LSU Doctoral Dissertations   Graduate School

2009

The structure of social networks: examining gender differences and effects on social support and psychological distress

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THE STRUCTURE OF SOCIAL NETWORKS:
EXAMINING GENDER DIFFERENCES AND
EFFECTS ON SOCIAL SUPPORT AND PSYCHOLOGICAL DISTRESS

A Dissertation
Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

In

The Department of Sociology

by
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December 2009

DEDICATION

For Ruth "Ruthie" Montz Levet
(June 14, 1918 - July 29, 2009)

Although she had to drop out of elementary school to support her younger siblings, my

grand-maw would always tell me, "I might not be book smart, but I got common sense."

She was the smartest woman I have ever known.

This is dedicated to you, Ruthie.

ACKNOWLEDGEMENTS

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ABSTRACT

Empirical research demonstrates that social networks — the aspatial social structures created through social relations — constitute a critical context that affects individuals' health and well-being. Net of individual characteristics, social network structures can increase perceived adequacy of social support and psychological health, particularly in the aftermath of a natural disaster. However, the question of whether social contexts affect men and women differently remains largely unanswered.

This dissertation examines the effects of social structural characteristics on social network structures for both national and regional data. The General Social Survey (GSS) provides the nationally representative data on social networks; the 1985 GSS serves as the baseline measure for making comparisons with the 2004 GSS data. My comparisons provide important information regarding the structure of social networks over the past two decades and allow me to explore whether, and to what extent, the effects of structural characteristics on social networks differ between men and women. My results indicate that the effect of marital status on proportion female differs significantly between men and women in both 1985 and 2004. Further, the effect of marital status on structural density also differs significantly between men and women in 1985; it exerts a positive effect for both men and women, but demonstrates greater significance for women.

The second objective of this dissertation is to examine the effects of social networks on social support and psychological distress, within the context of a natural disaster. Social network data collected from the New Orleans metropolitan area in 2003 (pre-Katrina) act as the baseline to which to compare the 2006, post-Katrina social network data. My results indicate that in 2003, the proportion female in core networks are positively related to social support, but for women

only. However, post-Katrina, network size and proportion kin significantly predicted perceived adequacy of social support, for men only. Regarding psychological distress, pre-Katrina, social support is only significant and negatively related to psychological distress for women. However, after Hurricane Katrina, social support is negatively related to psychological distress for both men and women.

CHAPTER 1: INTRODUCTION, LITERATURE REVIEW, AND
STATEMENT OF RESEARCH QUESTIONS

1.1   Introduction, Project Description, and Contributions of This Project

Social relationships affect health and well-being: Empirical research on social

relationships and health demonstrates that social networks–which are created through social

relations–constitute a critical context that affects individuals' health. More specifically, net of

individual characteristics, social network structures can affect perceived adequacy of social

support and psychological health.

Although the study of social networks has a long history in sociology, McPherson,

Smith-Lovin, and Brashears (2006) brought new attention to the importance of the topic.

McPherson et al. (2006) reported that more Americans were socially isolated now than ever

before: A new survey showed that individuals in the United States had significantly smaller core

personal networks than they did 20 years earlier. Their work raises an important question: Are

Americans currently facing a crisis within their social relationships? If so, what are the

implications of that change? More specifically if, as the national data indicate, the average size

of Americans' core discussion networks has decreased over the past 20 years (McPherson et al.

2006), do gender differences exist in the extent, causes, and consequences of that change?

Further, how do social network structures impact the stress-support process and psychological

health status, particularly in the aftermath of a natural disaster?

This dissertation addresses two central questions that derive from these issues. First, it

extends McPherson et al.'s (2006) analysis of core discussion networks to ask how the effects of

social structural characteristics on social network structures differ between men and women.

The General Social Survey (GSS) will provide the nationally representative data on social

networks; the 1985 GSS will serve as the baseline measure for making comparisons with the

2004 GSS data. These comparisons will provide important information regarding the structure of social networks over the past two decades and allow me to explore whether, and to what extent, the effects of structural characteristics on social networks differ between men and women.

The second objective of this dissertation is to examine the effects of social networks on social support and psychological distress, within the context of a natural disaster. Social network data collected from the New Orleans metropolitan area in 2003 (pre-Katrina) act as the baseline to which to compare the 2006, post-Katrina social network data. I will consider how social network structures impact both the social support process and psychological health status in different ways, for men and women. The extent to which the effects of social network structures on perceived availability of social support and psychological health differ between men and women will be a main focus of this dissertation.

The overarching questions of this dissertation are: Do core discussion network structures differ between men and women? How do the effects of social structural characteristics on social networks differ between men and women? Does the structure of social networks directly impact perceived adequacy of social support and psychological well-being, and if so, do men and women differ significantly in this regard? Also, what is the indirect effect of social network structure, through perceived adequacy of social support, on mental health status, and does it differ between men and women?

This dissertation will make scholarly contributions to three areas: the general social network literature, the literature on social networks and health, and studies of the role social networks play in disaster response and recovery. Currently, there is a lack of sociological literature on the changing trends in social networks in the context of a natural disaster. As

Hurricane Katrina left extensive damage in the Gulf South, the public health consequences are of great sociological interest and concern to local and national populations.

Although there are established protocols for emergency preparation, a consistently overlooked aspect is one's aspatial environment–social network context. During hurricane season, people are focused on physical and structural preparations, while possibly overlooking the opportunities for aid and resources within their social networks. Therefore, the findings of this research are useful both to the academic community and the public at large; this thorough research project is timely and necessary.

1.1.1 Dissertation Outline

This dissertation contains five chapters. In Chapter 1, I provide an introduction to the study of social networks and a comprehensive literature review that describes the theoretical orientation for this dissertation. Within Chapter 1, I provide the research questions that guide this dissertation and the hypotheses that will be tested. Chapter 2 describes the datasets used and all variables and measures; Chapter 2 also provides all descriptive statistics, as well as outlining the methodological procedures used for the analysis. Chapter 3 addresses the results for the national data, while Chapter 4 addresses the results of the regional data. This dissertation concludes with Chapter 5, which summarizes the overall findings for this study while discussing the limitations and possible directions for future research on this topic.

1.2 Literature Review

The first part of the literature review focuses on core discussion networks; it begins with conceptualizing social networks and then moves into addressing core discussion networks and social network analysis. From there, I describe the current "shape" of core discussion networks by exploring the impact of social structural factors on networks and how they differ between

men and women. At this point in Chapter 1, I advance the hypotheses for Part 1 of this project, which focuses on the impact of social structural characteristics on network structures and whether these effects differ significantly between men and women.

Part two of literature review derives from the discussion of social network analysis and addresses social resources theory. In this section, I discuss the possible resources that derive from one's social network. Then, I address how social network structures impact health-related outcomes, specifically focusing on perceived adequacy of social support and psychological health. Following this section, I address how the effects of social network structures on health-related outcomes differ between men and women. Furthermore, to explore the relationship between social networks and health-related outcomes in the context of a natural disaster, I provide a sociological discussion of Hurricane Katrina. Here, I address how the effects of social network structure on health-related outcomes may not only differ between men and women, but how these effects may differ between 2003 and 2006 for men and women.

1.2.1   What Are Social Networks?

One early description of social networks comes from the 17th century poet John Donne, who eloquently states in his prose, that "no man is an island, entire of itself…" (Donne 1624). Rather, individuals are socially connected to one another through interpersonal ties and social relationships. As aspatial social structures comprised of focal individuals and their ties to others, social networks are defined as "a set of nodes that are tied by one or more specific types of relations between them" (Hall and Wellman 1985:25). According to this conceptualization, nodes are identified as individuals. Therefore, social networks define the structure of social relationships (Leinhardt 1977). Egocentric social networks are social networks described from the perspective of a focal individual (ego); the individuals to whom ego is socially connected are

alters (Haines, Beggs, and Hurlbert 2002). In describing interpersonal environments from ego's perspective, Wellman (1988) maintains that egocentric networks "provide Ptolemaic views of networks as they may be perceived by the individuals at their centers" (p. 27).

Scholarly research demonstrates that social networks provide resources to individuals in a multitude of areas, ranging from job searches to social influence to both physical and mental health benefits (Granovetter 1973; Lin, Ensel, and Vaughn 1981; Lin, Woelfel, and Light 1985; Campbell, Marsden, and Hurlbert 1986; Haines and Hurlbert 1992; Beggs, Haines, and Hurlbert 1996a, 1996b). The repeated findings all echo the same message: Contacts matter. However, do all social contacts matter equally, or do certain social contacts matter more than others? To address this question, one must consider the type of resource or outcome of interest. Social network theorists have long supported the argument that "different network sectors are better at allocating different kinds of social resources" (Hurlbert, Haines, and Beggs 2000:599). One quantifiable and commonly studied social network sector is the core discussion network. Therefore, this dissertation asks: What are core discussion networks and what benefits (resources and outcomes) do they provide?

1.2.2 Defining Core Discussion Networks

As aspatial arrangements of alters surrounding ego, social networks contain many different types of social relationships. The types of contacts within a social network can range from the most intimate confidante to the most casual acquaintance and any social relationship in between. As one sector of interpersonal social structure, core discussion networks are network sectors containing close confidantes to whom individuals regularly turn for support or assistance, information, or to discuss matters that are important (Fischer 1982; Marsden 1987; Ruan 1998; Hurlbert, Haines, and Beggs 2000; McPherson et al. 2006). Core discussion

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networks reflect the closest and most intimate social ties. The core discussion network

represents "intense portions of the interpersonal environment" (Marsden 1987:123). As a unique

and important sector of one's overall social network, core discussion networks provide "a

window through which the respondent's interpersonal environment is to be scrutinized" (Burt

1984:317).

As one sector of the overall social network, core discussion networks are characterized as

relatively small in size while containing strong ego-alter ties and homophilous ties (Marsden

1987; Bailey and Marsden 1999; Hurlbert et al. 2000). Network size simply refers to the total

number of alters within one's social network. The strength of ties refers to the emotional

closeness between ego and alter, while homophily denotes the similarity of characteristics

between ego and alter (Lin et al. 1985; Haines and Hurlbert 1992; McPherson et al. 2006). The

principle of homophily is best illustrated as the "birds of a feather" phenomenon: "Contact

between similar people occurs at a higher rate than among dissimilar people" (McPherson,

Smith-Lovin, and Cook 2001:416). While homophily refers to the similarity of characteristics

between ego and alter, another dimension characterizing core discussion networks is

homogeneity. Homogeneity refers to the similarity of characteristics among alters within one's

social network (Marsden 1987). Therefore, while core discussion networks possess homophilous

ties, the structure of the network is largely homogeneous. Core discussion networks are also

dense, which is best described as reflecting either high degrees of connections among alters or

strong average intensity among ties (Wellman and Wortley 1990; Haines and Hurlbert 1992;

Smith-Lovin and McPherson 1993; Hurlbert et al. 2000; McPherson, Smith-Lovin, and Cook

2001). Furthermore, core discussion networks are heavily kin-centered, in regard to both the

number of kin and the proportion of kin present within this network sector (Marsden 1987; McPherson et al. 2006).

While empirical research describes the structure of core discussion networks, how is it possible to quantify and measure this specific network sector? In focusing on the most intimate and intense portion of one's social network, this dissertation identifies core discussion networks from the perspective of ego as those with whom ego discusses important matters. The guiding premise for defining core networks accordingly is that "there are some things that we discuss only with people who are very close to us" (McPherson et al. 2006:353). Specifically, this dissertation follows in the tradition of the General Social Survey (GSS), identifying core discussion networks as the individuals with whom we discuss important matters.

Although previous name generators have been developed, the first appearance of the standard name generator, as it currently appears, was in the 1985 General Social Survey social network module. The use of this specific name generator resulted in the collection of the first nationally representative egocentric survey data (Marsden 1987). The name generator is used to generate a list of names from respondents; the name generator provides ego-centric core discussion network data. To elicit names of the people with whom ego discusses important matters, the GSS name generator question reads as follows: "From time to time, most people discuss *important matters* with other people. Looking back over the last six months—who are the *people* with whom you discussed matters important to you?" (McPherson et al. 2006:355). Although respondents are not limited in providing the number of people with whom they discuss important matters, the follow-up name interpreter questions collect data for only the first five names that are provided.

Although the standard GSS name generator appears to be subjective in nature, how do individuals define "important" matters? Since the question itself does not dictate what matters are "important," respondents use their own personal discretion to determine which topics they deem important to them. One methodological concern regarding the use of name generators for measuring core discussion networks involves how the average individual interprets the question and evaluates what matters are viewed as important. In an investigation of the cognitive methods used to answer the GSS name generator question, Bailey and Marsden (1999) conducted face-to-face, concurrent think-aloud interviews with 50 respondents. The concurrent think-aloud methodology allowed the interviewer to ask the respondent a specific survey question and then follow-up with several probes about how the respondent arrived at their answer. For example, the first follow-up question asked respondents, "Can you tell me what you were thinking about first when you came up with these names?" (Bailey and Marsden 1999:293). If further probing was needed, respondents were asked, "Did you think first about important matters during the past 6 months, or did you think first about which people you care about, or something else?" (Bailey and Marsden 1999:293). If the GSS network question is interpreted literally, the reasons for generating names should be based upon the important matters they had in mind. Roughly 43% of the respondents literally interpreted the GSS question; this means these respondents listed names according to important topics they had in mind. About 28% of respondents reported that they provided names by reflecting upon general discussions or conversations they had over the past 6 months, where no particular "important matter" was discussed. Equal percentages of respondents (13%) referred to people with whom they had intimate conversations or those they encounter most frequently.

The underlying pattern is that individuals discuss important matters with people who are important to them (Bailey and Marsden 1999). As such, in the United States, the GSS name generator has been shown to be an intense name generator, eliciting the names of strong ties (Marsden 1990; Bearman and Parigi 2004). Research by Bearman and Parigi (2004) demonstrates that, because the people with whom one discusses important matters are emotionally close to them, they tend to know each other well and have similar social characteristics. These findings further reflect that core discussion networks are dense and homogeneous. As Marsden states, "these core discussion networks tend to be small, centered on kin, comparatively dense, and homogeneous by comparison to the respondent population as an opportunity structure" (Marsden 1987:126-127).

Additionally, Bailey and Marsden (1999) concluded that personal issues are the predominant issues described as important by respondents. These personal issues are centered on personal and intimate relationships, ranging from topics related to family and friends to issues that are important to their personal life (such as finances, hobbies, and health). More than one-quarter of respondents reported that "work" issues (which included business, jobs, school, or job-seeking) were considered important (Bailey and Marsden 1999). The major finding is that, when questioned about important matters, the majority of respondents were largely focused on issues in their personal lives. Therefore, the people with whom individuals discuss personal issues reflect strong, emotionally close ties in their core discussion networks. To further describe core discussion network structures, I now address social network analysis.

1.2.3 Measuring Networks: Social Network Analysis

Resources available through social networks undeniably benefit individuals. However, certain network sectors are better equipped to provide certain types of resources than others.

Hence, the conceptualization of social resources as resources deriving from social relationships calls for a methodological approach capable of examining and describing the structural arrangements of interpersonal ties within a social network. Social network analysis is one method used to measure social relationships; this method enables researchers to examine the relationships between social network structures and social resource availability and transfer.

Social network analysis examines the aspatial, interpersonal context that surrounds individuals and the resources they obtain through their social networks; this method of analysis allows researchers to examine the structure of the social network and the characteristics of the individuals within the social network. Researchers describe networks in relation to the social structure and the focal individual, therefore interpreting the behavior of actors in relation to their positions within the social structure (Marsden 1990). Social network analysis defines one's social network as the social connections ego (the focal individual) has to others (alters). Based on this structural perspective of one's social environment, the network is defined from the perspective of the focal individual (ego). Therefore, social network analysis involves the use of egocentric social networks.

Within social network analysis, two different approaches can be used to examine how social resources are derived from personal networks: the dyadic approach and the network structure approach (Campbell et al. 1986; Haines and Hurlbert 1992; Beggs et al. 1996a, 1996b). Focusing on the traits of ego (focal individual) and alters (ties, social contacts), the dyadic approach explains the relational transfer of social resources within a dyad (one ego-alter relationship from the network) (Haines and Hurlbert 1992). This approach examines the characteristics of one ego-alter dyad relationship from the social network to explain a specific type of transfer of social resources. The network structure approach, which is the approach that

is used in this dissertation, permits a broader analysis and calculation of measures. Rather than focus exclusively on the dyadic relationships between ego and each alter within the network, the network structure approach investigates the overall structural features of one's social network (Haines, Beggs, and Hurlbert 2008). Whereas the dyadic approach focuses on specific types of ties between ego and alters, the network structure approach focuses on aggregate features of core discussion networks and how these structures affect the transfer of social resources (Beggs et al. 1996; Hurlbert et al. 2000; Haines et al. 2002; Haines et al. 2008). Data for the network structure approach are collected through the name generator-name interpreter sequence.

Following the network structure approach (as advanced by Haines and Hurlbert 1992; Beggs et al. 1996a, 1996b; Hurlbert et al. 2000; Haines, Beggs, and Hurlbert 2008), this dissertation separates social network structure from social resources: Thus, it differentiates the structural features of core networks from the social resources derived from those networks. This dissertation, therefore, uses "true" network data to describe social network structures and the effects of these structures on health-related outcomes. However, before addressing the relationship between core discussion networks and resources, it is important to discuss the current, empirical research findings about the core discussion network structures of Americans.

1.2.4 The Current "Shape" of Core Discussion Networks

Network size is one fundamental characteristic of social network structure. Simply defined as the number of alters in one's network, network size, to some degree, is indicative of one's overall level of social integration (Marsden 1987; Smith-Lovin and McPherson 1993; Haines, Hurlbert, and Beggs 1996; Munch, McPherson, and Smith-Lovin 1997). Whereas larger network size reflects higher levels of social integration, smaller network size may reflect the absence of social integration, which can also be construed as social isolation. Social isolation

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refers to the absence or lack of connections to family, friends, neighbors, community members, or other individuals. Regarding core discussion networks, size reflects the number of people with whom one discusses important matters. Examining the 1985 General Social Survey data, Marsden (1987) found that a large percentage of respondents (nearly one-quarter-- 23.8% --of all respondents) reported not discussing important matters with anyone or with only one person; nearly 39.1% reported discussing important matters with 2 or fewer people. These data also report both the mean and mode for network size as three (Marsden 1987). As previously stated, results from the 1985 General Social Survey provided the first, nationally representative depiction of American interpersonal environments; based on average size, social networks appeared to be rather small.

In addition to network size, social network analysis also identifies other network structures that describe the overall shape of interpersonal environments. As Marsden (1987) reported, core discussion networks are heavily kin-centered; for social network analysis, drawing the distinction between kin and non-kin relationships is highly relevant to core discussion network structure. Kin relationships are classified by one of the following familial ties: spouse, parent, sibling, child, or other family member; non-kin relationships can reflect a variety of social associations, such as co-worker, co-member of a group, neighbor, friend, advisor, or other (General Social Survey). While the number of kin is one feature of social network structure, the relative measure of proportion kin within one's network is another structural feature that is frequently examined. In exploring core networks by general demographic characteristics, men and women differed in regard to kin and non-kin composition such that women's networks contained more kin, less non-kin, and higher proportion of kin than men's networks (Marsden 1987).

Density is another hallmark feature of core discussion networks. Although there are several ways to assess network density, the most common measures refer either to the interconnectedness of alters or the average intensity of ties within the network (Smith-Lovin and McPherson 1993; Haines et al. 2008). Dense networks are highly interconnected and intense, with low diversity of alters—thus, density and range vary inversely (Granovetter 1973; Campbell et al. 1986). Core discussion networks are characterized as relatively dense network sectors (Marsden 1987). Another method to assess structural density is to measure the emotional closeness between ego and each alter in the network. Although these two methods for measuring structural density are different in quantification procedures, they yield highly parallel results since "networks which have a high proportion of strong ego-alter ties tend to also have a high proportion of ties among alters" (Beggs et al. 1996a:74).

Marsden's (1987) initial exploration of core discussion networks provided the groundwork from which subsequent social network analyses would develop. To examine how core discussion networks changed over the past two decades, McPherson et al. (2006) replicated Marsden's (1987) social network analysis methodology, comparing the 2004 GSS data to the 1985 GSS data. Their findings demonstrate that the average size of core discussion networks has declined, with the mean number of core discussion network members going from 2.94 in 1985 to 2.08 in 2004. This is a surprising, and significant, finding. In 2004, the proportion of Americans who confided in no one was nearly three times the 1985 rate (McPherson et al. 2006). If core networks were relatively small in 1985, they were even smaller in 2004. Although no particular type of tie has been eliminated from the core discussion networks of Americans, non-kin ties have been reduced the most, leaving most Americans with core discussion networks dominated by kin (parents and spouses) (McPherson et al. 2006). These authors maintain an alarming social

phenomenon currently faces Americans: A rise in social isolation. If, as these data indicate, core discussion networks are shrinking, individuals are less socially involved with others now than they were in 1985. However, are Americans facing a rise in social isolation? If so, would men and women experience these changes the same way? How do core discussion networks differ between men and women?

To explore the changing structure of core discussion networks, McPherson et al. (2006) partially replicate and build upon the work of Marsden (1987) to compare size, number of kin and non-kin, proportion kin, and density in the core discussion networks of Americans in 1985 and 2004. When using sex as a demographic variable, their results provide preliminary evidence for a few gender differences in social network structures. Core discussion networks of women have significantly more kin than do the networks of men, in both 1985 and 2004. Although there was a significant difference between men and women in the number of non-kin in 1985 (women had fewer non-kin than men), this gender difference did not appear in 2004. Also, while there was a significant difference between men and women in the proportion kin in 1985 (women had higher proportion kin), this gender difference does not exist in 2004. There are no significant gender differences for network size or density; their results show that men and women do not differ in core discussion network size or network density between 1985 and 2004. These findings are consistent with the robust social network literature, which maintains that, although social network size may not differ between men and women, other network structures do indeed differ between men and women (Fischer 1982; McPherson and Smith-Lovin 1982; Fischer and Oliker 1983; Marsden 1987; Campbell 1988; Moore 1990; McPherson et al. 2006).

In examining the core discussion network structures that have been found to differ between men and women, kin composition is one structural aspect that reflects patterned gender

differences. The social networks of women are consistently characterized as having a greater

proportion of kin and more diverse kin ties and neighbors, when compared to the social networks

of men, while the networks of men are characterized as having more co-workers, advisors, and

friends when compared to the networks of women (Fischer and Oliker 1983; Wellman 1985;

Marsden 1987; Hurlbert and Acock 1990; Moore 1990; Pugliesi and Shook 1998; Yeung, Fung,

and Lang 2007). Although McPherson et al. (2006) did not find support for significant gender

differences in network density, they did not address the possible gender differences in proportion

female within core discussion networks.

In association with these initial findings of gender differences in core discussion network

structures, theoretical arguments call into question how social structural characteristics impact

men and women differently, thus affecting the structure of their core discussion networks. One

framework for explaining gender differences in social networks focuses on socialization

processes, and how structural characteristics can shape the formation and maintenance of social

relationships differently for men and women. Therefore, the first aim of this dissertation is to

provide gender-specific investigations into how social structures impact social relationships, and

therefore social networks, of men and women differently.

The overarching structural features of society affect the ways in which social

relationships (and therefore core discussion networks) form. As Blau's axiom states, "social

associations depend on opportunities for social contact" (1977:281). Without the opportunity to

interact socially, social relationships cannot be established. To determine how social structural

variables impact social network structures for men and women differently, Moore (1990)

examined the 1985 GSS network data. Although her research focused on the interactions

between gender and structural characteristics, her findings demonstrate that, when structural

positions are controlled (work situations, family structure, and age), women have a larger

number, larger proportion, and larger diversity of kin ties in their personal networks than men do,

and men have fewer kin ties and more coworker ties than women do (Moore 1990). She

concludes that the larger, social structural characteristics, whether through opportunities or

constraints, affect core discussion networks differently for men and women (Moore 1990).

These findings suggest that there are certain social structural characteristics that impact social

network structures differently for men and women. Hence, the first aim of this dissertation is to

build upon Moore's (1990) findings and explicitly examine the effects of social structures on

core discussion networks for men and women.

According to Moore (1990), the most relevant work-related social structural

characteristics are paid employment status, educational attainment, and income. For this cluster

of characteristics, Moore (1990) reports that these work-related structures "are positively (and

often strongly) related to network size and ties to non-kin" (p. 727) within social networks, as

these features afford opportunities to create social ties with individuals outside of one's

immediate family unit (Fischer 1982; Marsden 1987). For example, being in a paid employment

position provides an avenue through which to establish social ties to co-workers. Thus, the

workplace itself is a structure that can impact social relationships. Given the close relationship

between education and employment, and how education is a predictor of employment position,

Moore (1990) classifies education as another work-related characteristic. Education is also

linked to increased network size and decreased proportion kin (Marsden 1987). In pursuing

education, people become exposed to more diverse others, as well as social interactions that

bring them into contact with people outside of their immediate kin relationships (Fischer 1982;

Marsden 1987). While Moore (1990) includes personal income as a characteristic within the

work-related social structure, this dissertation diverges from the use of personal income and addresses family income as a feature of social structure. Although family income is not specifically a structural feature in itself, it is shaped partly by one's employment position, and provides unique opportunities for forming and maintaining social contacts.

In following Moore's (1990) initial investigation into social structure and social networks, two other characteristics that reflect family structure and impact socialization processes are marital status and the presence of children (minors) living in the home. Being married and having children living in the home both result in women being primarily responsible for domestic affairs (Fischer and Oliker 1983; Campbell 1988; Munch et al. 1997; Ridgeway and Smith-Lovin 1999). This increased responsibility at home limits both the time and opportunity women have to engage in interpersonal relationships, thereby impacting the formation and maintenance of certain social ties (Moore 1990; Munch et al. 1997). To support the argument that childrearing affects men and women differently, Munch et al. (1997) focused exclusively on the number and age of children living in the home to examine the effects of childrearing on social relationships. Their results show that childrearing affects men and women differently; while having children increases the proportion of kin in men's networks, children reduce network size for women (Munch et al. 1997).

Regarding parenthood, women, as compared to men, are more likely to leave the paid labor workforce when children are born (Hochschild 1989; Munch et al. 1997; Ridgeway and Smith-Lovin 1999). By removing themselves from the paid labor workforce, women are potentially dissolving social ties they previously had to coworkers and limiting their opportunity for social contacts with others in the workplace. Although men and women may experience the same life events of marriage and parenthood, their differential response to these life events

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results in different opportunities for the development and maintenance of social ties, thus resulting in different core discussion networks (Fischer and Oliker 1983; Ridgeway and Smith-Lovin 1999).

Age is another social structural characteristic that shapes social networks. Whereas network size decreases with age, network density increases with age (Marsden 1987). However, little research has examined the way in which age impacts social networks differently for men and women.

Drawing upon these comprehensive findings, the first aim of this dissertation is to build upon and extend previous research on gender differences in social networks (Marsden 1987; Moore 1990; Munch et al. 1997; McPherson et al. 2006) by systematically examining whether the effects of these social structural factors on core discussion networks differ significantly between men and women in 1985 and 2004. I also assess whether these effects differ significantly between 1985 and 2004 for men and women. In going beyond previous research, I examine the following four social network structures separately for men and women in 1985 and 2004: network size, proportion kin, proportion female, and network density. Since my focus is on identifying how all of the social structural factors vary by gender (the entire model), I conduct separate analyses for men and women.

The General Social Survey (GSS) will provide the nationally representative data on social networks and the 1985 GSS will serve as the baseline measure for making comparisons to the 2004 social network GSS data. Additionally, this dissertation will determine whether the effects of social structural factors on core discussion networks differ significantly between 1985 and 2004 for men and women. Making comparisons between 1985 and 2004 for men and women

will contribute to the current social network discourse of social structures on relationships by illustrating the current "shape" of core discussion network structures for men and women.

1.2.5   Part 1: Hypotheses

Aligned with the literature on core discussion networks and serving as a partial replication and extension of Marsden (1987), Moore (1990), and McPherson et al. (2006), I systematically explore core discussion networks for men and women in 1985 and 2004 and advance the following hypotheses:

H1.1   The core discussion network size of men is different from the core discussion network size of women in (a) 1985 and (b) 2004.

H1.2   The proportion kin in core discussion networks for men is different from the proportion kin in core discussion networks for women in (a) 1985 and (b) 2004.

H1.3   The proportion female in core discussion networks for men is different from the proportion female in core discussion networks for women in (a) 1985 and (b) 2004.

H1.4   The structural density in core discussion networks for men is different from the structural density in core discussion networks for women in (a) 1985 and (b) 2004.

H1.5   The core discussion network size of 1985 is different from the core discussion network size of 2004 for (a) men and (b) women.

H1.6   The proportion kin in core discussion networks of 1985 is different from the proportion kin in core discussion networks of 2004 for (a) men and (b) women.

H1.7   The proportion female in core discussion networks of 1985 is different from the proportion female in core discussion networks of 2004 for (a) men and (b) women.

H1.8   The structural density in core discussion networks of 1985 is different from the structural density in core discussion networks of 2004 for (a) men and (b) women.

To extend the research of Moore (1990), I examine whether the effects of social structural characteristics on core discussion network structure differ significantly between men and women in 1985 and 2004 and advance the following hypotheses:

H1.9   The effects of social structural variables on network size will be different for men and women in (a) 1985 and (b) 2004.

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H1.10 The effects of social structural variables on proportion kin will be different for men and women in (a) 1985 and (b) 2004.

H1.11 The effects of social structural variables on proportion female will be different for men and women in (a) 1985 and (b) 2004.

H1.12 The effects of social structural variables on structural density will be different for men and women in (a) 1985 and (b) 2004.

H1.13 The effects of social structural variables on core discussion network size will differ between 1985 and 2004 for (a) men and (b) women.

H1.14 The effects of social structural variables on proportion kin will differ between 1985 and 2004 for (a) men and (b) women.

H1.15 The effects of social structural variables on proportion female will differ between 1985 and 2004 for (a) men and (b) women.

H1.16 The effects of social structural variables on structural density will differ between 1985 and 2004 for (a) men and (b) women.

1.2.6 Benefits of Social Networks

Although social networks have been shown to provide benefits, such as social resources and both economic and noneconomic outcomes to individuals, what are these benefits and how does the structure of social networks allocate such benefits? To understand the relationship between social networks and the potential benefits they provide, it is important to refer to social resources theory. The theoretical construct of social resources theory is premised upon sociability: who we know (or socially interact with) has an effect upon our lives. Further, as Blau's axiom states, "social associations depend on opportunities for social contact" (Blau 1977:281). However, before addressing the framework of social resources theory, it is important to describe its connection to social capital theory. Although social resources and social capital theories both developed in the social sciences around the same time, there are certain similarities and differences that exist in regard to their functions and applications (Lin 1999). In the next

two sections, I will describe the origins and applications of social resources theory and social capital theory.

1.2.6.1 Social Resources Theory

Social resources theory begins with the premise that resources are embedded in social networks and these social resources are accessible through direct and indirect ties within the social network (Lin, Vaughn, and Ensel 1981; Lin 1999). This perspective defines social resources theory as "resource allocation through social networks" (Hurlbert et al. 2000:600). Research consistently demonstrates that "social resources exert an important and significant effect on attained status, beyond that accounted for by personal resources" (Lin 1999:468). Regarding both the quality and quantity of potential usefulness to individuals, social resources demonstrate a larger net effect than personal resources for certain outcomes (Lin 1982; Beggs et al. 1996a, 1996b; Hurlbert et al. 2000, Hurlbert, Haines, and Beggs 2005). However, to understand fully the applications of this theoretical paradigm, one must first understand the origins of social resources theory.

During the late 1960's and early 1970's, new approaches to understanding social mobility emerged in sociology. A fundamental concern of this work was indentifying the important predictors of one's socioeconomic status--status attainment. The perspective originated with Blau and Duncan (1967), who focused on the effects personal resources, or individual characteristics, exerted on attained status. In defining personal resources, Lin states that "personal resources are possessed by the individual who can use and dispose them with freedom and without much concern for compensation" (Lin 1999:467-468). However, personal resources can take on two different forms: ascribed status or achieved status. Whereas ascribed status refers to the status one socially inherits from their parents, meaning the involuntarily bestowed

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status position designated by birth, achieved status demonstrates actual volition or enacted effort (Foladare 1969). As the Blau and Duncan (1967) model showed, although ascribed status (measured as father's status and father's education) is an important predictor, the effect of achieved status (determined by son's educational accomplishments and previous employment positions) is a significantly stronger predictor of status attainment (Lin, Vaughn, and Ensel 1981; Lin 1999). Although the initial findings by Blau and Duncan (1967) focused on personal resources, critics of their model pointed out that structural factors influence social mobility, over and above individual characteristics (Lin, Ensel, and Vaughn 1981). One perspective that incorporates the effects of structural factors on status attainment is social resources theory, which measures the effects of one aspect of social structure—the social network in which an individual is embedded—on stratified outcomes (Lin, Ensel, and Vaughn 1981; Lin 1999).

Compared to personal resources, which are possessed by individuals, social resources are embedded within one's social network (Lin 1999, Lin 2001b). In his seminal work on social resources, Granovetter's (1973, 1974) results revealed that men who used an interpersonal contact to search for a new job obtained better jobs than men who did not use an interpersonal contact. These findings provided initial evidence of a relationship between social networks and status attainment. Moreover, Granovetter (1973, 1974) argued that certain types of ties within one's social network are advantageous for status attainment; he argued that "the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie" (Granovetter 1973:1361). In coining the phrase "strength of weak ties," Granovetter (1974) demonstrated that using weak social ties (individuals to whom the job searcher is not emotionally close) within one's network provides opportunities for individuals to reach out into the social structure,

allowing for previously unavailable or new information to be introduced into their network (Lin 1999). These findings, demonstrating that social contacts provide benefits to individuals, laid the foundation for social resources theory.

1.2.6.2 Social Capital Theory

By its name, social capital is "social" in that it is not singularly contained within one individual, but exists in relation to other individuals. The "capital" component reflects a type of resource. According to Nan Lin, the central premise of social capital is "an investment in social relations with an expected return in the marketplace" (Lin 2001b:29). Although the beneficial aspects of social relations are historically traced to Emile Durkheim, it is important to understand the emergence of social capital theory. Pierre Bourdieu was the first to formulate a systematic and theoretical conceptualization of social capital, which he defined as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (Bourdieu 1986:248). By participating in social groups and engaging in social relations, individuals are granted access to certain resources and benefits. According to Bourdieu's conceptualization of social capital, social networks are not an automatic arrangement but rather social networks are actively constructed and maintained. An important controversy surrounding social capital theory is whether the resources (benefits or profits) are collected for use by individuals or by collectivities. According to Nan Lin, "divorced from its roots in interactions and networking, social capital becomes merely another trendy term to employ or deploy in the broad context of improving or building social integration and solidarity" (Lin 2001a:9).

However, in deconstructing social capital, Portes (1998:6) offers the following definition: "Social capital stands for the ability of actors to secure benefits by virtue of membership in social

networks or other social structures." While previous research and theorists described social capital in a broad scope by addressing the impact of social relationships on certain benefits, Portes (1998) was one of the first to offer a network based approach to social capital, centered on both the structure of social relationships and the possible resources available from social relationships.

Therefore, the theoretical orientation of this dissertation synthesizes the perspectives of both Portes (1998) and Lin (2001a). In analyzing the return of social relationships at the individual level through social network analysis, this dissertation applies Portes' (1998) definition of social capital, thus teasing apart the structure of social relationships from the resource element. The focus of the second part of this dissertation is to examine the effects of social network structures on the social resource, social support, and a health-related outcome, psychological distress, on individuals prior to and immediately following Hurricane Katrina.

1.2.7 Individual Level Returns of Social Resources: Instrumental and Expressive Actions

As previously discussed, social network analysis enables researchers to describe networks in relation to the overall social structure, therefore interpreting the behavior of actors in relation to their position within the social structure (Marsden 1990). Using the network perspective allows social scientists to examine how the composition and structure of one's network affects the availability (or potential availability) of social resources and, in turn, outcomes. In viewing social relations from the network perspective, access to and availability of resources depends upon the quality and quantity of resources one has access to and is allowed to use, as well as one's location within the social network (network characteristics). Access to social resources and mobilization of social resources both depend on the structural composition

and one's positional location within the social network (Lin 1999; Lin 2001b). With whom one interacts affects access to social resources.

Lin (2000) advances two propositions for explaining why the structure of social relations yields differential outcomes in social resources. These propositions serve as explanations for potential inequality and stratification of social resources. First, the opportunity for social contact is guided by one's position within the overall (macro-level) social structure, with socioeconomic standing a highly salient feature. Based on one's original position or starting point within the status hierarchy, it follows that stratification can beget further stratification. The second premise advanced by Lin (2000) centers upon the principle of homophily: Contact between similar people occurs at a higher rate than contact among dissimilar people (Campbell and Lee 1992; McPherson et al. 2001). Homophily is the general finding within social networks; people surround themselves with others who are similar to themselves. Social network homophily has been identified in numerous characteristics, such as race, ethnicity, age, religion, education, occupation, and gender (McPherson et al. 2001). Although Lin's propositions for social resource stratification and inequality describe access to social resources on a general level, research has shown that, when looking at individual-level returns, social resources are utilized for two major types of outcomes: instrumental action and expressive action.

Drawing upon the social resources literature, status attainment research illustrates that social networks provide benefits to individuals, beyond what is accounted for by personal resources. For the status attainment research, attained status was the outcome of interest. Within social resources theory, growing recognition arises in the distinction between different types of social resources available from one's contacts. In examining the returns of social resources at the individual level, research demonstrates how individuals access and use resources for either

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instrumental or expressive actions (Lin 1999, 2001a). These two outcomes are categorically distinct actions. Instrumental actions involve obtaining resources not presently possessed by the individual, such as the action of accumulating additional capital or obtaining a specific goal (for example, finding a better job, higher occupational status, higher earnings) (Beggs et al. 1996b; Lin 2001a, 2001b). Expressive actions involve protecting or consolidating resources already possessed; these actions are used for resource preservation and maintenance (for example, social support, mental health, physical health) (Lin et al. 1985; Beggs et al. 1996b; Lin 2001a, 2001b).

Within the social resources literature, the majority of research on instrumental action derives from job-seeking behavior. As previously stated, in his work on strength of ties, Granovetter (1973) defined strength of tie as a "combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie" (p. 1361). In this line of research, Granovetter argues that reaching outside one's immediate social circle (which weaker ties do more effectively than stronger ties) allows ego to reach other parts of the social structure. The use of weak ties allows ego to access and mobilize resources from alters not immediately accessible to ego. By using weaker ties, those in disadvantaged groups may be able to reach people with better social resources, who are located higher in the social hierarchy. Therefore, instrumental action, such as job-seeking behavior, is achieved best through the use of weaker ties.

Research on expressive action is captured by the social support strand of social network analysis (Beggs et al. 1996b). Expressive actions involve protecting, maintaining, or consolidating resources already possessed (Lin 1982, 2001a). Literature from a variety of disciplines demonstrates that expressive action is beneficial for mental and physical well-being, particularly in the case of stressful experiences (Cohen and Syme 1985; Kessler, Price, and

Wortman 1985; Jacobson 1987). Whereas weak ties are advantageous for instrumental actions,

dense networks have an advantage for expressive action, as a means to preserve and reproduce

social resources. Social support, as one type of social resource, has been shown to be associated

with "strong rather than weak ties and by homophilous (sharing similar characteristics) rather

than heterophilous (dissimilar in characteristics) ties" (Lin et al. 1985:248).

In further elaborating the distinctions between instrumental and expressive actions,

additional research on social network structures maintains that certain types of networks are best

suited for certain types of actions. In regard to social network structure and instrumental action,

network sectors that are larger and contain higher diversity and range are more likely to contain

weaker ties, as well as heterophilous ties (dissimilar characteristics between ego and alters), than

social networks that lack these characteristics. Thus, these social network structures are

advantageous for instrumental action (Lin et al. 1981; Campbell et al. 1986; Marsden and

Hurlbert 1988; Beggs et al. 1996a). In regard to social network structure and expressive action,

networks containing stronger ties, higher proportions of kin, with high density and homogeneity

tend to promote expressive action (Lin 2001b). These are the characteristics that typify core

discussion networks.

Although homophily is typically the norm within core social networks, it is not always

advantageous, particularly for members of disadvantaged groups. As stated earlier, homophily

refers to the similarity of characteristics between ego and alters. Depending upon the outcome,

homophilous ties can sometimes constrain and limit the types of social resources that are

available; if ego and alters share similar characteristics, the social resources available through

these contacts will be similar. The similarity/redundancy of social resources in homophilous

networks can lead to a lack of variation of some kinds of social resources available and

accessible within the network, such as constraining access to novel information and new opportunities. Whereas close, homophilous ties and homogeneous networks are ideal for expressive actions (such as social support and health-related outcomes), those same network structures are not beneficial for instrumental actions, such as job-seeking behaviors or social mobility. Rather, the presence of weaker ties and diverse alters would be more beneficial for instrumental actions, such as mobility outcomes, because these types of network structures provide opportunities for individuals to access parts of the social structure that are outside their immediate social circles, thus allowing new, non-redundant information to be accessed (Granovetter 1973, 1974; Beggs et al. 1996a). Therefore, deriving from social resources theory, social network analysis allows for the development of a typology as it relates to social network structures and outcomes of interest.

The significant effects of social resources have been found for a variety of outcomes, such as longevity, mortality, status attainment, occupational mobility, social support, hurricane preparation and recovery, and mental and physical health status (Granovetter 1973, 1974; Berkman and Syme 1979; Lin, Ensel, and Vaughn 1981; Cohen and Wills 1985; Campbell, Marsden, and Hurlbert 1986; Aneshensel, Rutter, and Lachenbruch 1991; Berkman 1995; Beggs, Haines, and 1996a, 1996b; Berkman and Glass 2000; Fuhrer and Stansfeld 2002; Haines, Beggs, and Hurlbert 2002, 2008). To build upon and extend these findings to explore the ways in which social networks provide benefits to individuals, this dissertation examines the impact of core discussion network structures on expressive actions, particularly perceived adequacy of social support and psychological well-being. As the social support and social resources strands of social capital theory indicate, certain types of network structures promote expressive returns, particularly dense network sectors with close, strong ties. As a unique sector of one's overall

social network, core discussion networks are characterized as being relatively small in size while containing strong ego-alter and homophilous ties, homogeneous structures, as well as high proportions of kin (Marsden 1987; Bailey and Marsden 1999; Hurlbert et al. 2000; McPherson et al. 2006). Although this network sector is not ideal for instrumental action, core discussion networks provide the ideal network structure for examining expressive actions. Therefore, this dissertation examines the impact of core discussion network structures on perceived adequacy of social support and psychological health. This dissertation further investigates whether the effects of core discussion network structures on expressive actions differ significantly between men and women. To begin to address these concerns, I will now discuss the expressive actions of perceived adequacy of social support and psychological health.

1.2.8   Social Support: One Type of Social Resource

The idea that social relationships provide advantageous benefits is not a novel concept; it has surfaced and resurfaced at different epochs in time within the social science literature. The general awareness that group membership and social participation provide benefits dates back to the work of 19th century sociologist, Emile Durkheim. According to Durkheim's theory, social integration protects individuals from negative psychological consequences; higher levels of social integration result in lower rates of suicide (Durkheim 1897/1951). In other words, social connections can promote and benefit the health-status of individuals.

In building upon the theoretical arguments linking social relationships to health, the concept of social support developed within the scholarly discourse as one explanation for these repeated findings. This renewed interest in the relationship between sociability and health emerged in the late 1970's, when public health scholars reported the significant effects of social support on mortality: "People with social ties and relationships had lower mortality rates than

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people without such ties" (Berkman and Syme 1979:200). Much progress has been made in this field and research findings consistently demonstrate advantages of social support for both physical and mental health (Cohen and Wills 1985; House, Landis, and Umberson 1988; Haber et al. 2007). Despite the frequent use of the concept and the abundant literature on the topic, a consensus definition of social support has yet to be established. Additionally, the specific component features of social support that are advantageous for health-related outcomes have not been identified clearly (Sarason, Sarason, and Gurung 2001). One aim of this dissertation is to fill the gap in the social support literature by addressing one specific type of social support, perceived adequacy of support, and how social network structures impact this type of support. Further, this dissertation expands upon past scholarship to examine the indirect effect of network structure, through perceived adequacy of social support, on psychological distress.

In the next section, I address the conceptualization of social support, as well as the important distinctions among the different types of social support. Within this section, I maintain that due to the significant effect of perceived adequacy of social support on health-related outcomes, perceived support is the pinnacle form of support to understand, in regard to social network structure and health. In the final part of this section, I address the types of network structures that are beneficial for perceived adequacy of support.

1.2.8.1 Defining Social Support

An area of contention within the social support literature is the lack of a clear, definitive, conceptual definition. One of the first definitions of social support came from Sidney Cobb (1976), an epidemiologist at the forefront of the study of social support. According to his definition, social support is "information leading the subject to believe that he is cared for and loved…esteemed and valued…and belongs to a network of communication and mutual

obligations" (Cobb 1976:300). Cobb's definition is formulaic in that it not only addresses what social support is but also what it does for an individual. However, one of the criticisms of Cobb's approach is the exclusive focus on emotional support; there is no mention of instrumental support in his work (Turner 1981; Thoits 1982).

As a social epidemiologist, John Cassel's (1976) definition of social support focuses on the social environment and health, particularly the protective benefits of social integration; his research findings demonstrate that, during times of stress, the presence of social support protects or buffers individuals from negative health events. Additionally, Kaplan, Cassel, and Gore's (1977) conceptualization of social support centers upon "the 'metness' or gratification of a person's basic social needs (approval, esteem, succorance, etc.)" (p. 50). Lin et al. (1979) offer another formulation of this concept, defining social support as "support accessible to an individual through social ties to other individuals, groups, and the larger community" (p. 109). Subsequent conceptualizations of social support maintain that "support is the degree to which an individual's needs for affection, approval, belonging, and security are met by significant others" (Thoits 1982:147). Essentially, social support is the process by which social relationships with others fulfills certain needs of individuals (Aneshensel 1992).

One study that documents the importance of social connections for health comes from Berkman and Syme's (1979) longitudinal investigation of residents in Alameda County, California. Their findings demonstrate a relationship between social ties and mortality; people with more social connections live longer, net of multiple individual characteristics (such as socioeconomic status and health behaviors). Not only are social relationships advantageous for social support, but interpersonal environments also impact longevity and mortality. These

findings regarding the significant effects of social relationships on health status served as a catalyst for the exponential growth of the study of social support.

Within the social support literature, there are numerous ways to operationalize the concept. While the classic and influential work of Cobb (1976) focuses exclusively on emotional support, House (1981) expands the conceptualization and focuses on the multidimensionality of social support, defining it as "an interpersonal transaction involving one or more of the following: (1) emotional concern (liking, love, empathy), (2) instrumental aid (goods and services), (3) information (about the environment), or (4) appraisal (information relevant to self-evaluation)" (p. 39). For health-related outcomes, empirical research consistently identifies emotional support as the most important type of social support (House 1981; House 1987). In theory, instrumental support differs from emotional support; however, as House (1981) points out, even the most basic forms of instrumental support have emotional or psychological consequences. So what exactly are the differences between emotional and instrumental support?

1.2.8.2 Emotional and Instrumental Support

In arguing for a consensual understanding of social support, House et al. (1985) maintain that social support can be used to define the existence or quality of social relationships, as well as their functional content. However, they argue that "social support is, however, most commonly used to mean the last of these aspects of social relationships – their functional content" (House et al. 1985:85). In this section, I address the functional distinctions among social support.

Although social support is one of the resources derived from social contacts and connections, the support literature often differentiates between expressive (emotional) and instrumental support as fulfilling different functional needs (Wellman and Wortley 1989; Lin,

Ye, and Ensel 1999). Expressive support refers to intangible support, such as the emotional

expressions of love, affection, general concern, intimacy, security, sympathy, understanding, and

esteem; instrumental support is tangible aid, such as financial support, helping with domestic

responsibilities, or other types of practical assistance (Aneshensel 1992; Jackson 1992; Lin et al.

1999; Berkman and Glass 2000; Ross and Mirowsky 2002; Kana'Iaupuni et al. 2005).

Instrumental support is "the availability of others to help in material ways, such as loaning

money or giving a ride" (Hale, Hannum, and Espelage 2005:277).

Some prominent social support scholars maintain that emotional support is more

important than instrumental support (Lin et al. 1985; Lin and Ensel 1989; Aneshensel 1992;

Pugliesi and Shook 1998). This argument is rooted in repeated findings that emotional support is

more important for health-related outcomes, especially mental health (Lin et al. 1999). Haines

and Hurlbert (1992) offer further support for this argument, stating that "expressive support is

more important than its instrumental counterpart in the etiology of distress" (p. 255).

According to Lin et al. (1985), "success in either type of action depends upon access to

and use of social resources" (p. 249). This dissertation, with its focus on social resources, does

not tease apart or differentiate between expressive and instrumental support, but rather aims to

contribute to a separate contention that exists within the current social support literature: The

distinction between perceived adequacy of social support and received support. Here I address

the distinctions between perceived adequacy and received support and argue that perceived

adequacy of support is the more significant type of social support to investigate when examining

health-related outcomes.

1.2.8.3 Perceived Adequacy of Support and Received Support

An interesting area of contention within the social support literature involves whether perceived adequacy of support or received support is the more significant type of social support. Received support, defined from the perspective of ego, refers to actual support transactions; received support refers to actions enacted by alters to assist ego (Tardy 1985). Received support measures focus on the "nature and frequency of specific supportive transactions" (Lin et al. 1999:346).

Although received support reflects the objective view of supportive actions, perceived adequacy of support refers to one's subjective, cognitive appraisal of support adequacy (Wethington and Kessler 1986; Turner and Marino 1994; Lin et al. 1999; Kaul and Lakey 2003; Haber et al. 2007). The ongoing debates that surround these two types of support center upon an interesting and unique relationship between them: Perceived adequacy of support and received support are not highly correlated with one another (Barrera 1986; Cutrona 1986; Wethington and Kessler 1986; Lin et al. 1999).

In addition to the large discrepancy that exists between perceived and received support, the cognitive component, perceived availability of support, has repeatedly been identified as the more significant predictor of physical health and well-being, psychological health, and stress management (Cohen and Hoberman 1983; Cohen and Wills 1985; Wethington and Kessler 1986; Cohen 1988; Helgeson 1993; Turner and Marino 1994; Lin et al. 1999; Haber et al. 2007). When examining such health-related outcomes as physical health and psychological health, perceived adequacy of support is a stronger predictor than received support (Blazer 1982; Wethington and Kessler 1986; Helgeson 1993; Matud et al. 2003). As both a direct social

resource derived from core discussion networks and an indirect effect between network structure and psychological well-being, this dissertation focuses on perceived adequacy of social support.

The importance of understanding perceived adequacy of support is succinctly described by House (1981), in that "social support is likely to be effective only to the extent it is perceived" (p.27). A prominent scholar within sociology, W.I. Thomas, addresses the importance of perceived support in stating, "If men define situations as real, they are real in their consequences" (Thomas and Thomas 1928:571-572). Another scholar within sociology that emphasizes the importance of cognitive appraisals of situations is Herbert Blumer. He states, "The actor acts toward his world on the basis on how he sees it and not on the basis of how that world appears to the outside observer" (Blumer 1966:542). Thus, the focus on perceived adequacy of support reflects ego's cognitive belief that she or he has enough people in her or his network to help them, if the need arises.

According to social resources theory, the social environment provides the opportunity structure for certain resources to be provided to those belonging to that social environment. In following the tradition of teasing apart social network structure from the resources derived from the network, this dissertation contends that perceived adequacy of support is one type of social resource that derives from interpersonal contacts, specifically core discussion network structure. Treating social support as one type of social resource follows in the lineage established by Nan Lin and colleagues (1985), and further advanced by Haines and Hurlbert (1992), Beggs et al. (1996a, 1996b), Hurlbert et al. (2000, 2005), Haines, Beggs, and Hurlbert (2002), Haines et al. (2008).

Social network theorists have long supported the argument that "different network sectors are better at allocating different kinds of social resources" (Hurlbert et al. 2000:599). In

identifying the characteristics of different network sectors, past research demonstrates that network size is indicative of overall levels of social integration; using network size as a proxy for social integration predicts that being embedded in larger networks will result in higher levels of perceived support (Haines and Hurlbert 1992; Beggs et al. 1996b). However, network size is a complex structure to examine in regard to social resources and health-related outcomes. Whereas larger network size lends itself to greater network diversity and greater perceived support, larger network size also makes ego accountable to a larger number of alters. Thus, increasing network size may be negatively related to psychological health. The social support strand of network analysis, with its focus on describing characteristics of network sectors, contend that stronger ties, homophilous ties, and kin ties increase access to social support (Lin et al. 1985; Lin and Ensel 1989). Stronger ties tend to be present in dense social networks (Haines and Hurlbert 1992). Also, research based on familial roles and helping behaviors consistently reports that kin ties are important sources of social support (Quarantelli 1960; Fischer 1982; Antonucci and Akiyama 1987; Wellman and Wortley 1990; Kaniasty, Norris, and Murrell 1990). Furthermore, the sex composition of ties within one's network is linked to social support; networks containing higher proportion of female ties report more perceived support than networks containing lower proportion of female ties (Wellman and Wortley 1990; Kawachi and Berkman 2001). Additionally, denser network sectors have been shown to be advantageous for expressive actions, such as social support.

In assessing the core discussion network sector as one aspect of social networks, this dissertation predicts that the following four network structures will positively impact perceived adequacy of social support for men and women: network size, proportion kin, proportion

female, and network density. An additional aim is to address how the effects of core discussion network structure on perceived adequacy of social support differ between men and women.

As a robust and dynamic field of research that is largely interdisciplinary, there are several areas of contention within the social support literature. In the earlier part of this section, I addressed the distinctions between (a) emotional and instrumental support, and (b) perceived adequacy and received support. However, another area of debate within the social support field is the distinction between the structure of social support and the function of social support (Cohen and Wills 1985). Whereas the structural perspective of social support focuses on specific types of social relationships and characteristics of ties between people, the functional perspective of social support addresses the purpose, availability, and goals of support for individuals (Stroebe and Stroebe 1996). However, this dissertation offers a unique and thorough approach for understanding both the structural and functional components of social support. In synthesizing the scholarship of social resources theory, while applying social network analysis to core discussion networks, this dissertation does not confound the structure of networks with the potential resources. Rather, I examine the effect of (a) the structure of core discussion networks on (b) the social resources of perceived adequacy of social support and psychological well-being. In differentiating the structure of social networks from the social resources they provide, the framework used here is consistent with Portes' (1998) two distinctions of social capital.

1.2.9 Psychological Well-Being: A Health-Related Outcome

Empirical studies from a variety of disciplines report that social relationships are advantageous for health status, including physical and mental health. The scholarly work of Emile Durkheim, 19th century sociologist, addresses the benefits of group membership and social participation on health and well-being. Premised upon the concept of sociability and social

integration, the fields of sociology, public health, epidemiology, psychology, and gerontology offer support for the finding that the more socially integrated one is, the better their health status; one health status that benefits from social integration is psychological health.

The long line of scholarly investigations into social relationships and health echoes the initial findings of Durkheim, that "more socially isolated or less socially integrated individuals are less healthy, psychologically and physically, and more likely to die" (House et al. 1988:540). Further research documents that social relationships directly reduce psychological distress (Ensel and Lin 1991; Thoits 1995; Pinquart and Sorensen 2000; Yeung et al. 2007). Community studies of psychological well-being report that certain "certain social groups tend to have higher levels of psychological well-being; for example, males, younger persons and persons of higher income tend to have better psychological well-being" (Lin et al. 1999:348, referencing House et al. 1994; Turner 1994; Williams and Collins 1995). However, what about the impact of social network structure on psychological well-being? The scholarly literature fails to identify the specific features of social relationships that impact mental health status directly or indirectly. One goal of this dissertation is to begin to fill this gap in the social network and mental health fields.

Deriving from Durkheim's work, *Suicide* (1897/1951), one way to view social integration is as a certain level of social cohesion (Kawachi and Berkman 2001). A strict interpretation of social integration theory posits that higher levels of social integration should result in reduced levels of psychological distress. Accordingly, network size should be negatively related to psychological distress. However, another argument relating network size and distress is that larger network size may be positively related to psychological distress. Given that larger network size means more people within one's network, there is more potential for a greater strain on ego, therefore resulting in higher levels of psychological distress. Kessler and McLeod

(1984) coined the term "network events" to describe "life events that do not occur to the focal respondent but to someone in his or her social network who is considered important" (p. 620). Larger social networks afford more potential for experiencing a "network event." This dissertation follows Kessler and McLeod (1984) to argue that network size will be positively related to psychological distress for men and women in 2003 and 2006.

Whereas social integration reflects cohesiveness, previous research demonstrates that networks containing higher proportions of kin and higher proportions of women demonstrate greater social integration (Marsden 1987; McPherson et al. 2006; Haines et al. 2008). Because women are more likely to fulfill the role as kin and kith keeper, it follows that networks containing higher proportions of women will reflect higher levels of social integration. Additionally, the social networks of women contain more kin and more diverse kin, further reflecting greater levels of social integration. Additionally, according to the gender socialization literature, women are more emotionally expressive than men (Kessler and McLeod 1984; Matud et al. 2003). This would indicate that being embedded in networks with higher proportions of women would reduce psychological distress. Due to the negative association between social integration and psychological distress, this dissertation predicts that being embedded in social networks with higher proportions of kin and higher proportions of women will lead to decreased levels of psychological distress.

In regard to measures of density, the strength of ties within egocentric networks describes how emotionally close ego feels to each alter. Feeling emotionally close to others provides one with a supportive outlet to share, discuss, and evaluate distressing information. Early investigations into the benefits of close relationships on psychological health focused on marital status as reflecting emotional closeness between people; results demonstrate that married people

report less psychological distress than their unmarried counterparts (Gove and Tudor 1973).

Based on these findings, it should not be surprising that network density is negatively related to

psychological distress. Definitive associations between core discussion network structure and

psychological distress are still under development in the social sciences. One goal of this

dissertation is to help fill this gap in the social network and mental health literatures. I predict

that core discussion network size will be positively related to psychological distress, while

proportion kin, proportion female, and network density will be negatively related to

psychological distress. An additional aim is to address how the effects of core discussion

network structure on psychological distress differ between men and women.

1.2.10 Indirect Effect of Core Discussion Network Structure, Through Perceived Adequacy of Social Support, on Psychological Distress

Social network structures impact psychological health not only directly but also

indirectly, through perceived adequacy of social support. As previously mentioned, social

support decreases psychological distress (Berkman, Glass, Brissette, and Seeman 2000; Kawachi

and Berkman 2001). To connect this finding to social networks, the core discussion network

structures that promote perceived adequacy of social support should therefore reduce

psychological distress. I also ask whether this indirect effect differs significantly between men

and women.

1.2.11 The Gender(ed) Perspective

Gender is one of the most important factors that shape interpersonal relationships. As an

investigation into aspatial social environments and their impact on social support and health, this

dissertation examines whether the effects of core discussion network structure on perceived

adequacy of social support and psychological distress differ significantly between men and

women. One framework for explaining gender differences in social networks focuses on the

social construction of gender, and how socially-constructed gender roles impact social relationships. Investigations into gender role socialization consistently illustrate that, as children, boys and girls interact in gender-specific ways; this difference in social interactions during the formative years sets the stage for persistent gendered interaction patterns throughout the lifespan (Fischer and Oliker 1983; Belle 1987). Although some scholars consider culture to be the primary determinant of the development of social relationships, others emphasize the role of social interaction across the lifespan (Fuhrer and Stansfeld 2002). In light of these two perspectives, this dissertation contends that the simultaneous influences of social and interpersonal interaction, as well as culture, are all important and relevant factors in the social construction of gender roles.

The major distinction drawn between men and women regarding socialization echoes that of sex role stereotypes, with women demonstrating more expressive traits and actions and men more instrumental traits and actions (Helgeson 1994; Olson and Shultz 1994; Bozionelos and Bozionelos 2003). In his initial investigations into sex roles and the division of labor between men and women, Parsons (1964) identified expressive traits as those focused within the home, while instrumental traits were those focused outside of the home, or in the paid employment sector; expressive traits were linked to qualities such as emotional, empathic, and nurturing while instrumental traits were associated with financial provider, goal and task oriented, and independent (Molm and Hedley 1992; Wharton 2006). One prominent researcher investigating sex roles was Sandra Bem, who developed the Bem Sex Role Inventory (BSRI). Empirical investigations into sex roles, as measured with the BSRI, further highlight the differentiation of masculine sex roles as rational and focused on independence (instrumental) while feminine sex roles reflect compassion and intimacy (expressive) (Bem 1987; Turner 1994). These patterns are

found not only in social interactions and social roles, but also in occupational roles (Kandel, Davies, and Ravies 1985; Statham 1987; Matud et al. 2003). Based on these sex role orientations, the extensive sociological research demonstrates that women are more likely to fulfill and engage in nurturing roles more than men (Chodorow 1978; Kessler and McLeod 1984; Belle 1987).

In examining the stress response patterns of females, Shelley E. Taylor and colleagues (2000) coined the term "tend-and-befriend" to characterize how women respond under stress. According to the tend-and-befriend theory, women exhibit signs of nurturing their offspring (the tending component), while "affiliating with social groups" (the befriending component) (Taylor et al. 2000:411). In describing the dominant pattern of female socialization, women are more likely than men to seek support from their social relationships with family and friends (Belle 1989).

The gendered socialization differences between men and women are persistent, beginning in childhood and continuing throughout the lifespan (Belle 1987). Chodorow (1978) offers a developmental explanation that highlights young girls' behaviors as a means of reproducing mother behaviors. Fundamentally, the female gender role is reproduced through females emulating, reproducing, and enacting behaviors they recognize and identify in their mothers. Other developmental theories highlight the differences between interpersonal behaviors of males and females (Belle 1987; Belle 1989). These general differences depict males as expressing more interest in independence and less interest in emotions and feelings, while females focus more on emotional expression and nurturing (Kessler and McLeod 1984; Olson and Shultz 1994; Matud et al. 2003). Although the last several decades have produced some changes in gender roles, traditionally defined, stereotypical gender roles persist; the majority of women still fulfill

the role as primary caregiver and other domestic responsibilities while men focus on asserting their independence and other instrumentally based behaviors (Vaux 1985; Belle 1987; Umberson et al. 1996; Matud et al. 2003; Sayer 2005).

1.2.11.1 Connecting Gender Socialization to Health-Related Outcomes

Social networks impact two distinct health related outcomes: Social support and mental health status. However, social relationships are shaped by gender socialization patterns. Therefore, it is important to address how the effects of social networks on health-related outcomes differ between men and women. One trend that consistently appears in the gender socialization literature is that, in a time of need, women are more likely than men to turn to their friends for help or assistance; men often interpret help seeking behaviors as threatening to their masculine identity (DePaulo 1982; Turner 1994; Deborah Belle). In addition to turning to their friends for support and assistance, women are the ones who actively fulfill the roles as kin keeper, emotional guardian, and nurturer (Belle 1987). Empirical investigations into gender differences and the social support process report that women not only provide more supportive resources to others but also receive more social support than men (Kessler, McLeod, and Wethington 1985). Women are also more capable of mobilizing their supportive resources than men (Belle 1989). Additionally, women not only seek out more support from family and friends than men, but also provide more support to their network members than men (Belle 1987; Fuhrer and Stansfeld 2002). When compared to men, women turn to their network members for support more frequently and, when faced with a crisis situation, women are more likely to turn to their friends and family for support (Veroff, Kulka, and Douvan 1981; Belle 1987). Taken together, these findings would indicate that (a) having higher proportions of women in one's network

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would be beneficial for both perceived support and psychological health, and (b) women experience greater perceived adequacy of support than men. However, is this really the case?

Another health-related outcome that varies by gender is mental health status. Regarding the psychological well-being of men and women, women experience higher rates of psychological distress than men (Dohrenwend and Dohrenwend 1976; Weissman and Klerman 1977; Kessler and McLeod 1984; Mirowsky and Ross 1989; Turner 1994). An examination of how men and women develop and maintain social relationships offers an explanation for the reasons women experience more psychological distress than men. Because women are more expressive than men, their greater involvement in the emotional concerns of others may be one contributing factor to their increased levels of depression (Turner 1994). Another explanation, also rooted in gendered socialization patterns, addresses how the social roles women fulfill (primary caretaker, nurturer, kin-keeper) expose women to higher levels of stress than men; the heightened exposure to stress then leads to higher levels of psychological distress (Gove 1972; Aneshensel, Frerichs, and Clark 1981; Aneshensel, Rutter, and Lachenbruch 1991).

Although robust findings consistently demonstrate that social networks affect health, how do these effects differ between men and women? As previously discussed, the gender socialization literature offers descriptions of how social relationships differ between men and women, due to socialization patterns. Because men and women form social relationships differently, social network structures therefore differ between men and women; this has been documented in the social network literature.

Although gender socialization provides the framework for social interactions, the social relationships that develop for men and women illustrate marked differences in the structure of social networks. Although some researchers argue women's networks are larger than men's

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networks, these findings are not consistent across the board (Antonucci and Akiyama 1987). Other scholars report that network size is the same for men and women; however, they report network structure differences between men and women (Fischer 1982; Fischer and Oliker 1983; Marsden 1987; Moore 1990).

The proportion of kin in social networks is one difference between men and women. The social networks of women are consistently characterized as having a greater proportion of kin and more diverse kin ties and neighbors, when compared to the social networks of men (Fischer and Oliker 1983; Marsden 1987; Moore 1990; Pugliesi and Shook 1998; Yeung, Fung, and Lang 2007). Additionally, the support networks of women contain more kin than those of men (Hurlbert and Acock 1990; Pugliesi and Shook 1998). The social networks of men are characterized as having more co-workers, advisors, and friends when compared to the networks of women (Fischer and Oliker 1983; Moore 1990; Pugliesi and Shook 1998; Yeung et al. 2007). Although women are primarily responsible for maintaining kin ties within the family, it follows that the social networks of women will contain a higher proportion of kin than the social networks of men. When compared to men, women receive more support from kin within their network (Leslie and Grady 1985; Peek and Lin 1999; Fuhrer and Stansfeld 2002). Therefore, I argue that the proportion of kin in one's network will be positively related to perceived support and psychological health and that these effects will differ between men and women.

The proportion of female within one's social network is also important. Empirical investigations into gender differences and social network structure find that women not only provide more supportive resources to others but also receive more social support from other women, compared to men (Kessler et al. 1985; Antonucci and Akiyama 1987; Depner and Ingersoll-Dayton 1988; Turner 1994; Fuhrer and Stansfeld 2002; Yeung et al. 2007). Further,

women repeatedly report receiving more support from their same-sex network members (other females) and men report turning to their wives for support (Fischer 1982; Antonucci and Akiyama 1987; Turner 1994). Being embedded in a network with higher proportion female will positively impact perceived adequacy of support and mental health; further, these effects will differ between men and women.

One segment of the gender role socialization research argues that women demonstrate more expressive behaviors and traits, such as involving themselves in emotional relationships with others, than men do. However, the relationship between this expressive action and network density remains unexamined in the social network literature. Therefore, this dissertation asks whether men and women differ in structural density, and does the effect of structural density on social support and psychological distress differ significantly for men and women. As previously mentioned, there are several methods to assess network density. One method is to examine the interconnections among alters; this reflects how alters are connected to one another (Haines et al. 2008). Another measure of network density taps the emotional closeness of ego and each alter in the network. Based on past findings on the beneficial aspects of dense networks on health and well-being, I argue that structural density will be positively related to both social support and psychological health; furthermore, these effects will differ between men and women.

In the aftermath of a natural disaster, the devastating experience of loss and sadness is overwhelming. In such times of crisis, people turn to those around them; social networks play an important role in the recovery process, in terms of both physical and psychological recovery. This dissertation answers the call to identify the social network structures that connect social integration and psychological health; this research will identify the social network structures that increase the perceived adequacy of social support and reduce psychological distress. Examining

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this relationship from the sociological perspective allows this dissertation to investigate the independent effect of social network structure on social support and psychological well-being. Additionally, understanding how social networks provide health-related benefits for victims of a natural disaster will contribute to the sociological research on disasters. Further, this project considers how the effects of social network structures differ between men and women, contributing to sociology of gender studies.

Although one aim of this dissertation is to examine whether the effects of social network structure on social support and psychological distress differ between men and women, an additional aim is to examine this relationship prior to and immediately following Hurricane Katrina. The c impact of Hurricane Katrina on social networks offers social scientists a unique opportunity to examine the value of social networks following a devastating natural disaster.

1.2.12 Natural Disasters through the Sociological Lens: The Context of Hurricane Katrina

Hurricane Katrina made landfall on Monday, August 29, 2005, extensively damaging Southeastern Louisiana and Southern Mississippi. The catastrophic damage to New Orleans came not only from the hurricane, but also from multiple breaches in the levee system. Massive flooding in areas of New Orleans ensued, with some locations receiving more than 12 feet of water. Due to this colossal flooding, people who had not evacuated were trapped in the city. The direct effect of the hurricane, compounded by the massive flooding from the levee breaks, makes Hurricane Katrina the worst natural disaster in the history of the United States.

Natural disasters disrupt many areas and systems--economic, social, and environmental. As the greatest natural disaster in the history of the United States, Hurricane Katrina not only affected physical structures, such as houses, buildings, and neighborhoods, but also caused irreparable destruction to human life, social order, and health. Anecdotal evidence from

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physicians and mental-health specialists suggests that depression, anxiety, and other mood-related disorders rose in post-Katrina New Orleans (for example, see McCulley 2006). To date, scholarly findings echo the anecdotes: A significantly higher prevalence of mental-health disorders exist in post-Katrina New Orleans, compared to other areas affected by the hurricane (Galea et al. 2007).

Residents of New Orleans and surrounding areas are not only dealing with repairing and rebuilding their physical surroundings but are also having to reconstruct their social lives and their social networks. With friends and families now scattered throughout the United States, to whom did these individuals turn for support in the recovery process? Resources available through social networks undeniably benefit individuals, both mentally and physically. These resources are especially important in the aftermath of a natural disaster. Unger and Powell (1980) summarized findings from previous historical catastrophes, such as the Great Depression, World Wars, and disasters, and found that families who pool their available resources with friends, relatives, and neighbors cope better in the aftermath of the catastrophe than isolated families; this illustrates that these social relationships are essential in a time of recovery. Net of personal characteristics and community characteristics, individuals' social networks matter in the recovery process of a hurricane (Beggs et al. 1996a, 1996b; Haines et al. 2008; Hurlbert et al. 2000, 2005). As previously discussed, different network sectors are better at providing certain resources and outcomes; depending on the structure and resources of the network, constraining or enabling events can occur. Therefore, this dissertation asks: How do core discussion network structures effect social support and psychological distress in the aftermath of Hurricane Katrina, and do these effects differ significantly between men and women.

Although the majority of the disaster literature focuses on individual-level characteristics to describe the response patterns in the wake of a hurricane, there is a paucity of research focusing on the contextual characteristics of social network structure and how resources from networks facilitate the recovery process (Beggs et al. 1996a). Social resources theory demonstrates that access to social resources is affected by the structure of one's social network. In building upon the sociological literature on disasters and social resources theory in the context of Hurricane Katrina, this dissertation examines how social network structure affects the provision of two social resources: perceived adequacy of social support and psychological health.

In aligning the scientific findings that social networks affect health-related outcomes with the emerging evidence that this hurricane has caused serious health-related consequences to residents of the New Orleans metropolitan area, this dissertation answers the call for a sociological investigation of how social network structures provide benefits in the aftermath of a natural disaster. Specifically, this dissertation asks how social network structures directly and indirectly impact perceived adequacy of social support and psychological distress, and whether these effects differ significantly between men and women.

1.2.12.1   Social Network Structures and Natural Disasters

What are the social network structures that provide health-related benefits in the aftermath of a natural disaster? First, network size is an important predictor of available assistance in the aftermath of a hurricane. Just based on the sheer number of people one has access to, the larger the network size, the larger the potential pool of available people to help in the recovery process. However, did the size of social networks change significantly between 2003 and 2006 for New Orleans metropolitan residents? Also, does network size exert the same

effects on social support and psychological distress pre-Katrina as it does post-Katrina? Furthermore, do these effects differ significantly between men and women? Due to the chaotic nature of Hurricane Katrina and the intense levels of destruction and displacement, I predict that network size will differ significantly between 2003 and 2006, for both men and women. Here I also argue that larger social networks result in higher levels of psychological distress in the aftermath of Katrina. I argue that increased network size will result in psychological burden, or the incidence of respondents being pulled in too many directions at the same time, this increasing their levels of distress (Kessler and McLeod 1984). The effect of network size on psychological distress will differ significantly between men and women. As women are more emotionally involved in the lives of others, compared to men, they experience more vulnerability and exposure to events that happen to people in their networks (Aneshensel et al. 1991). Kessler and McLeod (1984) coined the phrase "high cost of caring" to describe how women experience higher levels of psychological distress, due to their awareness of and sensitivity to events that occur in the lives of their network members (Aneshensel et al. 1991; Antonucci, Akiyama, and Lansford 1998). For women, the potential number of alters' lives they are concerned with increases as network size increases.

In the aftermath of a natural disaster, the benefits of kin relationships are important. Kin provide the majority of help in the aftermath of a natural disaster (Fritz and Williams 1957; Quarantelli 1960; Quarantelli and Dynes 1977). Being embedded in social networks with high proportions of kin relationships not only provides emotional support but also shields individuals from negative consequences in the aftermath of a natural disaster (Quarantelli 1960; Drabek and Boggs 1968). Some disaster scholars even argue that natural disasters serve as a catalyst for strengthening kin relationships, even exceeding kin strength of pre-disaster relationships (Drabek

et al. 1975). Therefore, I predict proportion kin will differ significantly between 2003 and 2006 for men and women. Also, are the effects of proportion kin on perceived adequacy of social support and psychological distress different pre-Katrina to post-Katrina, and do these effects differ significantly between men and women? A review of the disaster literature consistently demonstrates that, when compared to men, women receive more aid from their family members (Drabek et al. 1975). As gender socialization theory predicts, the roles women fulfill as kin keepers keeps them in contact with more kin than men. However, following a natural disaster, women experience higher levels of distress than men do (Edwards 1998). This could also be explained by their fulfilling household responsibilities and being primarily responsible for others and domestic concerns (Anderson and Manuel 1994; Morrow and Enarson 1996; Edwards 1998). Women fulfill the role of primary caretaker more than men, even when they belong to the paid-labor workforce (Hochschild 1989; Morrow and Enarson 1996). Furthermore, the aftermath of a natural disaster brings about an expanded role of women as primary caretaker and nurturer (Morrow and Enarson 1996).

In line with the beneficial aspects of proportion kin for social support and psychological health, the proportion female in one's network is also advantageous for health-related outcomes. However, did proportion female differ significantly between 2003 and 2006 for men and women? Also, are the effects of proportion female on perceived adequacy of social support and psychological distress different pre-Katrina than post-Katrina, and do these effects differ significantly for men and women?

Density within one's social network would be advantageous when facing something as unpredictable and unprecedented as Hurricane Katrina. In defining themselves in relational and expressive terms, women are more able to define, identify, and express their feeling of emotional

closeness moreso than men. Given this difference, I predict women experience a higher proportion of strong ties than men do. However, did structural density differ between 2003 and 2006? Are the effects of structural density on perceived adequacy of social support and psychological distress different pre-Katrina than post-Katrina, and do these effects differ significantly between men and women?

1.2.13 Part 2: Hypotheses

In synthesizing the literatures on the social resources and social support strands of social network analysis, gender socialization, and natural disasters, I systematically explore core discussion networks for men and women in 2003 (pre-Katrina) and 2006 (post-Katrina) and advance the following hypotheses:

H2.1   The core discussion network size of men is different from the core discussion network size of women in (a) 2003 and (b) 2006.

H2.2   The core discussion network size of 2003 is different from the core discussion network size of 2006 for (a) men and (b) women.

H2.3   The proportion kin in core discussion networks for men is different from the proportion kin in core discussion networks for women in (a) 2003 and (b) 2006.

H2.4   The proportion kin in core discussion networks of 2003 is different from the proportion kin in core discussion networks of 2006 for (a) men and (b) women.

H2.5   The proportion female in core discussion networks for men is different from the proportion female in core discussion networks for women in (a) 2003 and (b) 2006.

H2.6   The proportion female in core discussion networks of 2003 is different from the proportion female in core discussion networks of 2006 for (a) men and (b) women.

H2.7   The structural density in core discussion networks for men is different from the structural density in core discussion networks for women in (a) 2003 and (b) 2006.

H2.8   The structural density in core discussion networks of 2003 is different from the structural density in core discussion networks of 2006 for (a) men and (b) women.

H2.9   The perceived adequacy of social support for men is different from the perceived adequacy of social support for women in (a) 2003 and (b) 2006.

H2.10 The perceived adequacy of social support in 2003 is different from the perceived adequacy of social support in 2006 for (a) men and (b) women.

H2.11 The psychological distress for men is different from the psychological distress for women in (a) 2003 and (b) 2006.

H2.12 The psychological distress in 2003 is different from the psychological distress in 2006 for (a) men and (b) women.

H2.13 The effects of social structural variables on network size will be different for men and women in (a) 2003 and (b) 2006.

H2.14 The effects of social structural variables on network size will differ between 2003 and 2006 for (a) men and (b) women.

H2.15 The effects of social structural variables on proportion kin will be different for men and women in (a) 2003 and (b) 2006.

H2.16 The effects of social structural variables on proportion kin will differ between 2003 and 2006 for (a) men and (b) women.

H2.17 The effects of social structural variables on proportion female will be different for men and women in (a) 2003 and (b) 2006.

H2.18 The effects of social structural variables on proportion female will differ between 2003 and 2006 for (a) men and (b) women.

H2.19 The effects of social structural variables on structural density will be different for men and women in (a) 2003 and (b) 2006.

H2.20 The effects of social structural variables on structural density will differ between 2003 and 2006 for (a) men and (b) women.

H2.21a Network size, proportion kin, proportion female, and network density will be directly and positively related to perceived adequacy of social support for men and women in (a) 2003 and (b) 2006.

H2.21b These effects will differ significantly between men and women in (a) 2003 and (b) 2006.

H2.21c These effects will differ significantly between 2003 and 2006 for (a) men and (b) women.

H2.22a Proportion kin, proportion female, and network density will be directly and negatively related to psychological distress for men and women in (a) 2003 and (b) 2006.

H2.22b   These effects will differ significantly between men and women in (a) 2003 and (b) 2006.

H2.22c   These effects will differ significantly between 2003 and 2006 for (a) men and (b) women.

H2.23a   Network size will be directly and positively related to psychological distress for men and women in (a) 2003 and (b) 2006.

H2.23b   This effect will differ significantly between men and women in (a) 2003 and (b) 2006.

H2.24a   As perceived adequacy of social support increases, psychological distress will decrease for men and women in (a) 2003 and (b) 2006, with corresponding network structures.

H2.24b   This effect will differ significantly between men and women in (a) 2003 and (b) 2006.

1.3   The Current Study

As McPherson et al. (2006) report, over the past two decades, the core discussion networks of Americans have gotten smaller in size. However, what are some of the other core discussion network structures that have changed, and have they changed differently for men and women?   To address these changes in a nationally representative sample, the first part of this dissertation focuses upon the core discussion networks of Americans in 1985 and 2004. As stated earlier in this chapter (Chapter 1), aligned with the literature on core discussion networks and serving as a partial replication and extension of Marsden (1987), Moore (1990), and McPherson et al. (2006), I systematically assess whether the effects of social structural factors on core discussion networks differ significantly between men and women in 1985 and 2004. To address this first part, I use General Social Survey (GSS) data to examine the core discussion networks of Americans in 1985 and 2004; my hypotheses for this part of my dissertation are listed on pages 19-20.

Core discussion network structures are one unique sector of overall social networks that are beneficial for expressive actions. The second objective of this dissertation is to examine the

effects of core discussion network structures on two health-related outcomes: perceived

adequacy of social support and psychological distress. I use regional data from Orleans and

Jefferson parishes to examine whether networks differ for men and women before and after

Hurricane Katrina. Specifically, I examine the effects of core discussion network structures on

perceived adequacy of social support and psychological distress (separately for men and women)

to determine (a) if these effects differ significantly between men and women and (b) if these

gender effects differ significantly between 2003 and 2006. My hypotheses for this part of my

dissertation are listed on pages 52-54.

CHAPTER 2: METHODOLOGY

2.1   Data and Sample

This dissertation addresses changes in core discussion networks for two distinct samples, a national sample and a regional sample. Data for this project come from several sources. The General Social Survey (GSS) is used to explore changes in national core discussion networks, while the regional data allow me to address network changes in the New Orleans metropolitan and surrounding area of Jefferson Parish.

2.1.1   National Data on Core Discussion Networks

To examine how core discussion network structures differ between men and women over the past two decades, I examine data from the 1985 wave and the 2004 wave of the General Social Survey (GSS). The social network module first appeared in the 1985 wave of the GSS; it serves as the baseline measure for making comparisons with the 2004 wave, which repeated the social network module. As a nationally representative, probability sample of respondents in the continental United States, the GSS has a relatively high response rate (approximately 71 percent (Davis, Smith, and Marsden 2007)).

Through the use of face-to-face interviews conducted by staff members from the National Opinion Research Center (NORC), the GSS collects data on a wide variety of attitudes, opinions, and behaviors. Interviews typically last 90 minutes (Smith 2007). Funded by the National Science Foundation (NSF), the General Social Survey is a trend survey.

The 1985 GSS data contain 1534 cases and the 2004 GSS data contain 2812 cases. Although all respondents in the 1985 wave (N=1534) were asked the social network module questions, only 1467 respondents of the total 2812 in the 2004 GSS wave received the social

network module questions. Therefore, my analyses for the 2004 GSS data only use the 1467

cases for which the social network module questions were asked.

The 1985 data consist of 846 females (55.1%) and 688 males (44.9%), who ranged in age

from 18 to 89. Males ranged in age from 18 to 89, while females' ages ranged from 19 to 89.[1]

The mean age for men in 1985 was 44.83, with a standard deviation of 17.19. The mean age for

women in 1985 was 46.43, with a standard deviation of 18.45.

The 2004 data consist of 813 females (55.4%) and 654 males (44.6%), who ranged in age

from 18 to 89. The mean age for men in 2004 was 46.47, with a standard deviation of 16.36.

The mean age for women in 2004 was 45.61, with a standard deviation of 16.74.

Table 2.1 presents the descriptive statistics (mean, standard deviation, minimum value,

maximum value, and range) for all variables (independent and dependent) included in the GSS

analysis. Panel A reflects the descriptive statistics for all 1985 GSS data, while Panel B is

restricted to men in 1985 and Panel C reports data for women in 1985. Panel D reflects the

descriptive statistics for all 2004 GSS data, while Panel E is restricted to men in 2004 and Panel

F reports data for women in 2004.

2.1.2   Regional Data on Core Discussion Networks

The second focus of this dissertation addresses the following questions: How do core

discussion network structures differ between men and women? What are the direct effects of

network structures on perceived adequacy of social support and psychological well-being, and do

these effects differ significantly between men and women? Also, what are the indirect effects of

social network structure on mental health status, through perceived social support? Addressing

these questions will use data from Orleans and Jefferson parishes in Louisiana.

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[1] The GSS uses the maximum age of 89 to describe individuals who are 89 years of age or older.

Table 2.1. Means and Standard Deviations for National Data (GSS)

Panel A. General Social Survey 1985 (Men and Women; n=1534)

	N	Mean	Standard Dev	Range	Min	Max
IVs & Controls						
Gender (Female)	1534	.552	.498	1	0	1
Age	1527	45.71	17.91	71	18	89
Education	1534	12.41	3.17	20	0	20
Married (Yes)	1534	.568	.495	1	0	1
Currently Employed (Yes)	1534	.594	.491	1	0	1
Kids < 18	1531	.748	1.17	8	0	8
Family Income	1531	24.20	17.67	62	.500	62.50
Median Income		21.25				
Race (White)	1534	.872	.334	1	0	1
DVs						
Network Size	1531	2.93	1.64	5	0	5
Proportion Female	1394	.523	.326	1	0	1
Proportion Kin	1395	.551	.372	1	0	1
Structural Density	1161	.612	.281	1	0	1

Panel B. General Social Survey 1985 (Men Only; n=688)

	N	Mean	Standard Dev	Range	Min	Max
IVs & Controls						
Gender (Female)	688	0	0	0	0	0
Age	686	44.83	17.19	71	18	89
Education	688	12.67	3.47	20	0	20
Married (Yes)	688	.631	.483	1	0	1
Currently Employed (Yes)	688	.714	.452	1	0	1
Kids < 18	686	.685	1.16	8	0	8
Family Income	687	27.23	17.88	62	.500	62.50
Median Income		23.75				
Race (White)	688	.878	.328	1	0	1
DVs						
Network Size	687	2.90	1.67	5	0	5
Proportion Female	621	.423	.325	1	0	1
Proportion Kin	622	.514	.382	1	0	1
Structural Density	505	.597	.286	1	0	1

(Table 2.1 continued)

Panel C. General Social Survey 1985 (Women Only; n=846)

	N	Mean	Standard Dev	Range	Min	Max
IVs & Controls						
Gender (Female)	846	1	0	0	1	1
Age	841	46.43	18.45	70	19	89
Education	846	12.19	2.89	20	0	20
Married (Yes)	846	.516	.500	1	0	1
Currently Employed (Yes)	846	.498	.500	1	0	1
Kids < 18	845	.800	1.19	8	0	8
Family Income	844	21.74	17.13	62	.500	62.50
Median Income		16.25				
Race (White)	846	.868	.339	1	0	1
DVs						
Network Size	844	2.95	1.61	5	0	5
Proportion Female	773	.603	.304	1	0	1
Proportion Kin	773	.581	.361	1	0	1
Structural Density	656	.624	.277	1	0	1

Panel D. General Social Survey 2004 (Men and Women; n=1467)

	N	Mean	Standard Dev	Range	Min	Max
IVs & Controls						
Gender (Female)	1467	.554	.497	1	0	1
Age	1462	45.99	16.57	71	18	89
Education	1466	13.73	2.88	20	0	20
Married (Yes)	1467	.543	.498	1	0	1
Currently Employed (Yes)	1466	.632	.482	1	0	1
Kids < 18	1460	.589	1.01	8	0	8
Family Income	1463	48.76	36.02	119.50	.500	120
Median Income		42.49				
Race (White)	1467	.788	.409	1	0	1
DVs						
Network Size	1467	1.94	1.67	5	0	5
Proportion Female	1065	.550	.353	1	0	1
Proportion Kin	1065	.587	.386	1	0	1
Structural Density	788	.643	.294	1	0	1

(Table 2.1 continued)

Panel E. General Social Survey 2004 (Men Only; n=654)

	N	Mean	Standard Dev	Range	Min	Max
IVs & Controls						
Gender (Female)	654	0	0	0	0	0
Age	651	46.47	16.36	71	18	89
Education	653	13.79	3.04	20	0	20
Married (Yes)	654	.566	.496	1	0	1
Currently Employed (Yes)	653	.670	.459	1	0	1
Kids < 18	650	.468	.912	5	0	5
Family Income	651	51.56	35.98	119.50	.500	120
Median Income		42.49				
Race (White)	654	.797	.403	1	0	1
DVs						
Network Size	654	1.81	1.67	5	0	5
Proportion Female	455	.492	.363	1	0	1
Proportion Kin	455	.566	.402	1	0	1
Structural Density	323	.649	.298	1	0	1

Panel F. General Social Survey 2004 (Women Only; n=813)

	N	Mean	Standard Dev	Range	Min	Max
IVs & Controls						
Gender (Female)	813	1	0	0	1	1
Age	811	45.61	16.74	71	18	89
Education	813	13.67	2.75	20	0	20
Married (Yes)	813	.524	.499	1	0	1
Currently Employed (Yes)	813	.577	.494	1	0	1
Kids < 18	810	.686	1.08	8	0	8
Family Income	812	46.52	35.91	119.50	.500	120
Median Income		42.49				
Race (White)	813	.781	.414	1	0	1
DVs						
Network Size	813	2.04	1.67	5	0	5
Proportion Female	610	.594	.340	1	0	1
Proportion Kin	610	.602	.374	1	0	1
Structural Density	465	.638	.292	1	0	1

Serving as the baseline, the 2003 data come from a project conducted by the Louisiana State University (LSU) Center for the Study of Public Health Impacts of Hurricanes. These telephone surveys gathered data on attitudes, opinions, behaviors, and core discussion networks of Orleans Parish residents (the parish that includes the city of New Orleans). The sample was drawn via Random-Digit Dialing (RDD); data were collected using Computer Administered Telephone Interviewing (CATI). The eligibility requirements were that participants were adult (18 years of age or older) residents of Orleans Parish. These data provide pre-Katrina baseline measures of the attitudes, opinions, behaviors, and core discussion networks of Orleans parish residents.

The 2003 baseline data contain a total of 606 cases, with 378 females (62.38%) and 227 males (37.46%)[2] who ranged in age from 18 to 88. Males ranged in age from 20 to 82, while females' ages ranged from 18 to 88. The mean age for men in 2003 was 43.91, with a standard deviation of 14.09. The mean age for women in 2003 was 45.85, with a standard deviation of 15.51.

The 2006 Citizen Recovery Survey serves as the third source of data for this dissertation. Conducted during the fall of 2006, at the time of the survey, these respondents were living in either Orleans or Jefferson parishes and had a working land line telephone. This telephone survey gathered data on attitudes, opinions, behaviors, and core discussion networks of residents in the aftermath of Hurricane Katrina. The sample was drawn via Random-Digit Dialing (RDD). For the 2006 post-Katrina data, the eligibility requirements were that participants were adult (18 years of age or older) residents of either Orleans or Jefferson parish. These data provide post-Katrina baseline measures on the attitudes, opinions, behaviors, and core discussion networks of Orleans and Jefferson parish residents.

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[2] The 2003 NOLA data contain 1 case (.16%) where sex is missing.

The 2006 post-Katrina sample contains a total of 677 cases, with 373 females (55.10%) and 301 males (44.46%),[3] who ranged in age from 18 to 99. The mean age for men in 2006 was 54.69, with a standard deviation of 15.49. The mean age for women in 2006 was 54.37, with a standard deviation of 15.22. Regarding the distribution of respondents by parish residence, 344 respondents (50.81%) resided in Orleans parish and 333 respondents (49.19%) resided in Jefferson parish at the time of the survey.

Table 2.2 reports the descriptive statistics (mean, standard deviation, minimum value, maximum value, and range) for all variables (independent and dependent) included in the regional (NOLA) analysis. Panel A reflects the descriptive statistics for all 2003 NOLA data, while Panel B is restricted to 2003 men and Panel C reflects 2003 women. Panel D reports the descriptive statistics for all 2006 NOLA data, while Panel E is restricted to 2006 men and Panel F reflects women in 2006.

2.2   Measures/Variables

2.2.1   Core Discussion Network Structure

2.2.1.1 The Use of Name Generators

To collect egocentric core discussion network data, this dissertation uses the standard procedure, the name generator-name interpreter sequence. For both the 1985 and 2004 GSS data, the name generator question asks respondents, "From time to time, most people discuss *important matters* with other people. Looking back over the last six months—who are the *people* with whom you discussed matters important to you? Just tell me their first names or initials."

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[3] The 2006 NOLA data contain 3 cases (.44%) where sex is missing.

Table 2.2. Means and Standard Deviations for Regional Data (NOLA)

Panel A. NOLA 2003 (Men and Women; n=606)

	N	Mean	Standard Dev	Range	Min	Max
IVs & Controls						
Gender (Female)	605	.625	.485	1	0	1
Age	584	45.08	15.01	70	18	88
Education	600	4.43	1.39	5	1	6
Married (Yes)	574	.416	.493	1	0	1
Health Status	597	3.01	.784	3	1	4
Kids < 18	604	.529	.983	6	0	6
Family Income	579	35.49	29.65	82.60	2.40	85
Median Income		30.00				
Race (White)	589	.443	.497	1	0	1
DVs						
Network Size	530	1.48	1.13	5	0	5
Proportion Female	450	.536	.434	1	0	1
Proportion Kin	452	.454	.449	1	0	1
Structural Density	431	.862	.226	1	0	1
Perceived Adequacy of Social Support	596	3.29	.855	3	1	4
Psychological Distress	603	7.29	9.29	47	0	47

Panel B. NOLA 2003 (Men Only; n=227)

	N	Mean	Standard Dev	Range	Min	Max
IVs & Controls						
Gender (Female)	227	0	0	0	0	0
Age	222	43.91	14.09	62	20	82
Education	225	4.48	1.40	5	1	6
Married (Yes)	221	.407	.492	1	0	1
Health Status	225	2.96	.839	3	1	4
Kids < 18	226	.407	.845	6	0	6
Family Income	221	38.99	29.54	82.50	2.50	85
Median Income		42.50				
Race (White)	219	.438	.497	1	0	1
DVs						
Network Size	201	1.35	1.10	5	0	5
Proportion Female	163	.459	.447	1	0	1
Proportion Kin	164	.378	.445	1	0	1
Structural Density	153	.856	.231	1	0	1
Perceived Adequacy of Social Support	224	3.36	.808	3	1	4
Psychological Distress	227	6.66	8.98	43	8	43

(Table 2.2 continued)

Panel C. NOLA 2003 (Women Only; n=378)

	N	Mean	Standard Dev	Range	Min	Max
IVs & Controls						
Gender (Female)	378	1	0	0	1	1
Age	361	45.85	15.51	70	18	88
Education	374	4.40	1.39	5	1	6
Married (Yes)	353	.422	.494	1	0	1
Health Status	371	3.03	.749	3	1	4
Kids < 18	377	.591	1.02	5	0	5
Family Income	358	33.33	29.56	82.60	2.40	85
Median Income		20.00				
Race (White)	370	.446	.497	1	0	1
DVs						
Network Size	329	1.56	1.13	5	0	5
Proportion Female	287	.580	.422	1	0	1
Proportion Kin	288	.498	.445	1	0	1
Structural Density	278	.865	.223	1	0	1
Perceived Adequacy of Social Support	371	3.25	.882	3	1	4
Psychological Distress	375	7.68	9.47	47	0	47

Panel D. NOLA 2006 (Men and Women; n=677)

	N	Mean	Standard Dev	Range	Min	Max
IVs & Controls						
Gender (Female)	674	.553	.497	1	0	1
Age	638	54.51	15.33	81	18	99
Education	646	4.25	1.23	5	1	6
Married (Yes)	672	.543	.499	1	0	1
Health Status	674	2.85	.862	3	1	4
Kids < 18	670	.541	.995	7	0	7
Family Income	665	48.93	38.06	108.54	1.47	110
Median Income		50.00				
Race (White)	649	.661	.473	1	0	1
DVs						
Network Size	677	1.83	1.30	5	0	5
Proportion Female	588	.635	.365	1	0	1
Proportion Kin	589	.605	.407	1	0	1
Structural Density	590	.948	.151	1	0	1
Perceived Adequacy of Social Support	612	2.56	.966	3	1	4
Psychological Distress	675	12.62	13.46	49	0	49

(Table 2.2 continued)

Panel E. NOLA 2006 (Men Only; n=301)

	N	Mean	Standard Dev	Range	Min	Max
IVs & Controls						
Gender (Female)	301	0	0	0	0	0
Age	287	54.69	15.49	81	18	99
Education	288	4.46	1.29	5	1	6
Married (Yes)	300	.640	.481	1	0	1
Health Status	300	2.93	.827	3	1	4
Kids < 18	298	.560	1.01	4	0	4
Family Income	296	56.72	39.85	108.25	1.75	110
Median Income		50.00				
Race (White)	289	.713	.453	1	0	1
DVs						
Network Size	301	1.57	1.20	5	0	5
Proportion Female	248	.645	.373	1	0	1
Proportion Kin	248	.634	.423	1	0	1
Structural Density	248	.940	.163	1	0	1
Perceived Adequacy of Social Support	269	2.53	.940	3	1	4
Psychological Distress	301	10.01	11.64	49	0	49

Panel F. NOLA 2006 (Women Only; n=373)

	N	Mean	Standard Dev	Range	Min	Max
IVs & Controls						
Gender (Female)	373	1	0	0	1	1
Age	351	54.37	15.22	81	18	99
Education	358	4.09	1.16	5	1	6
Married (Yes)	369	.463	.49	1	0	1
Health Status	371	2.79	.89	3	1	4
Kids < 18	369	.531	.99	7	0	7
Family Income	366	42.63	35.51	108.54	1.47	110
Median Income		30.00				
Race (White)	360	.619	.49	1	0	1
DVs						
Network Size	373	2.03	1.35	5	0	5
Proportion Female	337	.628	.359	1	0	1
Proportion Kin	338	.584	.394	1	0	1
Structural Density	339	.954	.141	1	0	1
Perceived Adequacy of Social Support	340	2.58	.990	3	1	4
Psychological Distress	371	14.83	14.46	49	0	49

The regional data use a modified version of the GSS name generator. The pre-Katrina (2003) name generator reads, "Now we have some more specific questions about people you know. This information will help us know more about the kinds of ties people have to other people. The people you tell us about may include members of your household, other people in the area, or people elsewhere, they don't have to live in your area. For each question, I'm going to ask you for the first name and the last initial of the person you're talking about, just so we can keep track. The names won't be kept permanently or used for anything, it's just so we can keep people straight. Who are the individuals with whom you have discussed important matters in the last six months?" The post-Katrina (2006) name generator uses a modified introduction, but the specific question remains the same. It reads, "Now we have some more specific questions about people you know, as part of understanding how people are getting along. The people you tell us about may include members of your household, other people in the area, or people elsewhere – they don't have to live in your area. For each question, I'm going to ask you for the first name and the last initial of the person you're talking about, just so we can keep track, then I'm going to ask you a few quick questions about them. First, could you tell us who you discussed matters that were important to you in the last six months?"

Following the name generator, a series of name interpreter questions asked respondents to provide information on characteristics of each individual (alter) they named. It should be noted that for the GSS, only the first five names of alters were recorded; name interpreter data were only collected on the first five individuals. For the 2003 New Orleans data, a maximum of five names was collected through the name generator question. For the 2006 New Orleans/Jefferson parish data, a limit was not placed on the number of names respondents could provide.

2.2.1.2 Measures of Network Structure

To measure core discussion network structure, I construct measures of network size, proportion kin, proportion female, and network density.

Network Size. I construct my measure of core discussion network size as the number of alters elicited by the GSS name generator. Although the GSS data categorize the number of alters given as ranging from zero to 6 or more, name interpreter data are only collected for the first five alters. Therefore, I set the maximum for the network size measure at 5; network size ranges from 0 to 5. Data for respondents who report 6 or more alters will be coded as having a network size of 5.

In the regional data, the 2003 survey instructed interviewers to accept a maximum of five names for the GSS name generator question. However, the 2006 regional data did not limit the number of names provided by respondents. To establish and maintain consistency in my measure of network size, I limit network size to five for the 2006 regional data. Respondents who report 6 or more alters will be coded as having a network size of 5.

Given that the remaining three dependent variables for the GSS analysis (proportion female, proportion kin, and network density) are measures of relative composition of core discussion network structure, they can only be calculated for networks greater than or equal to one. Therefore, respondents who report zero for network size are excluded from any analyses for proportion female, proportion kin, and network density. For 1985 GSS data, 136 cases (8.86%) are excluded because network size was 0. For 2004 GSS data, 397 cases (27.06%) are excluded. Although it appears that a moderate percentage of cases is excluded from the relative network composition measures in the 2004 data, this increase in the number of people reporting zero as network size is the trend documented by McPherson, Smith-Lovin, and Brashears (2006).

For the 2003 regional data, 78 cases (12.87%) are excluded because network size was 0. For the

2006 regional data, 87 cases (12.85%) are excluded. Table 2.3 presents the frequency

distributions of network size for all datasets.

Table 2.3. Network Size Frequency Distribution.

Panel A. 1985 GSS Data.

Network Size	Frequency	Percent
0	136	8.9
1	228	14.9
2	235	15.3
3	321	20.9
4	233	15.2
5	378	24.6
Total	1531	99.8
Missing	3	.2
Total	1534	100

Panel B. 2004 GSS Data.

Network Size	Frequency	Percent
0	397	27.1
1	281	19.2
2	263	17.9
3	232	15.8
4	128	8.7
5	166	11.3
Total	1467	100
Missing	0	
Total	1467	100

Panel C. 2003 NOLA Data.

Network Size	Frequency	Percent
0	78	12.9
1	251	41.4
2	115	19
3	54	8.9
4	18	3.0
5	14	2.3
Total	530	87.5
Missing	76	12.5
Total	606	100

(Table 2.3 continued)

Panel D. 2006 NOLA Data.

Network Size	Frequency	Percent
0	87	12.9
1	229	33.8
2	188	27.8
3	99	14.6
4	35	5.2
5	39	5.8
Total	677	100
Missing	0	
Total	677	100

Proportion Kin. To construct the measure of proportion kin, I created a dummy variable to represent the respondent's relationship with each alter named as being kin (1) or non-kin (0). Given that a proportion is the same as the mean value of a dichotomy when scored as 0 and 1, I calculate proportion kin as the average (mean) of kin relationships present within one's network.

Proportion Female. To construct the measure of proportion female, I created a dummy variable to represent the sex of each alter named as female (1) or male (0). Given that a proportion is the same as the mean value of a dichotomy when scored as 0 and 1, I calculate proportion female as the average (mean) of females present within one's network.

Network Density. In both the 1985 and 2004 waves of the GSS, respondents are asked to report how close they believe each pair of named alters is. The specific item reads, "Please think about the relations between the people you just mentioned. Some of them may be total strangers in the sense that they wouldn't recognize each other if they bumped into each other on the street. Others may be especially close, as close to each other as they are to you. First, think about (Name X) and (Name Y). Are (Name X) and (Name Y) total strangers? Are they especially close?" These statements are then repeated for each combination of alters named. This measure

captures the proportion of maximum intensity relationships in the network. Respondents

described alters as being especially close (1), neither close nor strangers (2), or total strangers

(3). To construct this network variable, the value for especially close remains coded as 1; I

recode neither close nor strangers to a value of .5, and total strangers as 0 (following the tradition

of Marsden 1987; Hurlbert et al. 2000). After recoding these values, I calculate network density

as the average (mean) intensity of ties among alters (Hurlbert et al. 2000).[4]

The regional data use a different type of question to measure structural density. In both

the pre-Katrina (2003) and post-Katrina (2006) data, respondents are asked to report how close

they feel to each named alter. The measure for structural density is constructed from a measure

that captures the "average closeness between the respondent and each of the alters" (Beggs et al.

1996a:64). The levels of closeness are broken down into whether ego feels especially close (1),

somewhat close (.5), or not close at all (0) to each alter. I construct structural density as the

average (mean) closeness of ties present within one's network.[5] Although the national and

regional data use different techniques as a proxy for network density, "networks which have a

high proportion of strong ego-alter ties tend to also have a high proportion of ties among alters"

(Beggs et al. 1996a:74). Therefore, my measures of network density are comparable.

2.2.2 Perceived Adequacy of Social Support

As previously stated, this dissertation follows in the research tradition that emphasizes

the cognitive appraisal of social support, such that perceived adequacy of support serves as a

better predictor of health-related outcomes than received support (Helgeson 1993; Turner and

Marino 1994; Thoits 1995; Haber, Cohen, Lucas, and Baltes 2007). The measure for perceived

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[4] For GSS, network density is measured as the strength of relationships between alters. Therefore, network density is only calculated for respondents who report network size of 2 or larger (Marsden 1987).

[5] For NOLA data, network density is measured as the average (mean) closeness of relationships between the respondent and each alter. Therefore, network density is only calculated for respondents who report network size of 1 or larger.

adequacy of support ranges from 1 to 4, with higher values indicating greater levels of perceived support. The pre-Katrina and post-Katrina measure comes from respondents' answers to the following question: "About how much of the time would you say you have enough people to help you? Would you say a lot of the time (4), some of the time (3), only once in a while (2), or never (1)?"

2.2.3   Psychological Distress

To assess the level of psychological distress among individuals in the Orleans and Jefferson parish areas, a measure of psychological distress developed by Ross and Mirowsky (1989) was used in the pre-Katrina (2003) and post-Katrina (2006) data. Although general population measures of psychological distress are often collected via the CES-D Scale (Center for Epidemiological Studies – Depression Scale), the Ross and Mirowsky (1989) measure is highly correlated with the CES-D (r=.92) (Radloff 1977; Ross and Mirowsky 1984; Ross and Mirowsky 1989).

Following the item selection of Ross and Mirowsky (1989:209), the scale used here asks respondents to report, "How many days (0 to 7) during the past week have you: (1) felt that you just couldn't get going, (2) felt sad, (3) had trouble getting to sleep or staying asleep, (4) felt that everything was an effort, (5) felt lonely, (6) felt that you couldn't shake the blues, and (7) had trouble keeping your mind on what you were doing?"

To construct the composite measure of psychological distress, respondents' answers to the above items are summed. This value reflects the number of psychologically distressing symptoms experienced per week; values range from 0 to 49 with higher values indicating higher levels of psychological distress.

To determine the internal consistency of the psychological distress scale, or how well each of the seven items measures psychological distress, I calculated the alpha reliability for both the pre-Katrina and post-Katrina data. In the social sciences, an alpha reliability of .70 or above is considered good (Streiner and Norman 2003). The Cronbach's Alpha for 2003 Nola is .833. The Cronbach's Alpha for 2006 Nola is .889.

2.2.4 Individual Characteristics

To maintain consistency between the national and regional data, a standard set of individual characteristics is used in the analyses. The main independent variable is gender, which compares women (1) to men (0). Previous research on the social structural explanations for gender differences in social relations finds that women and men occupy different positions within the social structure; the most commonly-examined social structures are age, education level, employment status, marital status, family income, and children under the age of 18 living in the household (Moore 1990). Therefore, to determine whether these social structural explanations impact men and women differently, I use these individual characteristics as predictor variables in the GSS analyses to predict network size, proportion kin, proportion female, and network density. These results are presented in Chapter 3.

For the NOLA analysis, this set of individual characteristics are used as predictors for network size, proportion kin, proportion female, and network density.[6] I then use these variables as controls for examining the impact of core discussion network structure on predicting perceived adequacy of social support and psychological distress. These results are presented in Chapter 4.

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[6] 2006 NOLA data did not contain any information on current employment status. Self-reported physical health status is known to have an impact on social networks, social support, and psychological distress. Therefore, in the regional 2003 and 2006 data, I include self-reported physical health status as an individual characteristic.

Age is measured in years.[7] Education is measured differently between the GSS data and the NOLA data. For 1985 and 2004 GSS, education is measured in years, reflecting the highest year of education completed. However, while the 2003 NOLA collected respondents' highest year of education completed, the 2006 post-Katrina education level comes from the question, "How many years of school have you completed?" Response categories are coded as: 0-8 grade (1), 9-11 grade (2), high school graduate (3), some college/technical school graduate (4), four year college degree (5), and post graduate degree (6). I collapse the 2003 educational data to parallel the 2006 educational data.

Employment status compares those who are currently employed (1) to those who are not currently employed (0).[8] Marital status compares married people (1) to all others (0); this dichotomy for marital status compares married respondents to all unmarried individuals (including widowed, divorced, separated, or never married). The family income measure reflects ranges in thousands of dollars.[9] For the cases in which income is missing, I construct a

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[7] In the 2003 pre-Katrina data, respondents were asked to report the year in which they were born. To compute their age, I subtract that year from 2003.

[8] There is no measure of employment status for the 2006 post-Katrina respondents. Recall, I use self-reported health status as a predictor in the NOLA analyses.

[9] 1985 GSS family income was coded according to the following increments: less than $1,000, $1,000- $2,999, $3,000-$3,999, $4,000-$4,999, $5,000-$5,999, $6,000-$6,999, $7,000-$7,999, $8,000-$9,999, $10,000-$12,4999, $12,500-$14,999, $15,000-$17,499, $17,500-$19,999, $20,000-$22,499, $22,500-$24,999, $25,000-$34,999, $35,000-$49,999, $50,000 and more. I then recoded family income to thousands of dollars, assigning the midpoint for each category. I recoded the last category as $62,500 in accordance with Hout's (2004) report regarding the upper midpoint for 1985 GSS family income. 2004 GSS family income was coded according to the following increments: under $1,000, $1,000- $2,999, $3,000-$3,999, $4,000-$4,999, $5,000-$5,999, $6,000-$6,999, $7,000-$7,999, $8,000-$9,999, $10,000-$12,4999, $12,500-$14,999, $15,000-$17,499, $17,500-$19,999, $20,000-$22,499, $22,500-$24,999, $25,000-$29,999, $30,000-$34,999, $35,000-$39,999, $40,000-$49,999, $50,000-$59,999, $60,000-$74,999, $75,000-$89,999, $90,000-$109,999, $110,000 or over. I then recoded family income to thousands of dollars, assigning the midpoint for each category. I recoded the last category as $120,000. 2003 NOLA family income was coded according to the following increments: under $5,000, under $10,000, under $15,000, under $25,000, under $35,000, under $50,000, under $75,000, and more than $75,000. I then recoded family income to thousands of dollars, assigning the midpoint for each category. I recoded the last category as $85,000. 2006 NOLA family income was coded according to the following increments: less than $10,000, less than $20,000, less than $40,000, less than $60,000, less than $80,000, less than $100,000, and over $100,000. I then recoded family income to thousands of dollars, assigning the midpoint for each category. I recoded the last category as $110,000.

prediction equation to impute income.[10] The presence of children in the household under 18 is

measured as the number of children under 18 living in the household. Self-rated health (for the

NOLA analysis) is measured as poor (1), fair (2), good (3), or excellent (4). I measure race,

included as a control variable, as white (1) or nonwhite (0).

2.3   Analysis Procedures

This dissertation uses several analysis techniques. The first aim of this dissertation is to

assess whether the effects of social structural factors on core discussion networks differ

significantly between men and women. To address this first aim, I use General Social Survey

(GSS) data to examine the core discussion networks of Americans in 1985 and 2004; these

results are presented in Chapter 3. Within Chapter 3, the first stage of analysis uses independent

sample t-tests to detect significant differences between the mean values of core discussion

network structures for men and women in 1985 and 2004. The second stage of analysis for the

national data employs multivariate analysis. For multivariate modeling, I use ordinary least

squares (OLS) regression. The OLS models examine the direct effects of social structural

characteristics on core discussion networks. I present the unstandardized ordinary least squares

coefficients and standard errors for these regression models in a series of tables.

The second aim of this dissertation focuses on core discussion networks within the

context of Hurricane Katrina. Specifically, I focus on the effects of core discussion networks on

perceived adequacy of social support and psychological distress (separately for men and women)

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[10] In cases where family income was not reported, I created an imputation equation to impute family income. For
1985 GSS, the prediction equation to impute family income was: 1.921 + (.500 x health) + (1.518 x currently
employed) + (.381 x education) + (-.526 x female) + (2.595 x married) + (2.557 own home). For 2004 GSS, the
prediction equation to impute family income was: 4.355 + (.032 x age) + (1.217 x white) + (.452 x education) +
(4.456 x married) + (2.842 x currently employed). For 2003 NOLA, the prediction equation to impute family
income was: 1.970 + (.577 x currently employed) + (1.176 x married) + (.309 x education) + (.338 x health status) +
(.952 x own home) + (.522 x own car) + (-.277 x safe neighborhood). For 2006 NOLA, the prediction equation to
impute family income was: 1.557 + (.974 x white) + (-.018 x age) + (.402 x education) + (-.417 x female) + (1.332 x
married) + (.235 x self-rated health).

to determine (a) if these effects differ significantly between men and women and (b) if these

gender effects differ significantly between 2003 and 2006. I also examine (c) the indirect effects

of network structures on psychological distress through perceived adequacy of social support, net

of social structural characteristics. Chapter 4 presents all results and findings for the regional

sample (NOLA). Within Chapter 4, the first stage of analysis uses independent sample t-tests to

detect significant differences between the mean values of core discussion network structures,

perceived adequacy of social support, and psychological distress for men and women in 2003

and 2006. The second stage of analysis employs multivariate analysis. For multivariate

modeling, I use ordinary least squares (OLS) regression. I present the unstandardized ordinary

least squares coefficients and standard errors for these regression models of in a series of tables.

The third stage of analysis for both the national and regional data involves conducting a

statistical test for the equality of regression coefficients. This z-score, commonly referred to as

the Paternoster coefficient, statistically tests the null hypothesis that two regression coefficients,

from identical regression models, are equal to one another (Paternoster, Brame, Mazerolle, and

Piquero 1998). The formula for calculating this z-score is as follows:

$$Z \quad = \quad \frac{b_1 - b_2}{\sqrt{SEb_1^2 + SEb_2^2}}$$

The numerator reflects the difference between the unstandardized coefficients (b_1 and b_2) divided

by the square root of the sum of the squared standard errors. In testing the equality of regression

coefficients, this z-score determines whether the effect of each independent variable is the same

across models (and in this dissertation, models are grouped by gender). Therefore, a significant

z-score means that the effect of a given independent variable is not the same (is significantly

different) for men and women. I compute these z-scores to test for significant differences

between men and women on all significant predictor variables in GSS 1985, GSS 2004, NOLA 2003, and NOLA 2006.

2.4   Regression Diagnostics

To ensure that none of my independent variables are highly correlated with one another, which would flaw my analyses, I examine tolerance estimates. The social science rule of thumb for tolerance levels is typically set at .4. Tolerance levels below .4 indicate that several predictor variables are highly correlated with one another and multicollinearity may be a problem (Kuter, Nachtsheim, and Neter 2004). In examining tolerance estimates, none of the coefficients fell below .4. Therefore, colinearity did not affect my results significantly.

For my OLS regression analyses, I also test for heteroskedasticity (variance of error terms) (Kutner, Nachtsheim, and Neter 2004). One assumption within regression analysis is homoskedasticity, meaning equal error terms (equal error variance). To investigate whether there is heteroskedasticity, I examine residuals in scatterplots. If heteroskedasticity is detected, I take the appropriate steps to correct this situation.

CHAPTER 3: ADDRESSING GSS DATA ANALYSIS AND RESULTS

The first aim of this dissertation is to assess whether the effects of social structural factors on core discussion networks differ significantly between men and women. Drawing upon the findings that core discussion networks have declined in size over the past two decades (McPherson et al. 2006), this dissertation will also assess whether the effects of social structural factors on core discussion networks differ significantly between 1985 and 2004, for men and women. In going beyond previous research, I examine the following social network structures separately for men and women in 1985 and 2004: network size, proportion kin, proportion female, and network density. Social network data from the 1985 General Social Survey (GSS) serve as the baseline measure to which to compare the 2004 GSS social network data.

In this chapter (Chapter 3), I consider how the effects of social structural characteristics differ (a) between men and women in 1985 and in 2004 (Men 1985-Women 1985; Men 2004-Women 2004) and (b) between 1985 and 2004 for men and women (Men 1985-Men 2004; Women 1985-Women 2004).; my hypotheses predict significant differences in effects for all of these comparisons. For my hypotheses, I use the test for the equality of regression coefficients; this z-score tests whether the regression coefficients of the groups being compared are equal. The use of this test determines whether the effects of social structural factors on core discussion network structures differ significantly between men and women in (a) 1985 and (b) 2004, and whether the effects of social structural factors on core discussion network structures differ significantly between 1985 and 2004 for (a) men and (b) women. Therefore, my hypotheses focus on testing the effects of social structural factors on core discussion networks *between* models; I do, however, report the results for significant findings *within* models as well.

3.1 Independent Sample T-Tests for Differences in Means Comparing Men and Women in 1985 and 2004

Recently, the findings of McPherson et al. (2006) shed new light on social networks: The core discussion networks of Americans are smaller now than two decades ago. One question that this dissertation builds upon is the extent to which core discussion network structures have changed between 1985 and 2004. As a partial replication of previous scholarship regarding the overall changes in network structure over the last two decades, I use independent sample t-tests to assess the differences in core discussion network structures between men and women in 1985 and 2004. Although detecting the differences in mean values for core discussion network structures is not a focus of this dissertation, I provide the results here as replication of analyses to lend support to the work of Marsden (1987), Moore (1990), and McPherson et al. (2006). Table 3.1 (Panel A) provides the results of a series of independent sample t-tests for men and women in 1985. Panel B (Table 3.1) presents the results of the independent sample t-tests for men and women in 2004. Panel C (Table 3.1) reports the independent sample t-tests for men only, testing the differences between 1985 and 2004. Panel D (Table 3.1) presents the results of differences between 1985 and 2004 for women only.

3.1.1 Significant Results: Independent Sample T-Tests[11]

3.1.1.1 Differences between Men and Women in (a) 1985 and (b) 2004

Results of the t-tests show that, in 1985, men and women differed significantly in proportion kin and proportion female in their core discussion networks (Panel A, Table 3.1).

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[11] One assumption for conducting independent sample t-tests is that variances are equal for the two independent groups. The Levene test for equality of variance is used to test this assumption. If the result of the Levene test is significant, equal variances can not be assumed. However, the assumption of equal variances can be relaxed when either large samples are used or when the two independent groups are roughly equal in size. Therefore, the results do not violate any of the assumptions of the independent sample t-tests. SPSS also reports the coefficients and p-value for equal variance not assumed. Please note: significant results for the Levene test (meaning equal variances not assumed) are identified above in cases where degrees of freedom (df) contain two numbers after the decimal point.

Table 3.1. Independent Sample T-Tests for Differences in Means of Core Discussion Network Structures.

Panel A. GSS 1985: Differences between Men and Women.

Dependent Variables	N	Mean	St. Dev.	T-Value	P
Network Size					
Men	687	2.90	1.67	-.522	.602
Women	844	2.95	1.61		
DF = 1529					
Proportion Kin					
Men	622	.514	.382	-3.30	.001***
Women	773	.581	.361		
DF = 1295.95					
Proportion Female					
Men	621	.423	.325	-10.61	.000***
Women	773	.603	.304		
DF = 1288.56					
Network Density					
Men	505	.597	.286	-1.64	.102
Women	656	.624	.277		
DF = 1159					

* p≤.05, ** p≤.01, ***p≤.001 (based on two-tailed tests of significance).

Panel B. GSS 2004: Differences between Men and Women.

Dependent Variables	N	Mean	St. Dev.	T-Value	P
Network Size					
Men	654	1.81	1.67	-2.65	.008**
Women	813	2.04	1.67		
DF = 1465					
Proportion Kin					
Men	455	.566	.402	-1.47	.140
Women	610	.602	.373		
DF = 936.52					
Proportion Female					
Men	455	.492	.363	-4.66	.000***
Women	610	.594	.339		
DF = 1063					
Network Density					
Men	323	.649	.298	.502	.616
Women	465	.638	.292		
DF = 786					

* p≤.05, ** p≤.01, ***p≤.001 (based on two-tailed tests of significance).

(Table 3.1 continued)

Panel C. GSS Men Only: Differences between 1985 and 2004.

Dependent Variables	N	Mean	St. Dev.	T-Value	P
Network Size					
1985	687	2.90	1.67	11.98	.000***
2004	654	1.81	1.67		
DF = 1339					
Proportion Kin					
1985	622	.514	.382	-2.14	.033*
2004	455	.566	.402		
DF = 948.48					
Proportion Female					
1985	621	.423	.325	-3.25	.001***
2004	610	.594	.339		
DF = 912.86					
Network Density					
1985	505	.597	.286	-2.52	.012*
2004	323	.649	.298		
DF = 826					

* $p \leq .05$, ** $p \leq .01$, ***$p \leq .001$ (based on two-tailed tests of significance).

Panel D. GSS Women Only: Differences between 1985 and 2004.

Dependent Variables	N	Mean	St. Dev.	T-Value	P
Network Size					
1985	844	2.95	1.61	11.23	.000***
2004	813	2.04	1.67		
DF = 1655					
Proportion Kin					
1985	773	.581	.361	-1.07	.283
2004	610	.602	.373		
DF = 1381					
Proportion Female					
1985	773	.603	.304	.559	.576
2004	610	.594	.339		
DF = 1234.34					
Network Density					
1985	656	.624	.277	-.827	.409
2004	465	.638	.292		
DF = 1119					

* $p \leq .05$, ** $p \leq .01$, ***$p \leq .001$ (based on two-tailed tests of significance).

Women's networks (M = .581, SD = .361) contained a significantly higher proportion of kin, on average, than men's networks (M = .514, SD = .382), (t (1295.95) = -3.30, p = .001). The data also reflect a statistically significant difference for proportion female between women (M = .603, SD = .304) and men (M = .423, SD = .325), with women's networks containing a higher proportion of female than men's networks, (t (1288.56) = -10.61, p = .000).

The finding that women's networks contain higher proportion of kin than men's networks in 1985 is not startling, but offers support for gender role differentiations between men and women, as well as evidence of how these differences in roles impact core discussion networks. In elaborating on the differences in kin relationships for men and women, Gerstel and Sarkisian (2006) posit that, "women rather than men are the keepers of the modern extended family" (p. 254). In other words, women are the family members that manage and engage in kin-connecting relationships, such as "the preparation of ritual feasts, responsibility for holiday card lists, and gift buying" and these responsibilities can be perceived "as extensions of women's domestic responsibilities for cooking, consumption, and nurturance" (di Leonardo 1987:446). Research shows that, in addition to fulfilling paid employment responsibilities and household/childcare responsibilities for their own immediate family unit, women are also primarily responsible for maintaining ties with other relatives in the family. Gerstel (2000, 2003) labels women's responsibilities to extended family as the "third shift." Whereas women's "first shift" refers to paid labor/employment responsibilities, and the "second shift" covers immediate household and childrearing responsibilities, the "third shift" is the unpaid labor involved in caring for extended kin responsibilities (Hochschild and Machung 2003). Not only do men and women fulfill certain social roles, but the effects of fulfilling social roles significantly impact the structure of core

discussion networks, resulting in significant differences in proportion kin between men and women.

While these results for proportion kin are consistent with Marsden's (1987) analysis of the 1985 GSS core discussion networks, his research did not specifically present findings for proportion female; rather, he examined sex heterogeneity as a core discussion network structure. My finding of larger proportion female in women's networks, compared to men's, further contributes to Marsden's results by highlighting the principle of network homophily. The finding that women turn to other women to discuss important matters while men turn to other men illustrates the principle of homophily; network homophily is defined as ego turning to a similar other, or the similarity that exists between ego and alters. Not only does this finding reflect the general network trend of homophily, but this would be an example of gender homophily, where ego is turning to an alter of the same gender.

The 2004 GSS data yield a slightly different picture of differences in core discussion networks between men and women (Panel B, Table 3.1). The proportion female remains significantly different between men (M = .492, SD = .363) and women (M = .594, SD = .339) in 2004; women's networks contain higher proportion female than men's networks do, (t (1063) = -4.66, p = .000). In 2004, women discuss important matters with more women than men do. Unlike 1985, I find a significant difference in network size between men (M = 1.81, SD = 1.67) and women (M = 2.04, SD = 1.67) in 2004, with women having significantly larger networks than men, (t (1465) = -2.65, p = .008). Therefore, in 2004, women discussed matters that were important to them with more people than men did. As some social network scholars argue, network size can be indicative of overall social integration. These results lend support that, in 2004, women were more socially integrated than men. Although McPherson et al. (2006)

analyzed the 2004 GSS social network data, they did not present findings for mean differences. Thus, these results are also new contributions to the social network literature.

3.1.1.2 Differences between 1985 and 2004 for (a) Men and (b) Women

To address the extent to which network structures differ significantly between 1985 and 2004 for men and women, I conducted another set of independent sample t-tests. Although McPherson et al. (2006) reported that overall network size has decreased between 1985 and 2004, I address the gender specific differences in core discussion network structures over the past two decades.

Men showed several significant differences in network structure between 1985 and 2004 (Panel C, Table 3.1). Men's network size decreased significantly from 1985 (M = 2.90, SD = 1.67) to 2004 (M = 1.81, SD = 1.67). Men's core discussion network size in 2004 is smaller than 1985, t (1339) = 11.98, p = .000. As McPherson et al. (2006) report, core discussion network size decreased dramatically from 1985 to 2004 for Americans. The significant finding that men's networks size decreased between these years is not new but further confirms the change in network size over the past two decades. To further examine how the reduction in network size impacts the relative network structure such as proportion kin and proportion female, my results are consistent with the findings of McPherson et al. (2006): Men's proportion kin increased significantly from 1985 (M = .514, SD = .382) to 2004 (M = .566, SD = .402). Men's 2004 networks contain higher proportion kin than their 1985 networks, (t (948.48) = -2.14, p = .033). As McPherson et al. (2006) maintain, decreased network size with an increase in proportion kin between 1985 and 2004 indicates the removal of non-kin from core networks; the removal of non-kin from core networks produces overall reduced size as well as increased proportion kin.

These findings indicate that, although network size has decreased, core networks are denser in 2004 than in 1985.

The proportion female in men's networks also differed significantly between 1985 (M = .423, SD = .325) and 2004 (M = .594, SD = .339). Men's networks in 2004 contained a higher proportion female than men's networks in 1985, (t (912.86) = -3.25, p = .001). Men's networks were more female-centered in 2004 than they were in 1985. Despite the reduced size in core networks over the past two decades, the proportion of female ties remains highly salient in men's networks. Furthermore, network density within men's networks differed significantly between 1985 (M = .597, SD = .286) and 2004 (M = .649, SD = .298); men's networks were significantly more dense in 2004, (t (826) = -2.52, p = .012). For GSS data, network density refers to the interconnections among alters within ego's network; men's networks in 2004 were more interconnected than they were in 1985. For men, all four core discussion network structures underwent significant changes over the past two decades. Although the direct causal reasons for such changes remain unknown, my results indicate that men's core networks have undergone significant changes over the past two decades.

Turning to changes in women's networks over the past two decades, only network size differed significantly between 1985 (M = 2.95, SD = 1.61) to 2004 (M = 2.04, SD = 1.67). Women's networks in 2004 were significantly smaller than their 1985 networks, (t (1655) = 11.23, p = .000). As stated earlier, the hallmark of McPherson et al.'s (2006) research was the surprising, and significant, decrease in Americans' network size over the past two decades. While my findings here correspond with McPherson et al.'s (2006) report on decreasing size, it is interesting to note that size alone was the only significant change in women's core discussion network structures between 1985 and 2004. Whereas men's networks underwent significant

changes in all core discussion network structures (network size, proportion kin, proportion female, and network density), women's proportion kin, proportion female, and network density did not undergo significant changes between 1985 and 2004. My findings appear to indicate that, over the past two decades, men have experienced more changes in their interpersonal relationships than women have.

To elaborate on these significant findings, I argue that the increase of women into paid employment work opportunities may serve as explanations for these changes. As women's paid employment opportunities are on the rise, this affords women unique opportunities to socialize with a greater pool of contacts, thus increasing their network size. As Blau's axiom states, "social associations depend on opportunities for social contact" (1977:281). Thus, for women, working outside of the home provides an opportunity to establish and maintain social contacts. On the other hand, with women working more outside of the home, family and childrearing responsibilities have become more of a co-parenting enterprise, with men participating more within the in-home sphere, thus limiting their exposure to potential contacts, particularly non-kin males. Hence, for men, as network size is on the decline, the proportion kin, female, and density are on the rise.

Building upon the findings of significant differences in core discussion network structures between men and women in both 1985 and 2004, the next stage of my analysis uses multivariate modeling to explore the effects of social structural factors on core discussion networks, and whether these effects differ significantly between men and women in (a) 1985 and (b) 2004, and between 1985 and 2004 for (a) men and (b) women.

3.2 Multivariate Analysis and Regression Diagnostics

For multivariate modeling, I use ordinary least squares (OLS) regression to assess the effects of social structural factors on network size, proportion kin, proportion female, and network density, separately for men and women, in (a) 1985 and (b) 2004. For each multivariate model, I present the unstandardized ordinary least squares coefficient and standard errors.

To ensure that none of my independent variables are highly correlated with one another, which would flaw my analyses, I also examine tolerance estimates. The social science rule of thumb for tolerance levels is typically set at .4: Tolerance levels below .4 suggest that several predictor variables are highly correlated with one another and multicollinearity may be a problem (Kuter, Nachtsheim, and Neter 2004). Therefore, I examined the data to make sure that none of my coefficients fall below .4. None of the coefficients fell below .4, suggesting that collinearity did not affect my results significantly.

3.3 GSS 1985

3.3.1 Effects of Social Structural Factors on Core Discussion Networks in 1985: Gender Differences

To assess the impact of social structural characteristics on the structure of respondents' core discussion networks, I conducted a series of OLS regressions, separately for men and women in 1985; I also tested each predictor variable to determine whether its impact on network characteristics differed significantly between men and women. Providing the gender-specific models enables me to test whether the effects of social structural factors on network structure differ between men and women. As the hypotheses at the end of Chapter 1 state, I predict that all of the social structural factors will differ significantly between men and women, for all core discussion network structures.

**Table 3.2. Unstandardized ordinary least squares coefficients for regression of
<u>NETWORK SIZE</u> on social structural characteristics**

	1985 Gender Differences				
	Panel A		Panel B		Panel C
	Men 1985		Women 1985		M1 – W1
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	Z[‡]
Age	-.013**	.004	-.018***	.004	.885 (ns)
Education	.121***	.020	.119***	.020	.071 (ns)
Married (Yes)	-.117	.139	.085	.117	-1.11 (ns)
Currently Employed (Yes)	.006	.159	-.018	.114	.123 (ns)
Kids < 18	-.009	.057	-.099*	.049	1.19 (ns)
Family Income	.012**	.004	.010**	.004	.354 (ns)
Race (White)	.085	.186	.692***	.154	-2.51*
Intercept	1.65		1.58		
R^2	.149		.187		
Adjusted R^2	.140		.180		
N	682		837		

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M1 = Men 1985; W1 = Women 1985

I first ask what social structural factors affect network size for men in 1985 (Panel A,
Table 3.2). The results for the main effects show that age exerts a significant, negative effect on
network size: Older men have smaller networks than younger men. Men's education and family
income both exert significant, positive effects on network size: Men with higher education have
larger networks than men with lower education. Also, men with higher family income are
embedded in larger networks than men with lower family income.

When addressing the question of what social structural factors affect network size for
women in 1985 (Panel B, Table 3.2), results show that age, education, and family income exert
significant effects on network size, similar to the effects they have on men's networks in 1985.
Older women have smaller networks than younger women. Women with higher education have
larger networks than women with lower education. Also, women with higher family income are
embedded in larger networks than women with lower family income. Furthermore, for women

in 1985, results demonstrate that having children under the age of 18 in the home has a significant, negative effect on network size: As the number of children under the age of 18 increases, network size decreases. The control variable race (white) also exerts a significant, positive effect on network size: White women have larger networks than non-white women.

Considering that education and family income afford more opportunities for social interaction, it is not surprising that these factors are positively related to network size for both men and women. The potential field of possible social association can explain why age is negatively related to network size; older people may be less exposed to social opportunities to associate than younger people, just based on logistical issues. As my results indicate, for women, children in the home is also negatively related to network size; child care responsibilities may prohibit the opportunities women have from socially interacting with people in other social circles, thus reducing their network size.

To specifically test my hypotheses about gender differences in these effects, I compute a series of z-scores. Panel C (Table 3.2) reports the z-scores for the tests for the equality of regression coefficients; these z-scores indicate whether there is a significant difference between men and women in the effects of each social structural variable on network size. None of my hypotheses for network size are supported. For men and women in 1985, none of the structural factors that were predicted to shape network size differently for men and women are significant. The lack of significant findings demonstrates that the effects of the social structural factors on network size are more similar than different between men and women in 1985. The absence of significant findings for marital status and children in the home is rather interesting, given past research findings that men and women experience these life events differently, and the impact of these life events differentially shape the opportunities for forming and maintaining social

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associations. This does not seem to be the case in regard to network size in 1985. The control variable race is the only variable that differs significantly between men and women in 1985 (z = -2.51, p < .05). While the effect of race on network size for men was not significant, it was significant for women. The significant z-score reflects that the effect of race (white) was larger for women in 1985, and the difference between men and women is statistically significant.

If network size is indicative of one's overall level of social integration, my results illustrate that while certain structural factors promote opportunities for social interactions (education, family income), other factors can restrict the potential for social interactions (age, children in the home), thereby shaping core discussion network size.

Table 3.3. Unstandardized Ordinary Least Squares Coefficients for Regression of PROPORTION KIN on Social Structural Characteristics

	1985 Gender Differences				
	Panel A		Panel B		Panel C
	Men 1985		Women 1985		M1 – W1
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	$Z^{\ddagger}$
Age	-.001	.001	.002	.001	-2.12 (ns)
Education	-.018***	.005	-.011*	.005	-.990 (ns)
Married (Yes)	.201***	.035	.242***	.028	-.915 (ns)
Currently Employed (Yes)	-.029	.039	-.080**	.028	1.06 (ns)
Kids < 18	-.015	.014	-.004	.012	-.598 (ns)
Family Income	-.002	.001	-.004***	.001	1.42 (ns)
Race (White)	.170***	.047	.004	.039	2.72**
Intercept	.587		.644		
R^2	.108		.144		
Adjusted R^2	.098		.136		
N	619		770		

* $p \le .05$; ** $p \le .01$; *** $p \le .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M1 = Men 1985; W1 = Women 1985

What are the significant predictors of proportion kin in core discussion networks for men and women in 1985? In the 1985 GSS data, education exerts a significant, negative effect on proportion kin: Men with higher education have lower proportion kin in their networks than men

with lower education (Panel A, Table 3.3). Being married and being white both exert significant, positive effects on proportion kin. Married men are embedded in networks with higher proportion kin than their unmarried counterparts and the networks of white men contain a higher proportion kin than the networks of their non-white counterparts do.

Proportion kin demonstrates different effects in women's networks for the 1985 GSS data (Panel B, Table 3.3). For proportion kin in women's networks, the effect of education is significant and negative: Women with higher education are embedded in networks that contain lower proportion kin than women with lower education. Other social structural factors that exert significant, negative effects on women's proportion kin are currently employed and family income. Similar to the effect of being married for men, women who are married have higher proportion female in their networks than their unmarried counterparts.

The negative effect of education on proportion kin follows in the human capital lineage, whereby education affords one with the opportunity structure to associate with others that are not directly kin or extended kin. This pattern occurs for both men and women in 1985. However, marital status, which by its very design is directly related to the acquisition of a new kin relationship, increases proportion kin for both men and women. However, only women experience the negative association of being employed and family income on proportion kin. I contend that the unique opportunities provided to women through outside employment status and family income increase potential non-kin associations. Therefore, women who are employed or who have greater family income are circulating in social environments that are not largely kin dependent, thus reducing the proportion kin in women's networks in 1985.

However, a central question remains: Do men and women differ significantly in these effects on proportion kin? To test my hypotheses about gender differences in these effects, Panel

C (Table 3.3) reports the z-scores for the tests for the equality of regression coefficients. The hypothesis for race (white) is the only one that is supported: Race (white) was positively associated with proportion kin for men but not significant for women and this difference was statistically significant. Race (white) is a stronger predictor of proportion kin for men than for women ($z = 2.72$, $p < .01$).

Table 3.4. Unstandardized Ordinary Least Squares Coefficients for Regression of PROPORTION FEMALE on Social Structural Characteristics

	1985 Gender Differences				
	Panel A		Panel B		Panel C
	Men 1985		Women 1985		M1 – W1
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	$Z^{\ddagger}$
Age	.000	.001	-.001	.001	.707 (ns)
Education	-.005	.004	-.007	.004	.353 (ns)
Married (Yes)	.090**	.031	-.145***	.025	5.90***
Currently Employed (Yes)	.044	.034	-.041	.024	2.04 (ns)
Kids < 18	-.016	.012	.020	.011	-2.21 (ns)
Family Income	-.001	.001	.001	.001	-1.43 (ns)
Race (White)	-.012	.042	-.124***	.034	2.07*
Intercept	.460		.916		
R^2	.026		.082		
Adjusted R^2	.014		.074		
N	618		770		

* $p \le .05$; ** $p \le .01$; *** $p \le .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M1 = Men 1985; W1 = Women 1985

In addressing the question of which social structural factors affect proportion female for men in 1985 (Panel A, Table 3.4), results show that being married is the only characteristic to exert a significant, and positive effect on proportion female. Married men are embedded in core discussion networks that contain a significantly higher proportion female than do the core discussion networks of unmarried men.

For women in 1985, being married has the opposite effect: Married women are embedded in core discussion networks that have lower proportion female than unmarried women

(Panel B, Table 3.4). Another way to address this finding is that for women, being married lowers the proportion female in one's network. The main effect coefficient for marital status (married) is significant for both men and women, the direction is positive for men and negative for women. In testing the equality of regression coefficients (Panel C, Table 3.4), my results further indicate that the effect of marital status on proportion female differs significantly between men and women: ($z = 5.90$, $p < .001$). What do these significant findings indicate?

Previous research on the effects of marital status on men and women consistently reports that being married, as compared to nonmarried, results in higher proportion of kin within one's network (Hurlbert and Acock 1990; Moore 1990). As Hurlbert and Acock (1990) maintain, being married affords one with the opportunity of being embedded in multiple (several) kin networks, thus providing a large pool of possible kin to include. However, how could these findings explain the differences in men and women in regard to proportion female within core discussion networks? Seeing as though both married men and women turn to kin moreso than their nonmarried counterparts, for men, wife is a salient kin relationship, and for women, husband is a significant kin relationship. Therefore, for men, including their spouse as a network member increases the proportion female, whereas for women, including their husband (kin) decreases the proportion female in their networks. To explain this significant difference between men and women, I incorporate the work of Pugliesi and Shook (1998:220), stating that "this difference probably stems from the ability of the married to turn to spouses for support." Turning to one's spouse affords men and women different opportunities for core discussion network structure; for men, turning to spouse increases proportion female, whereas for women, turning to spouse decreases proportion female.

Turning back to the results for women in 1985, the control for race (white) has a significant, negative effect on proportion female (Panel C, Table 3.4). Race (white) was significant and negatively associated with proportion female for women but not significant for men: White women have lower proportion female in their networks than non-white women. The effect of race (white) on proportion female also differed significantly between men and women ($z = 2.07$, $p < .05$), such that race (white) was a stronger predictor of proportion female for women than for men. These results are not surprising when interpreting them in the context of race and family demography patterns. Drawing on the influential work of William Julius Wilson and racial differences in marriage rates, Wilson (1987) offers one explanation for the large discrepancy between blacks and whites in regard to marital status: the relative shortage of eligible black males with adequate employment (Fossett and Kiecolt 1991; Lichter, LeClere, and McLaughlin 1991). In connecting Wilson's work to differences between whites and non-whites in regard to proportion female within core discussion networks, this finding boils down to the opportunity to include spouse (kin) within one's network. If non-white women have overall lower marriage rates than white women, non-white women do not have spouse (male) as an option for being in the network, thus it is likely that more females (either kin or friends) will be included. However, given the higher rates of marriage for white women, including spouse (male) in their network eliminates a space for at least one female, resulting in lower proportion female for white women. Building upon these findings, I propose future research should focus on the interactions between gender, race, and marital status in regard to core discussion network structure.

For men in 1985, both education and employment status exert significant, negative effects on structural density (Panel A, Table 3.5). Men with higher education have lower

Table 3.5. Unstandardized Ordinary Least Squares Coefficients for Regression of STRUCTURAL DENSITY on Social Structural Characteristics

	1985 Gender Differences				
	Panel A		Panel B		Panel C
	Men 1985		Women 1985		M1 – W1
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	Z[‡]
Age	.000	.001	.001	.001	-.707 (ns)
Education	-.017***	.004	-.013**	.004	-.707 (ns)
Married (Yes)	.059*	.029	.136***	.024	-2.05*
Currently Employed (Yes)	-.085**	.033	-.051*	.023	-.845 (ns)
Kids < 18	-.018	.012	-.010	.010	-.513 (ns)
Family Income	.000	.001	-.002*	.001	1.42 (ns)
Race (White)	.034	.040	-.050	.035	1.58 (ns)
Intercept	.821		.790		
R^2	.088		.101		
Adjusted R^2	.075		.091		
N	503		654		

* $p \le .05$; ** $p \le .01$; *** $p \le .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M1 = Men 1985; W1 = Women 1985

structural density in their networks than men with lower education. Also, men who are currently employed are embedded in core discussion networks that are less dense than men who are not currently employed. Being married also exerts a significant, positive effect on the structural density of men's networks in 1985: Networks of married men are more dense than networks of unmarried men.

Education and current employment exert similar significant, negative effects on women's core discussion networks in 1985 as they did for men's networks, while marital status exerts a similar significant, positive effect on women's network density as it did for men's (Panel B, Table 3.5). Women with higher education have lower structural density than women with lower education, and women who are currently employed are embedded in less dense networks than women who are not currently employed. Also, networks of married women are more dense than

networks of unmarried women. Additionally, family income also exerts a significant, negative effect on structural density for women—as family income increases, structural density decreases.

In interpreting network density findings for men and women, it is important to refer to the definition of network density for the GSS sample data. Network density reflects the interconnections among alters within one's core discussion network. In other words, network density refers to how connected or familiar alters are with one another. To elaborate on my results here, I draw upon the original research by Fischer (1982), Marsden (1987), and Moore (1990) while also incorporating how the overall social structure affords different opportunities to interact socially, to explain the effects of education and employment on network density.

The pursuit of higher education provides the opportunity to make and maintain social relationships with a wide variety of people, particularly people outside of one's immediate social circle. The same argument can be used to describe how employment status offers opportunities for social interaction with a wide variety of people. Both of these opportunity structures provide access to diverse others, and while these diverse others are connected to ego, more than likely the social circles of these alters are not closely related to one another. As stated earlier, network density is the inverse of network diversity. Therefore, diversity of alters results in lower network density. Both education and employment opportunity structures provide opportunities to create diverse networks, resulting in networks that are less dense. I also interpret the significant, negative effect of family income on structural density for women alone the same way, connecting family income as a factor that provides women with opportunities to interact socially with others in various, diverse social circles. Again, diversity and density are inverse indicators of one another, more diversity results in less density in networks.

Regarding the significant, and positive relationship between marital status and network

density for both men and women, I draw upon my earlier results that show, for both men and women in 1985, marital status increases the proportion kin within networks. I contend that high proportion of kin within networks leads to network density. Kin relationships indicate familial ties, those kin are likely to be interconnected with one another. Therefore, being married results in more dense networks, seeing as though kin ties are likely to be present within this network sector. One direction of my own future research agenda is to examine multiple interaction effects to further understand the relationship between structural influences and core discussion networks and the extent to which they differ for men and women.

The effect of marital status on network density is the only social structural characteristic to differ significantly between men and women in 1985 (Panel C, Table 3.5); I only find support for my hypothesis for marital status. As the main effect of marital status on network density is positive, and significant for both men and women, the significant z-score indicates that marital status (married) is a stronger predictor of structural density for women than for men ($z = -2.05$, $p < .05$). While marital status was positively related to network density for both men and women, the effect was bigger for women, and the difference between men and women is statistically significant. The lack of any other significant findings demonstrates that the effects of the social structural factors (except for marital status) on network density do not differ significantly for men and women in 1985.

3.4   GSS 2004

3.4.1   Effects of Social Structural Factors on Core Discussion Networks in 2004: Gender Differences

To assess the impact of social structural characteristics on core discussion network structures, I conduct a series of OLS regressions, separately for men and women, in 2004; I also tested each predictor variable to determine whether its impact on network structure differs

significantly between men and women. Providing the gender-specific models enables me to test

whether the effects of social structural factors on network structure differ between men and

women. As the hypotheses at the end of Chapter 1 state, I predict that all of the social structural

factors will differ significantly for men and women for all core discussion network structures.

**Table 3.6. Unstandardized Ordinary Least Squares Coefficients for Regression of
NETWORK SIZE on Social Structural Characteristics**

	2004 Gender Differences				
	Panel A		Panel B		Panel C
	Men 2004		Women 2004		M2 – W2
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	Z‡
Age	.002	.005	-.003	.004	.781 (ns)
Education	.080***	.023	.107***	.023	-.830 (ns)
Married (Yes)	.040	.144	-.096	.128	.706 (ns)
Currently Employed (Yes)	-.006	.162	.088	.124	-.461 (ns)
Kids < 18	-.122	.075	.067	.056	-2.02 (ns)
Family Income	.008***	.002	.004*	.002	1.41 (ns)
Race (White)	.427**	.159	.762***	.140	-1.58 (ns)
Intercept	-.108		-.121		
R^2	.101		.097		
Adjusted R^2	.091		.089		
N	646		808		

* $p \le .05$; ** $p \le .01$; *** $p \le .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M2 = Men 2004; W2 = Women 2004

In addressing the question of what social structural factors affect network size for men in

2004 (Panel A, Table 3.6), results for the main effects show that education and family income

exert significant, positive effects on network size. Men with higher education have larger

networks than men with lower education. Also, men with higher family income are embedded in

larger networks than men with lower family income. If social network size reflects social

integration, education and family income both positively relate to higher levels of social

integration for men in 2004. The impact of education and family income in 2004 is the same as

1985. The control variable race (white) exerts a significant, positive effect on network size in

2004: White men have larger networks than non-white men. In connecting these results to overall levels of social integration, as these results indicate, white men are more socially integrated than non-white men in 2004. Furthermore, if social isolation reflects the inverse of social integration, these results offer preliminary evidence that non-white men may experience more social isolation than white men.

When addressing the question of what social structural factors affect network size for women in 2004 (Panel B, Table 3.6), results show that the same factors that are significant for men are also significant for women: Education and family income exert significant, positive effects on network size. Women with higher education have larger networks than women with lower education. Also, women with higher family income are embedded in larger networks than women with lower family income. The impact of education and family income for women in 2004 is the same as it was in 1985. The control variable race (white) exerts a significant, positive effect on network size: White women have larger networks than non-white women. Similar to the case I argued above for men's networks, if core discussion network size is indicative of one's overall level of social integration, those with less education and less family income are at greater risk for social isolation than their counterparts. Additionally, nonwhite women may face higher levels of social isolation than white women.

To specifically test my hypotheses about gender differences in these effects, I compute a series of z-scores. Panel C (Table 3.6) reports the z-scores for the tests for the equality of regression coefficients. None of my hypotheses for significant differences are supported. Apparently, in 2004, the effects of these social structural factors on network size did not differ significantly between men and women.

Table 3.7. Unstandardized ordinary least squares coefficients for regression of PROPORTION KIN on social structural characteristics

	2004 Gender Differences				
	Panel A		Panel B		Panel C
	Men 2004		Women 2004		M2 – W2
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	Z‡
Age	-.001	.001	.000	.001	-.707 (ns)
Education	-.010	.007	-.020***	.006	1.08 (ns)
Married (Yes)	.228***	.043	.124***	.034	1.89 (ns)
Currently Employed (Yes)	-.012	.049	-.021	.032	.154 (ns)
Kids < 18	.034	.021	.018	.015	.619 (ns)
Family Income	-.001	.001	-.001	.001	0 (ns)
Race (White)	.040	.050	.084*	.039	-.694 (ns)
Intercept	.610		.755		
R^2	.086		.062		
Adjusted R^2	.072		.051		
N	452		607		

* $p \le .05$; ** $p \le .01$; *** $p \le .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M2 = Men 2004; W2 = Women 2004

For proportion kin in men's networks for 2004, marital status exerts a significant, positive effect on proportion kin: Married men are embedded in networks with higher proportion kin than unmarried men (Panel A, Table 3.7). The impact of marital status on proportion kin for men was also significant in 1985; the effect of marital status on proportion kin in core discussion networks of men is significant in both 1985 and 2004. Regarding marital status and proportion kin for men, being married implies that one now has access to more relatives, albeit they may be in-laws, than unmarried people. Being surrounded by a larger pool of kin may therefore lead men to discuss important matters with kin moreso than nonkin. Therefore, my results indicate that married men, moreso than their nonmarried counterparts, are embedded in networks with higher proportion kin.

The pattern for the effects on proportion kin in women's networks for 2004 is different, however (Panel B, Table 3.7). For women, the effect of education is significant and negative:

Women with higher education are embedded in networks that contain lower proportion kin than women with lower education. As education provides opportunities to interact with others outside of the immediate family circle, women who are more educated have access and exposure to others who are not related to them; education provides a unique opportunity structure for women to interact socially with those outside of their kin circle. Similar to the effect of being married for men, women who are married have higher proportion kin in their networks than their unmarried counterparts. Just as marital status increases proportion kin for men, it also exerts a significant, and positive, effect on women. The control variable race (white) is also significant, and positive, for women: White women are embedded in networks with higher proportion kin than non-white women. This race related result can be explained by differences in family demography, such that as nonwhite women are less likely to be married than white women, their exposure to kin in limited to their direct family ties, whereas being married affords the opportunity of having several sets of kin relationships.

None of my hypotheses for proportion kin are supported; there are no significant differences between men and women in the effects of social structural factors on proportion kin in 2004. The absence of significant findings demonstrates that the effects of social structural factors on proportion kin do not differ significantly for men and women in 2004. Although the test for the equality of regression coefficients fail to detect any significant differences between men and women in regard to the effects of social structural factors on proportion kin, my future research agenda plans to focus on several interactions that may further specify the complex relationships between gender, social structure, and proportion kin.

In addressing the question of which factors affect proportion female for men in 2004 (Panel A, Table 3.8), results show that being married exerts a significant, positive effect on

**Table 3.8. Unstandardized ordinary least squares coefficients for regression of
<u>PROPORTION FEMALE</u> on social structural characteristics**

	2004 Gender Differences				
	Panel A		Panel B		Panel C
	Men 2004		Women 2004		M2 – W2
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	$Z^{\ddagger}$
Age	-.003*	.001	.003**	.001	-4.29***
Education	-.002	.006	.010	.005	-1.54 (ns)
Married (Yes)	.165***	.039	-.166***	.031	6.64***
Currently Employed (Yes)	-.065	.045	-.019	.029	-.859 (ns)
Kids < 18	.032	.019	.026	.013	.261 (ns)
Family Income	-.001	.001	.000	.000	-1.00 (ns)
Race (White)	.011	.046	-.114***	.035	2.16*
Intercept	.649		.512		
R^2	.066		.087		
Adjusted R^2	.051		.076		
N	452		607		

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M2 = Men 2004; W2 = Women 2004

proportion female. Married men are embedded in networks with higher proportion female than

unmarried men. Knowing that men are likely to turn to their spouse to discuss important matters,

and that men's spouse is a female, this finding is reflecting men turning to their female spouses,

thus explaining the effect of marital status on proportion female for men. Also, age has a

significant, negative effect on proportion female: Younger men have higher proportion female in

their networks compared to older men.

For the 2004 data, marital status and race both exert significant, negative effects on the

proportion female in women's networks (Panel B, Table 3.8). Married women are embedded in

networks with lower proportion female than unmarried women; networks of white women

contain a lower proportion female than networks of non-white women. Again, given that

married women turn to their spouse to discuss important matters, the inclusion of their male

spouse restricts the potential space for an additional female confidante, thus reducing the

proportion of females in the core discussion networks of married women. Also, as stated earlier, white women marry at higher rates than nonwhite women; therefore, the proportion female is being reduced by women turning toward their spouse. Age, however, has the opposite effect on proportion female for women than for men: Older women have larger proportion female in their networks than younger women. Drawing upon research on lifespan development, women live longer than men. Age, as a unique opportunity structure itself, shapes the overall structure based on lifespan. With women living longer than men, it is not surprising that older women's networks are higher in proportion female than younger women's networks.

How do the effects of social structural characteristics on proportion female differ between men and women? In testing the equality of the regression coefficients, I find support for three of my hypotheses. The effects of age ($z = -4.2857$, $p < .001$), marital status ($z = 6.64$, $p < .001$), and race ($z = 2.16$, $p < .05$) on proportion female differ significantly between men and women (Panel C, Table 3.8). Although the direct effects of age on proportion female for both men and women are significant, they differ in the direction of the relationship; this difference in direction is what the significant z-score is detecting. The significant difference between men and women in regard to marital status can also be interpreted the same way: Married men have larger proportion kin in their network compared to their unmarried counterparts, whereas married women have smaller proportion kin in their networks. The test for the equality of regression coefficients detects the difference in direction for the effect of marital status on proportion kin. Furthermore, the significant difference between men and women for the effect of race on proportion kin can be interpreted the same way; this z-score detects the difference in direction.

For men in 2004, education and family income exert significant, negative effects on structural density: Men with higher education have lower structural density in their networks

Table 3.9. Unstandardized ordinary least squares coefficients for regression of STRUCTURAL DENSITY on social structural characteristics

	2004 Gender Differences				
	Panel A		Panel B		Panel C
	Men 2004		Women 2004		M2 – W2
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	$Z^{\ddagger}$
Age	.001	.001	.000	.001	.707 (ns)
Education	-.021***	.006	-.017**	.005	-.513 (ns)
Married (Yes)	.088*	.038	.032	.031	1.14 (ns)
Currently Employed (Yes)	.022	.043	-.037	.029	1.14 (ns)
Kids < 18	.004	.021	-.028*	.014	1.27 (ns)
Family Income	-.001*	.001	.001	.000	-2.00*
Race (White)	-.016	.048	.023	.039	-.631 (ns)
Intercept	.909		.829		
R^2	.079		.041		
Adjusted R^2	.058		.027		
N	320		462		

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M2 = Men 2004; W2 = Women 2004

than men with lower education (Panel A, Table 3.9). Men with greater family income have lower structural density in their networks than men with less family income. These results suggest that both education and family income provide men with opportunities to interact socially with others outside of their immediate social circle. The opportunity to increase diversity among social contacts decreases density. However, being married works in the opposite direction. For men in 2004, marital status exerts a significant, positive effect on the structural density of men's networks: Married men have more structural density within their networks than their unmarried counterparts. This suggests that, for married men, there is a high degree of interconnections among their networks members, moreso than for their unmarried counterparts.

Education and the presence of minor children in the home exert significant, negative, effects on structural density in women's networks in 2004 (Panel B, Table 3.9).   Women with

higher education have lower structural density in their networks than women with lower education. Also, women with more children under the age of 18 living in the home have lower network density than women without less children under the age of 18 living in the home. These results are not surprising for two reasons. First, educational endeavors afford women with an opportunity structure to interact socially with diverse others; as diversity increases, density decreases. Secondly, for women with children in the home, as research demonstrates, even when participating in the paid labor workforce, women are still primarily responsible for childcare within the family. Being responsible for children in the home exposes women to multiple social circles of playmates and schoolmates of their children, while participating in multiple social spheres. Therefore, for women, childrearing increases exposure to diverse social circles, with alters that are not highly connected to one another.

The effect of family income on network density is the only social structural characteristic to differ significantly between men and women in 2004. The hypothesis for family income is the only one supported: The effect of family income on network density differs significantly between men and women in 2004 (Panel C, Table 3.9). While family income is significant and negative for men, it is nonsignificant for women ($z = -2.00$, $p < .05$). The significant z-score indicates that the effect of family income is significant for men, and also that its effect differs significantly between men and women. The absence of any other significant findings for network density demonstrates that the effects of social structural factors on network density do not differ significantly between men and women in 2004.

3.5   Detecting Differences between 1985 and 2004

As McPherson et al. (2006) report, core discussion networks have gotten smaller over the

past two decades. In building upon their preliminary findings, I conduct a series of tests of the

equality of regression coefficients between 1985 and 2004 for (a) men and (b) women. These

tests examine the extent to which the effects of social structural factors on core discussion

networks differ significantly between 1985 and 2004 for men and women. Here I report the

results of these tests.

3.5.1   Differences between 1985 and 2004: Men Only

For men, results reveal a significant difference for age (Panel A, Table 3.10). Whereas

the direct effect of age on network size was significant and negative in 1985, it was

nonsignificant in 2004: The effect of age on network size does differ significantly for men

between 1985 and 2004 ($z = -2.34$, $p < .05$). While age was negatively related to men's network

size in 1985, it was not associated with network size in 2004. This indicates that age is a

stronger predictor of network size for men in 1985; age is not a significant predictor of network

size in 2004.

I fail to reject the remaining hypotheses for the equality of regression coefficients since

the effects of the remaining factors on network size do not differ significantly between 1985 and

2004 for men. Furthermore, there are no significant differences between 1985 and 2004 in the

impact of structural characteristics on proportion kin or network density, among men (Panel A,

Table 3.11 and Panel A, Table 3.13). However, the effect of age again differs significantly

between 1985 and 2004, this time in its effect on proportion female (Panel A, Table 3.12).

While the direct effect of age on proportion female was positive and nonsignfiicant in 1985, it

was negative and significant in 2004: The effect of age on proportion female does differ

significantly for men between 1985 and 2004 ($z = 2.12$, $p < .05$). While age had a negative

impact on proportion female in 2004, it was not associated with proportion female for men in

1985. My results indicate that age is a slightly stronger predictor of proportion female for men in

2004. For men, age is not a significant predictor of proportion female in 1985.

Table 3.10. Tests for Equality of Regression Coefficients Across Years for Men and Women for <u>NETWORK SIZE</u>‡

	Differences between 1985 and 2004	
	Panel A Men 1985 - Men 2004	Panel B Women 1985 – Women 2004
	Z = M1 – M2	Z = W1 – W2
Individual Characteristics		
Age	-2.34*	-2.68**
Education	1.34 (ns)	.395 (ns)
Married (Yes)	-.785 (ns)	1.04 (ns)
Currently Employed (Yes)	.053 (ns)	-.629 (ns)
Kids < 18	1.20 (ns)	-2.23*
Family Income	.894 (ns)	1.34 (ns)
Race (White)	-1.39 (ns)	-.336 (ns)

* $p \le .05$; ** $p \le .01$; *** $p \le .001$ (two-tailed test of significance).
‡ Coefficients used in these tests come from Table 3.2 (1985) and Table 3.6 (2004)
Note. M1 = Men 1985, M2 = Men 2004; W1 = Women 1985, W2 = Women 2004

Table 3.11. Tests for Equality of Regression Coefficients Across Years for Men and Women for <u>PROPORTION KIN</u>‡

	Differences between 1985 and 2004	
	Panel A Men 1985 – Men 2004	Panel B Women 1985 – Women 2004
	Z = M1 – M2	Z = W1 – W2
Individual Characteristics		
Age	0 (ns)	1.41 (ns)
Education	-.929 (ns)	1.15 (ns)
Married (Yes)	-.487 (ns)	2.68**
Currently Employed (Yes)	-.271 (ns)	-1.39 (ns)
Kids < 18	-1.94 (ns)	-1.14 (ns)
Family Income	-.707 (ns)	-2.14*
Race (White)	1.89 (ns)	-1.45 (ns)

* $p \le .05$; ** $p \le .01$; *** $p \le .001$ (two-tailed test of significance).
‡ Coefficients used in these tests come from Table 3.3 (1985) and Table 3.7 (2004)
Note. M1 = Men 1985, M2 = Men 2004; W1 = Women 1985, W2 = Women 2004

Table 3.12. Tests for Equality of Regression Coefficients Across Years for Men and Women for PROPORTION FEMALE‡

	Differences between 1985 and 2004	
	Panel A Men 1985 – Men 2004	Panel B Women 1985 – Women 2004
	Z = M1 – M2	Z = W1 – W2
Individual Characteristics		
Age	2.12*	-2.86**
Education	-.416 (ns)	-2.65 (ns)
Married (Yes)	-1.51 (ns)	.528 (ns)
Currently Employed (Yes)	1.93 (ns)	-.585 (ns)
Kids < 18	-2.14 (ns)	-.353 (ns)
Family Income	0 (ns)	1.00 (ns)
Race (White)	-.369 (ns)	-.205 (ns)

* p ≤ .05; ** p ≤ .01; *** p ≤ .001 (two-tailed test of significance).
‡ Coefficients used in these tests come from Table 3.4 (1985) and Table 3.8 (2004)
Note. M1 = Men 1985, M2 = Men 2004; W1 = Women 1985, W2 = Women 2004

Table 3.13. Tests for Equality of Regression Coefficients Across Years for Men and Women for STRUCTURAL DENSITY‡

	Differences between 1985 and 2004	
	Panel A Men 1985 – Men 2004	Panel B Women 1985 – Women 2004
	Z = M1 – M2	Z = W1 – W2
Individual Characteristics		
Age	-.707 (ns)	.707 (ns)
Education	.555 (ns)	.625 (ns)
Married (Yes)	-.606 (ns)	2.65**
Currently Employed (Yes)	-1.97 (ns)	-.378 (ns)
Kids < 18	-.909 (ns)	1.04 (ns)
Family Income	.706 (ns)	-3.00**
Race (White)	.800 (ns)	-1.39 (ns)

* p ≤ .05; ** p ≤ .01; *** p ≤ .001 (two-tailed test of significance).
‡ Coefficients used in these tests come from Table 3.5 (1985) and Table 3.9 (2004)
Note. M1 = Men 1985, M2 = Men 2004; W1 = Women 1985, W2 = Women 2004

3.5.2 Differences between 1985 and 2004: Women Only

For women, differences between 1985 and 2004 reveal different patterns (Panel B, Table 3.10). The direct effect of age on network size was negative and significant in 1985 and negative and nonsignficant in 2004: The effect of age on network size does differ significantly between 1985 and 2004 for women (z = -2.68, p < .01). While age was negative for women in 1985, it

was not associated with network size for women in 2004. This indicates that age is a stronger predictor of network size for women in 1985; age is not a significant predictor of network size in 2004. Regarding children in the home, its effect was significant and negative in 1985, but positive and nonsignficant in 2004. The effect of children in the home on network size does differ significantly between 1985 and 2004 for women ($z = -2.23$, $p < .05$). While children in the home was negatively related to network size for women in 1985, it was not associated with network size for women in 2004. Having kids in the home is a stronger predictor of network size for women in 1985, but not a significant predictor of network size in 2004.

Turning to proportion kin (Panel B, Table 3.11), marital status is both positive and significant for women in 1985 and 2004. Marital status was positive for proportion kin in women's networks in both 1985 and 2004. The effect of marital status on proportion kin differs significantly between 1985 and 2004 for women ($z = 2.68$, $p < .01$). Family income is negative and significant in 1985, but negative and nonsignificant in 2004. Family income has a negative effect on proportion kin in 1985 but not associated with proportion kin in 2004; the effect of family income on proportion kin differs significantly between 1985 and 2004 for women ($z = -2.14$, $p < .05$). Thus, family income is a stronger predictor of proportion kin in 1985.

Turning to proportion female in core discussion networks, Panel B (Table 3.12) provides the results. Age is negative and nonsignificant in 1985, but positive and significant in 2004. While age has a positive effect on proportion female in 2004, it was not associated with proportion female in 1985. The effect of age on proportion female differs significantly between 1985 and 2004 for women ($z = -2.86$, $p < .01$).

Regarding network density (Panel B, Table 3.13), marital status is significant and positive in 1985, but nonsignificant and positive in 2004. Marital status positively impacts

network density in 1985 but not associated with network density in 2004; the effect of marital status on network density differs significantly between 1985 and 2004 for women ($z = 2.65$, $p < .01$). Thus, marital status is a stronger predictor of network density in 1985. Turning to family income, its effect is negative and significant in 1985 and positive and nonsignificant in 2004. Family income was negative for network density in 1985 but not associated with network density in 2004. The effect of family income on network density differs significantly between 1985 and 2004 for women ($z = -3.00$, $p < .01$). However, based on the direction (of the nonsignificant finding in 2004), my results appear to indicate the possibility that family income increases structural density for women in 2004.

CHAPTER 4: ADRESSING REGIONAL (NOLA) DATA ANALYSIS AND RESULTS

The first objective of this dissertation is to assess whether the effects of social structural factors on core discussion networks differ significantly between men and women. To address this first objective, I used General Social Survey (GSS) data to examine the core discussion networks of Americans in 1985 and 2004; I presented those results in Chapter 3.

The second objective of this dissertation focuses on the effects of core discussion networks on two health-related outcomes: perceived adequacy of social support and psychological distress. This dissertation investigates whether the effects of network structures on health-related outcomes differ significantly between men and women. Further, I also examine whether networks differ for men and women before and after Hurricane Katrina. Specifically, I examine the effects of core discussion network structures on perceived adequacy of social support and psychological distress (separately for men and women) to determine (a) if these effects differ significantly between men and women and (b) if these gender effects differ significantly between 2003 and 2006. This chapter (Chapter 4) addresses the second objective of this dissertation. Social network data collected from the New Orleans metropolitan area in 2003 (pre-Katrina) serve as the baseline measure to compare to 2006 (post-Katrina) social network data.

In this chapter, I first consider how core discussion network structures (network size, proportion kin, proportion female, and network density), perceived adequacy of social support, and psychological distress differ between men and women in (a) 2003 (pre-Katrina) and (b) 2006 (post-Katrina). These comparisons focus on gender differences (men compared to women) within 2003 and 2006. Next, to examine the impact of Hurricane Katrina, I consider how core discussion network structures (network size, proportion kin, proportion female, and network

density), perceived adequacy of social support, and psychological distress differ between 2003 (pre-Katrina) and 2006 (post-Katrina) for (a) men and (b) women. These comparisons focus on year differences (2003 compared to 2006), separately for men and women. I predict that core discussion network structures (network size, proportion kin, proportion female, and network density), perceived adequacy of social support, and psychological distress will differ between men and women in (a) 2003 and (b) 2006. I also predict that core discussion network structures (network size, proportion kin, proportion female, and network density), perceived adequacy of social support, and psychological distress will differ between 2003 and 2006 for (a) men and (b) women. Therefore, the series of comparisons for core discussion network structures, perceived adequacy of social support, and psychological distress will be:

Gender Differences: Men 2003-Women 2003; Men 2006-Women 2006

Year Differences: Men 2003-Men 2006; Women 2003-Women 2006

To address these issues, I use independent sample t-tests to compare the mean values of core discussion network structures, perceived adequacy of social support, and psychological distress to detect differences between men and women in (a) 2003 and (b) 2006, and compare the mean values of core discussion network structures, perceived adequacy of social support, and psychological distress to detect differences between 2003 and 2006 for (a) men and (b) women.

Further addressing the second objective of this dissertation, I examine the direct and indirect effects of core discussion network structures on health-related outcomes. First, I examine (a) the direct effects of core discussion network structures on perceived adequacy of social support, (b) the direct effects of core discussion network structures on psychological distress, and (c) the indirect effects of core discussion network structures, through perceived adequacy of social support, on psychological distress. To assess whether the effects of network

structures on the health-related outcomes differ significantly between men and women, I run

separate OLS models for men and women in (a) 2003 and (b) 2006. I use the test for the equality

of regression coefficients; this z-score tests whether the regression coefficients of the groups

being compared are equal. The use of this test determines whether the effects of core discussion

networks on perceived adequacy of social support and psychological distress differ significantly

between men and women in (a) 2003 and (b) 2006 and whether the effects of core discussion

networks on perceived adequacy of social support and psychological distress differ significantly

between 2003 and 2006 for (a) men and (b) women. Therefore, my hypotheses focus on testing

the effects of core discussion network structures on perceived adequacy of social support and

psychological distress between models; I do, however, report the results for significant findings

within models as well.

4.1 Independent Sample T-Tests for Differences in Means Comparing Men and Women in 2003 and 2006

As the national data indicate, Americans' core discussion network structures are smaller

now than two decades ago (McPherson et al. 2006). However, how does a natural disaster

impact social network structures? If, in the span of 20 years, Americans' core networks have

decreased in size, how do Americans' social networks fair over the course of a three year time

span that happens to include Hurricane Katrina? Further, how do these network structures

impact perceived adequacy of social support and psychological distress prior to and immediately

following a natural disaster, and do men and women differ in these effects? To address these

questions, this dissertation examines the core discussion networks of men and women in both

Orleans and Jefferson Parishes of Louisiana in 2003 and 2006. Please note, these data are not

panel but rather cross-sectional, trend data collected at two distinct periods of time (2003 and

2006).

I employ independent sample t-tests to assess the differences in core discussion network structures (network size, proportion kin, proportion female, and network density), perceived adequacy of social support, and psychological distress between men and women in 2003 and 2006. Table 4.1 (Panel A) provides the results of a series of independent sample t-tests for men and women in 2003. Panel B (Table 4.1) presents the results of the independent sample t-tests for men and women in 2006. Panel C (Table 4.1) reports the independent sample t-tests for men only, testing the differences between 2003 and 2006. Panel D (Table 4.1) presents the results of differences between 2003 and 2006 for women only.

4.1.1 Significant Results: Independent Sample T-Tests[12]

4.1.1.1 Differences between Men and Women in (a) 2003 and (b) 2006

Results of the t-tests show that, in 2003 (pre-Katrina), men and women differed significantly in network size, proportion kin, and proportion female (Panel A, Table 4.1). Women's networks (M = 1.56, SD = 1.13) were significantly larger than men's networks (M = 1.35, SD = 1.10) in 2003, (t (528) = -2.05, p = .041). If it is true that network size indicates social integration, and the inverse of social isolation, women were more socially integrated than men in 2003. Women's networks (M = .498, SD = .446) contained a significantly higher proportion of kin, on average, than men's networks (M = .378, SD = .445), (t (450) = -2.74, p = .006). My results further support gender role differentiation by demonstrating that, in 2003, women were embedded in networks containing a higher proportion kin than men were.

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[12] One assumption for conducting independent sample t-tests is that variances are equal for the two independent groups. The Levene test for equality of variance is used to test this assumption. If the result of the Levene test is significant, equal variances can not be assumed. However, the assumption of equal variances can be relaxed when either large samples are used or when the two independent groups are roughly equal in size. Therefore, these results do not violate any of the assumptions of the independent sample t-tests. SPSS also reports the coefficients and p-value for equal variance not assumed. Please note: significant results for the Levene test (meaning equal variances not assumed) are identified above in cases where degrees of freedom (df) contain two numbers after the decimal point.

Table 4.1. Independent Sample T-Tests for Differences in Means of Core Discussion Network Structures, Perceived Adequacy of Social Support, and Psychological Distress.

Panel A. NOLA 2003: Differences between Men and Women.

Dependent Variables	N	Mean	St. Dev.	T-Value	P
Network Size					
Men	201	1.35	1.10	-2.05	.041*
Women	329	1.56	1.13		
DF = 528					
Proportion Female					
Men	163	.459	.447	-2.87	.004**
Women	287	.580	.422		
DF = 448					
Proportion Kin					
Men	164	.378	.445	-2.74	.006**
Women	288	.498	.446		
DF = 450					
Structural Density					
Men	153	.856	.231	-.425	.671
Women	278	.865	.224		
DF = 429					
Perceived Adequacy of Social Support					
Men	224	3.36	.808	1.43	.152
Women	371	3.25	.882		
DF = 593					
Psychological Distress					
Men	227	6.66	8.98	-1.30	.194
Women	375	7.68	9.47		
DF = 600					

* p≤.05, ** p≤.01, ***p≤.001 (based on two-tailed tests of significance).

(Table 4.1 continued)

Panel B. NOLA 2006: Differences between Men and Women.

Dependent Variables	N	Mean	St. Dev.	T-Value	P
Network Size					
Men	301	1.57	1.20	-4.72	.000***
Women	373	2.04	1.35		
DF = 672					
Proportion Female					
Men	248	.645	.372	.564	.573
Women	337	.628	.359		
DF = 583					
Proportion Kin					
Men	248	.634	.423	1.46	.145
Women	338	.584	.394		
DF = 509.64					
Structural Density					
Men	248	.940	.163	-1.09	.275
Women	339	.955	.141		
DF = 485.91					
Perceived Adequacy of Social Support					
Men	269	2.53	.940	-.679	.497
Women	340	2.58	.990		
DF = 607					
Psychological Distress					
Men	301	10.01	11.64	-4.78	.000***
Women	371	14.83	14.46		
DF = 669.96					

* p≤.05, ** p≤.01, ***p≤.001 (based on two-tailed tests of significance).

(Table 4.1 continued)

Panel C. NOLA Men Only: Differences between 2003 and 2006.

Dependent Variables	N	Mean	St. Dev.	T-Value	P
Network Size					
2003	201	1.35	1.10	-2.06	.040***
2006	301	1.57	1.20		
DF = 452.23					
Proportion Female					
2003	163	.459	.447	-4.41	.000***
2006	248	.645	.373		
DF = 302.56					
Proportion Kin					
2003	164	.378	.445	-5.88	.000***
2006	248	.634	.423		
DF = 410					
Structural Density					
2003	153	.856	.231	-3.97	.000***
2006	248	.940	.163		
DF = 245.01					
Perceived Adequacy of Social Support					
2003	224	3.36	.807	10.49	.000***
2006	269	2.53	.940		
DF = 490.52					
Psychological Distress					
2003	227	6.66	8.98	-3.73	.000***
2006	301	10.01	11.64		
DF = 525.72					

* p≤.05, ** p≤.01, ***p≤.001 (based on two-tailed tests of significance).

(Table 4.1 continued)

Panel D. NOLA Women Only: Differences between 2003 and 2006.

Dependent Variables	N	Mean	St. Dev.	T-Value	P
Network Size					
2003	329	1.56	1.13	-5.10	.000***
2006	373	2.04	1.35		
DF = 698.58					
Proportion Female					
2003	287	.580	.422	-1.51	.131
2006	337	.628	.359		
DF = 564.63					
Proportion Kin					
2003	288	.498	.446	-2.53	.012*
2006	338	.584	.394		
DF = 578.09					
Structural Density					
2003	278	.865	.224	-5.77	.000***
2006	339	.955	.141		
DF = 447.91					
Perceived Adequacy of Social Support					
2003	371	3.25	.882	9.46	.000***
2006	340	2.59	.990		
DF = 681.33					
Psychological Distress					
2003	375	7.68	9.47	-7.98	.000***
2006	371	14.83	14.46		
DF = 637.28					

* p≤.05, ** p≤.01, ***p≤.001 (based on two-tailed tests of significance).

The data also reflect a statistically significant difference for proportion female between women (M = .580, SD = .422) and men (M = .459, SD = .447), with women's networks containing a higher proportion female than men's networks, (t (448) = -2.87, p = .004).

Although the social network literature consistently reports that men and women do not differ in network size, while at the same time recognizing significant differences in other network structures, my results diverge from these traditional findings: At least in the New Orleans metropolitan area, women are embedded in larger core networks than men are. However, the rest of my results are in consensus with the national data: The ways in which men and women fulfill gender roles impact the shape of their social networks. For example, it is not surprising that women's networks contain higher proportion kin than men's networks. Research into the familial roles of men and women indicates that women are primarily responsible for maintaining kin ties with extended family; as women, more than men, serve as kin keepers, they come into more contact with other kin relatives (Gerstel and Sarkisian 2006). Furthermore, consistent with the findings of Haines et al. (2008), my results also demonstrate that women's networks contain higher proportion of female than men's networks.

I find no support for my hypotheses regarding gender differences in structural density, perceived adequacy of social support, and psychological distress in 2003. Contrary to the sociological health studies on social support and psychological health, the 2003 data do not show any significant differences between men and women for these health-related outcomes.

The 2006 (post-Katrina) data yield a slightly different picture of core discussion networks for men and women (Panel B, Table 4.1). In the aftermath of Hurricane Katrina, women (M = 2.04, SD = 1.35) continue to have significantly larger networks than men ((M = 1.57, SD = 1.20), t (672) = -4.72, p = .000). As an extension of the social integration literature, my results

seem to indicate that women experience less social isolation than men in the aftermath of a natural disaster. However, the remaining core discussion network structures do not differ significantly between men and women. The lack of a significant finding for proportion kin calls into question the gender role socialization literature, which contends that women are primarily responsible for maintaining extended kin ties. Apparently, after a natural disaster, men and women turn to kin to discuss important matters at relatively equal rates.

Consistent with the disaster and mental health literatures, my results further show that there was a significant difference in psychological distress between men and women post-Katrina, with women (M = 14.83, SD = 14.46) reporting higher levels of distress than men (M = 10.01, SD = 11.64), (t (669.96) = -4.78, P = .000). Following Hurricane Katrina, women reported experiencing more psychological distress than men.

4.1.1.2 Differences between 2003 and 2006 for (a) Men and (b) Women

To address the extent to which core discussion network structures, perceived adequacy of social support, and psychological distress differed significantly between 2003 and 2006 for men and women, I conducted another series of independent sample t-tests.

Before I address the structure of core discussion networks in 2003 and 2006, it is important to understand the social and historical context of the New Orleans metropolitan area. South Louisiana, particularly New Orleans and the surrounding areas, both pre and post-Katrina, are unique in regard to the low levels of generational mobility. New Orleans itself is a place where an "unusually high number of multigenerational family members reside" (Bourque, Siegel, Kano, and Wood 2006:146). Understanding the context of this regional culture affords an additional level of understanding the changes in core networks between 2003 and 2006.

Men's core discussion networks illustrate several significant changes in structure, social support, and psychological distress between 2003 (pre-Katrina) and 2006 (post-Katrina) (Panel C, Table 4.1). The proportion kin of men's networks increased significantly between 2003 and 2006. In 2006, men's networks contained higher proportions of kin (M = .634, SD = .423), on average, than they did in 2003 (M = .378, SD = .445), (t (410) = -5.88, p = .000). This regional finding is consistent with the national data which also indicate that, in recent years, men's networks have become more kin-centered. Not only have men's networks become more kin-centered over the past 20 years, but my results further indicate that, following Hurricane Katrina, men became more embedded in core networks that were largely kin-focused, compared to 2003, pre-Katrina networks. As both the sociology of disasters research and social support literatures demonstrate, in a time of need, people often turn to their family members for help and support (Drabek 1975; Smith 1983). In the aftermath of Hurricane Katrina, residents of the New Orleans metropolitan area were in need of help; it is not surprising that men's post-Katrina networks contained higher proportion kin than men's pre-Katrina networks.

The proportion female in men's networks also differed significantly between 2003 (M = .459, SD = .447) and 2006 (M = .645, SD = .373). Men's networks in 2006 contained a higher proportion female than men's networks in 2003, (t (302.56) = -4.41, p = .000). If, as the gender role socialization literature contends, women are more expressive and provide more support to others than men do, in the aftermath of Hurricane Katrina, men are embedded in core networks that are largely female-centered. My results indicate that men found themselves embedded in networks that contained higher proportion female in 2006 than they did in 2003. Also, drawing from the social support literature that women are larger providers of expressive support than men are, it seems reasonable that, following Hurricane Katrina, men's networks contained higher

proportion female in 2006 than in 2003. Also, recalling that the name generator prompts

respondents to provide the names of people with whom they discussed important matters, my

findings suggest that, compared to 2003, men in 2006 were discussing important matters with

more female-centered networks. Turning to structural density, men's networks in 2006 (M =

.940, SD = .163) contained higher density than their networks did in 2003 (M = .856, SD = .231),

(t (245.01) = -3.97, p = .000). For the regional data, network density was measured as the

average closeness between ego and all alters within in the network; my results indicate that

men's networks in 2006 reflect higher levels of average closeness than 2003 networks. Post-

Katrina men were emotionally closer, on average, to their core networks than men in 2003 were.

As my results show, men's network structures differed significantly between 2003 and

2006. However, did perceived adequacy of social support and psychological distress differ

between those years as well? Men's perceived adequacy of social support differed significantly

between 2003 (M = 3.36, SD = .807) and 2006 (M = 2.53, SD = .940); men in 2003 described

greater levels of perceived support than men in 2006, (t (490.52) = 10.49, p = .000). This is a

unique contribution to the social behavior and disaster literature, pointing out that men in 2003

described greater perceived support than men did in the aftermath of Hurricane Katrina. In other

words, following Hurricane Katrina, men described having less support available to them than

men in 2003 did. One explanation for this surprising finding may be due to the overwhelming

amount of destruction Hurricane Katrina caused to the New Orleans metropolitan area; given

such massive destruction, respondents may have felt that no amount of help available would be

enough to help their recovery process, thus reducing their evaluations of perceived availability of

help. Another rationale to explain this startling finding could be due to the sheer geographic

dispersion and relocation of network members caused by Hurricane Katrina. Given the saliency

of this natural disaster at the time of the post-Katrina (2006) survey, respondents may have been overwhelmed with the realization that their regular confidants were no longer around, leading to reduced perceptions of available help. As my results indicate, levels of perceived adequacy of social support were, on average, lower in 2006 post-Katrina than in 2003 pre-Katrina for men. Also consistent with the mental health and disaster literature that reports increased levels of psychological distress following natural disasters, men in 2006 (M = 10.01, SD = 11.64) reported higher levels of psychological distress than men did in 2003 (M = 6.66, SD = 8.98), (t (525.72) = -3.73, p = .000). Measured as the number of psychologically distressing symptoms experienced per week, men described experiencing more symptoms per week in 2006 than men did men in 2003.

Turning to the changes in women's networks between 2003 and 2006, my results indicate that women's social networks differed significantly between 2003 and 2006 in network size, proportion kin, and structural density (Panel D, Table 4.1). Women's post-Katrina networks (M = 2.04, SD = 1.35) were significantly larger than their pre-Katrina networks (M = 1.56, SD = 1.13), (t (698.58) = -5.10, p = .000). This is an interesting finding, given the massive destruction to both the physical and social structures in the aftermath of the hurricane. My results indicate that women were embedded in significantly larger networks in 2006 than in 2003. The post-Katrina networks of women (M = .584, SD = .394) also contained a significantly higher proportion of kin than women's pre-Katrina networks (M = .498, SD = .446), (t (578.09) = -2.53, p = .012). This is consistent with the support literature, which maintains kin provide multiple types of support in a time of need (Wellman and Wortley 1990; Kaniasty, Norris, and Murrell 1990). Reflecting on the importance of kin support and assistance following a natural disaster, my results indicate that after Katrina, women discussed important matters and turned to kin more

so than non-kin. Additionally, the New Orleans metropolitan area contains high levels of

generational geographic stability, meaning kin live around kin or in the general area. In

interpreting this result, I maintain that women were turning to their family members in greater

numbers than non-kin for help and assistance in their recovery process. Regarding structural

density, women's networks in 2006 (M = .955, SD = .141) contained higher density than

women's networks in 2003 (M = .865, SD = .224), (t (447.91) = -5.77, p = .000). Women in

2006 felt, on average, closer to their alters than women in 2003 did. Having survived such a

devastating experience, I argue here that the Katrina experience emotionally bonded women to

their network members, thus resulting in greater levels of emotional closeness.

Turning to perceived adequacy of social support and psychological distress, differences

for women between 2003 and 2006 demonstrated the same pattern as men. Women's perceived

adequacy of social support differed significantly between 2003 (M = 3.25, SD = .882) and 2006

(M = 2.59, SD = .990); women in 2003 experienced greater levels of perceived support than

women in 2006 (t (681.33) = 9.46, p = .000). Consistent with the mental health and disaster

literature, women in 2006 (M = 14.83, SD = 14.46) reported higher levels of psychological

distress than women in 2003 (M = 7.68, SD = 9.47), (t (637.28) = -7.98, p = .000). My results

show that, for women, perceived adequacy of social support decreased between 2003 and 2006,

whereas psychological distress increased between 2003 and 2006. These results are consistent

with my findings for men's perceived support and psychological distress. I maintain that the

decrease in support between 2003 and 2006 is due to the overwhelming level of destruction to

the New Orleans metropolitan area caused by Katrina; quite possibly no amount of help would

be enough to help out. Furthermore, the dispersion and disruption to social networks may have

made women feel as though help would not be available. Also, the increase in the number of

psychologically distressing symptoms experienced per week was expected, given the mental health consequences of natural disasters.

Building upon the findings of significant differences in core discussion network structures, perceived adequacy of social support, and psychological distress between men and women in 2003 and 2006, the next stage of my analysis uses multivariate modeling to explore the effects of core discussion network structures on perceived adequacy of support and psychological distress, and whether these effects differ significantly between men and women in (a) 2003 and (b) 2006, and between 2003 and 2006 for (a) men and (b) women.

4.2   Multivariate Analysis and Regression Diagnostics

For multivariate modeling, I use ordinary least squares (OLS) regression. The first stage of my analysis assesses the effects of social structural factors on network size, proportion kin, proportion female, and network density, separately for men and women, in (a) 2003 and (b) 2006. For each multivariate model, I present the unstandardized ordinary least squares coefficient and standard errors.

The second stage of my analysis explores the direct effects of social network structure on perceived adequacy of social support, separately for men and women, in (a) 2003 and (b) 2006. The third stage of my analysis examines both the direct and indirect (through perceived adequacy of social support) effects of social network structure on psychological distress, separately for men and women, in (a) 2003 and (b) 2006. Throughout my analysis, I calculate z-scores to test the equality of regression coefficients across models, to determine whether significant gender differences exist in these effects between men and women.

To ensure that none of my independent variables are highly correlated with one another, which would flaw the analysis, I examine tolerance estimates. The social science rule of thumb

for tolerance levels is typically set at .4: Tolerance levels below .4 suggest that several predictor

variables are highly correlated with one another and multicollinearity may be a problem (Kuter,

Nachtsheim, and Neter 2004). Therefore, I examined the data to make sure than none of my

coefficients fell below .4. None of the coefficients fell below .4, suggesting that collinearity did

not affect my results significantly.

4.3   NOLA 2003

4.3.1   Effects of Social Structural Factors on Core Discussion Networks in 2003: Gender Differences

To assess the impact of social structural characteristics on the structure of respondents'

core discussion networks, I conducted a series of OLS regressions, separately for men and

women in 2003; I also tested each predictor variable to determine whether its impact on network

characteristics differed significantly between men and women. Providing the gender-specific

models enables me to test whether the effects of social structural factors on network structure

differ between men and women. As the hypotheses at the end of Chapter 1 state, I predict that

the effects of all social structural factors on all core discussion network structures will differ

significantly between men and women.

I first ask what social structural factors affect network size for men in 2003 (Panel A,

Table 4.2). The results for the main effects show that the control for race is the only significant

predictor for men's network size, exerting a positive effect: White men had larger networks, pre-

Katrina, than non-white men. When addressing the question of what social structural factors

affect network size for women in 2003 (Panel B, Table 4.2), results show that education exerts a

significant effect on network size. Women with higher education have larger networks than

women with lower education. From a simple opportunistic approach, the pursuit of higher

Table 4.2 Unstandardized ordinary least squares coefficients for regression of NETWORK SIZE on individual level variables

	2003 Gender Differences				
	Panel A		Panel B		Panel C
	Men 2003		Women 2003		M1 to W1
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	Z[‡]
Age	.002	.006	-.005	.004	.971 (ns)
Education	.029	.066	.187***	.054	-1.85 (ns)
Married (Yes)	-.018	.186	.120	.142	-0.59 (ns)
Health Status	-.008	.098	-.168	.091	1.19 (ns)
Kids < 18	-.008	.111	.042	.077	-0.370 (ns)
Family Income	-.001	.003	.005	.002	-1.66 (ns)
Race (White)	.661***	.176	.292*	.138	1.65 (ns)
Intercept	.899		1.14		
R^2	.096		.122		
Adjusted R^2	.060		.100		
N	186		286		

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M1 = Men 2003; W1 = Women 2003

education provides an opportunity structure for increased opportunity for social contact with others, thereby increasing the opportunity to create social relationships. Also, the control for race (white) was also significant: White women had larger networks, pre-Katrina, than non-white women.

To specifically test my hypotheses about gender differences in these effects, I compute a series of z-scores. Panel C (Table 4.2) reports the z-scores for the tests for the equality of regression coefficients; these z-scores indicate whether there is a significant difference between men and women in the effects of each social structural variable on network size. None of my hypotheses for network size are supported. For men and women in 2003, none of the structural factors that were predicted to shape network size differently for men and women are significant. The lack of significant findings demonstrates that the effects of the social structural factors on network size do not differ significantly between men and women in 2003. The absence of significant findings for marital status and children in the home is interesting, given past research

that argues the effects of these life events impact men and women differently. Family role

scholars often report that being married and having children in the home result in women being

primarily responsible for domestic affairs (Fischer and Oliker 1983; Campbell 1985; Munch et

al. 1997; Ridgeway and Smith-Lovin 1999). One may assume that the increased responsibilities

within the home would limit and constrain women's opportunities to engage and maintain

interpersonal relationships, thus affecting their social networks. However, as my results indicate

neither marital status nor children in the home are significant predictors of network size; given

these non-significant findings, it is inherent that the effects of these characteristics on network

size do not differ significantly between men and women in 2003.

**Table 4.3. Unstandardized ordinary least squares coefficients for regression of
PROPORTION KIN on individual level variables.**

	2003 Gender Differences				
	Panel A		Panel B		Panel C
	Men 2003		Women 2003		M1 to W1
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	$Z^{\ddagger}$
Age	.002	.003	.003	.002	-.277 (ns)
Education	-.028	.030	-.012	.023	-.423 (ns)
Married (Yes)	.121	.085	.129*	.062	-.076 (ns)
Health Status	.034	.044	.039	.038	-.086 (ns)
Kids < 18	.021	.059	.006	.034	.220 (ns)
Family Income	-.001	.001	.000	.001	-.707 (ns)
Race (White)	-.072	.079	-.018	.059	-.547 (ns)
Intercept	.382		.284		
R^2	.045		.039		
Adjusted R^2	-.001		.012		
N	152		259		

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M1 = Men 2003; W1 = Women 2003

What are the significant predictors of proportion kin in core discussion networks for men

and women in 2003? Although none of the social structural characteristics significantly predict

proportion kin for men (Panel A, Table 4.3), marital status exerts a significant, positive effect for

women: Married women are embedded in networks with higher proportion kin than their
unmarried counterparts (Panel B, Table 4.3). Being married increases the potential for
developing kin relationships, by acquiring additional kin-ties through in-laws. Therefore, being
married affords one with the opportunity to acquire more kin relationships, therefore increasing
the potential pool of possible kin social interaction.

To test my hypotheses about gender differences in these effects, Panel C (Table 4.3)
reports the z-scores for the tests for the equality of regression coefficients. For men and women
in 2003, none of the structural factors that were predicted to shape proportion kin differently for
men and women are significant. In other words, the effects of the social structural factors on
proportion kin are more similar than they are different for men and women in 2003.

Table 4.4 Unstandardized ordinary least squares coefficients for regression of
<u>PROPORTION FEMALE</u> on individual level variables.

	2003 Gender Differences				
	Panel A		Panel B		Panel C
	Men 2003		Women 2003		M1 to W1
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	$Z^{\ddagger}$
Age	-.003	.003	-.004*	.002	.277 (ns)
Education	-.001	.030	-.067**	.021	1.80 (ns)
Married (Yes)	.112	.084	-.131*	.056	2.41*
Health Status	-.085	.044	-.063	.035	-.391 (ns)
Kids < 18	.107	.059	-.011	.031	1.77 (ns)
Family Income	.001	.001	.001	.001	0 (ns)
Race (White)	.016	.079	-.083	.054	1.03 (ns)
Intercept	.712		1.31		
R^2	.078		.116		
Adjusted R^2	.033		.091		
N	151		259		

* $p \le .05$; ** $p \le .01$; *** $p \le .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M1 = Men 2003; W1 = Women 2003

In addressing the question of which social structural factors affect proportion female for
men in 2003, none of my predictor variables exert significant effects (Panel A, Table 4.4).

However, results indicate that, for women, age, education, and marital status exert significant, negative effects on proportion female (Panel B, Table 4.4). Older women are embedded in networks with lower proportion female than younger women. Women with higher education had networks with a smaller proportion of female than women with lower education. Married women are embedded in core discussion networks that have lower proportion female than unmarried women. As Pugliesi and Shook (1998) maintain, being married provides one with a spouse, someone to turn to discuss important matters; the spouse for women would be their husband, thus reducing the potential space for a female within their network. Therefore, I argue that for married women, their spouse (husband), given their level of relational intimacy, is an alter in their core network with whom they discuss important matters, which leads to lower proportion female in networks of married women in 2003.

The effect of marital status on proportion female is the only social structural characteristic to differ significantly between men and women in 2003 (Panel C, Table 4.4); I only find support for my hypothesis for marital status. Whereas the main effect of marital status on men is not significant, its effect is significant and negative for women: Marital status is a stronger predictor of proportion female for women ($z = 2.41$; $p < .05$) than it is for men. The lack of any other significant findings demonstrates that the effects of the social structural factors (except for marital status) on proportion female do not differ significantly between men and women in 2003. This lack of significance leads me to draw an interesting conclusion that shifts the paradigm focus from gender differences to gender similarities. On one hand, it is possible that in recent years (2003), the effects of historically relevant social structural characteristics have lost their significant impact on social network structures, thus resulting in more similarities

than differences between men and women. If this is the case, future research may explore the

disappearance of gender differences rather than the existence of such differences.

**Table 4.5. Unstandardized ordinary least squares coefficients for regression of
STRUCTURAL DENSITY on individual level variables.**

	2003 Gender Differences				
	Panel A		Panel B		Panel C
	Men 2003		Women 2003		M1 to W1
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	$Z^{\ddagger}$
Age	.002	.001	.000	.001	1.41 (ns)
Education	.025	.015	.015	.012	.521 (ns)
Married (Yes)	.024	.043	.028	.031	-.075 (ns)
Health Status	.038	.023	-.014	.019	1.74 (ns)
Kids < 18	-.017	.031	-.014	.017	-.084 (ns)
Family Income	-.001	.001	.000	.001	-.707 (ns)
Race (White)	-.056	.040	.052	.030	-2.16 (ns)
Intercept	.634		.826		
R^2	.084		.035		
Adjusted R^2	.035		.007		
N	141		252		

* $p \le .05$; ** $p \le .01$; *** $p \le .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M1 = Men 2003; W1 = Women 2003

Surprisingly, none of the social structural factors significantly predicted structural density

for men (Panel A, Table 4.5) or women (Panel B, Table 4.5) in 2003. My results indicate that

none of these structural characteristics impacted the average closeness between ego and alters,

for either men or women in the New Orleans metro area, pre-Katrina. With an R-squared of

8.4% (and an adjusted R-squared of 3.5%), these structural characteristics do not appear to be a

good fit for predicting density in social networks.

Table 4.6. Unstandardized Ordinary Least Squares Coefficients for Regression of SOCIAL SUPPORT on Network Characteristics and Individual Level Variables, Nola 2003

	DV = Social Support				
	Panel A		Panel B		Panel C
	Men 2003		Women 2003		M1 to W1
	Coeff.	(S.E.)	Coeff.	(S.E.)	Z‡
Network Characteristics					
Network Size	.061	.068	.037	.052	.280 (ns)
Proportion Kin	-.092	.163	.056	.124	-.723 (ns)
Proportion Female	-.167	.161	.227†	.134	-1.88 (ns)
Structural Density	.117	.317	.144	.249	-.067 (ns)
Individual Characteristics					
Age	-.004	.005	-.003	.004	-.156 (ns)
Education	.044	.053	.010	.046	.484 (ns)
Married (Yes)	.036	.154	-.026	.120	.317 (ns)
Health Status	-.070	.083	.189**	.073	-2.34*
Kids < 18	.042	.112	-.040	.064	.636 (ns)
Family Income	.001	.002	.001	.002	0 (ns)
Race (White)	.402**	.149	.154	.115	1.32 (ns)
Intercept	3.21		2.49		
R^2	.117		.075		
Adjusted R^2	.041		.032		
N	140		251		

* p ≤ .05; ** p ≤ .01; *** p ≤ .001 (two-tailed test of significance); † p ≤ .05 (one-tailed test).
‡ Test for equality of regression coefficients.
Note. M1 = Men 2003; W1 = Women 2003

4.3.2   Effects of Core Discussion Network Structure on Perceived Adequacy of Social Support in 2003: Gender Differences

Table 4.6 presents the direct effects of core discussion network structure on perceived adequacy of social support, net of social structural characteristics. Surprisingly, none of the core discussion network structures (network size, proportion kin, proportion female, and structural density) significantly predicted perceived adequacy of social support for men in 2003 (Panel A, Table 4.6). The control for race (white) is the only variable to have a significant effect on perceived adequacy of social support for men: White men have higher perceptions of social support than non-white men. Although the social support literature predicts that core discussion

network structures are beneficial for expressive actions, such as social support, I find no support for such claims for men in 2003. For men in 2003, I fail to reject my hypotheses that core discussion network structures impact perceived adequacy of social support.

At the end of Chapter 1, I hypothesized the network size, proportion kin, proportion female, and network density would be significantly and positively related to perceived adequacy of social support (Panel B, Table 4.6). For women in 2003, my results show that only proportion female is significant, and positively related to perceived adequacy of social support. For women, being embedded in female-centered networks resulted in higher perceptions of social support. In synthesizing the gender socialization and social support literatures, my results lend support to past findings that women, as more expressive, typically offer more support to others. It is not surprising that being surrounded by females would lead one to believe that support would be available, if the need would arise. Turning to the control variables, health status had a significant, positive effect on perceived adequacy of social support: Women who consider themselves to be healthy had higher perceived support than those who reported poorer health.

The effect of health status on perceived adequacy of social support is the only control variable to differ significantly between men and women in 2003 (Panel C, Table 4.6). As the main effect of health status on social support is not significant for men, but positive and significant for women, the significant z-score indicates that health status is a stronger predictor of perceived adequacy of social support for women, compared to men, in 2003 ($z = -2.34$; $p < .05$). The lack of any other significant findings demonstrates that the effects of core discussion networks and the control variables (except health status) on perceived adequacy of social support do not differ significantly between men and women in 2003.

Table 4.7. Unstandardized Ordinary Least Squares Coefficients for Regression of <u>PSYCHOLOGICAL DISTRESS</u> on Social Support, Network Characteristics, and Individual Level Variables, Nola 2003

	DV = Psychological Distress				
	Panel A		Panel B		Panel C
	Men 2003		Women 2003		M1 to W1
	Coeff.	(S.E.)	Coeff.	(S.E.)	$Z^{\ddagger}$
Social Support	-1.21	.844	-1.38†	.708	.161 (ns)
Network Characteristics					
Network Size	.005	.650	.126	.575	-.139 (ns)
Proportion Kin	-2.24	1.56	-1.21	1.36	-.495 (ns)
Proportion Female	2.71	1.54	-2.42	1.48	2.40 (ns)
Structural Density	3.74	3.03	2.17	2.73	.385 (ns)
Individual Characteristics					
Age	-.107*	.048	-.113**	.041	.095 (ns)
Education	-1.61**	.511	-1.26*	.500	-.487 (ns)
Married (Yes)	.166	1.47	-.348	1.32	.260 (ns)
Health Status	-3.77***	.796	-3.63***	.815	-.118 (ns)
Kids < 18	1.51	1.07	1.76*	.704	-.192 (ns)
Family Income	-.022	.024	-.003	.022	-.583 (ns)
Race (White)	2.49	1.46	-.504	1.27	1.55 (ns)
Intercept	29.92		34.52		
R^2	.322		.210		
Adjusted R^2	.258		.170		
N	140		250		

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test of significance). † $p \leq .05$ (one-tailed test).
‡ Test for equality of regression coefficients.
Note. M1 = Men 2003; W1 = Women 2003

4.3.3   Effects of Core Discussion Network Structure and Perceived Adequacy of Social Support on Psychological Distress in 2003: Gender Differences

Table 4.7 presents the effects of core discussion network structure and perceived

adequacy of social support on psychological distress, net of individual characteristics. Although

I predicted a positive relationship between network size and psychological distress, I find no

support for this relationship among men in 2003 (Panel A, Table 4.7). I also predicted a negative

relationship between proportion kin, proportion female, and structural density on psychological

distress, and I find no support for these predictions. Further, I predicted a significant, negative

relationship between perceived adequacy of social support and psychological distress; I find no evidence that perceived adequacy of social support exerted a significant effect on psychological distress for men.

Turning to the control variables, age, education, and health status all exerted significant, negative effects on psychological distress, among men in 2003. Older men reported less psychological distress than younger men in 2003. Also, men with more education reported less distress than men with less education; healthier men in 2003 reported less psychological distress than their less healthier counterparts.

My analysis for women in 2003 yields similar findings (Panel B, Table 4.7). I predicted a positive relationship between network size and psychological distress and negative relationships between proportion kin, proportion female, and structural density and psychological distress. None of the network characteristics significantly predicted psychological distress among women in 2003. I do find support for the significant, negative relationship between perceived adequacy of social support and psychological distress: As perceived adequacy of social support increases, psychological distress decreases, among women in 2003.

Looking at the control variables, the results for women in 2003 are consistent with the findings for men in 2003: Age, education, and health status were significant, negative predictors of psychological distress for women in 2003. Older women had lower psychological distress than younger women. Women with higher education had lower psychological distress than women with lower education, while women who considered themselves to be healthier had lower psychological distress than those who reported poorer health. Additionally, for women, having children under the age of 18 in the home is a significant, positive predictor of psychological

distress: Psychological distress increased as the number of children under 18 in the home increased.

Although I predicted that all of these effects would differ significantly between men and women, my analysis fails to find any significant differences in the effects of predictors on psychological distress for men and women.

4.3.4   Indirect Effect of Core Discussion Network Structure, through Perceived Adequacy of Social Support, on Psychological Distress in 2003: Gender Differences

In addition to examining the direct effects, I also examined the indirect effects of core discussion networks, through perceived adequacy of social support, on psychological distress. For men, I find no evidence of an indirect relationship (Panel A, Table 4.7). For women, although there are no direct effects of network structure on psychological distress, perceived support exerts a significant, negative effect on psychological distress (Panel B, Table 4.7). Proportion female in the network indirectly influences psychological distress, through perceived adequacy of social support, among women in 2003. For women, as proportion female in their network increases, perceived adequacy of social support increases, which decreases psychological distress. This significant indirect relationship lends support to the gender socialization and social support literatures, which portray women as emotional and expressive. Being embedded in a core network with higher proportion female provides women with a comforting aspatial environment that fosters perceptions of support availability.

4.4   NOLA 2006

4.4.1   Effects of Social Structural Factors on Core Discussion Networks in 2006: Gender Differences

To assess the impact of social structural characteristics on the structure of respondents' core discussion networks, I conducted a series of OLS regressions, separately for men and

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women in 2006; I also tested each predictor variable to determine whether its impact on network

characteristics differed significantly between men and women. Providing the gender-specific

models enables me to test whether the effects of social structural factors on network structure

differ between men and women. As the hypotheses at the end of Chapter 1 state, I predict that

all of the social structural factors will differ significantly between men and women, for all core

discussion network structures.

Table 4.8. Unstandardized Ordinary Least Squares Coefficients for Regression of NETWORK SIZE on Individual Level Variables

	2006 Gender Differences				
	Panel A		Panel B		Panel C
	Men 2006		Women 2006		M2 to W2
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	$Z^{\ddagger}$
Age	-.008	.005	-.010	.005	.283 (ns)
Education	.051	.064	.213**	.068	-1.73 (ns)
Married (Yes)	-.153	.169	.171	.151	-1.43 (ns)
Health Status	-.084	.091	-.094	.083	.081 (ns)
Kids < 18	-.049	.079	-.119	.079	.626 (ns)
Family Income	.004	.002	.000	.002	1.41 (ns)
Race (White)	.340*	.173	.422**	.152	-.356 (ns)
Intercept	1.72		1.72		
R^2	.053		.085		
Adjusted R^2	.029		.066		
N	282		346		

* $p \le .05$; ** $p \le .01$; *** $p \le .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M2 = Men 2006; W2 = Women 2006

Turning to core discussion networks in the aftermath of Hurricane Katrina, I first address

the question of what social structural factors affected network size among men in 2006 (Panel A,

Table 4.8). The results show that the control for race is the only significant predictor for men's

network size, exerting a positive effect: White men have larger networks, post-Katrina, than

non-white men. In addressing what social structural factors affect network size for women in

2006 (Panel B, Table 4.8), results show that education exerts a significant effect on network size. Women with higher education have larger networks than women with lower education. As the cross-sectional data show, women who are more educated are embedded in larger networks than their less educated counterparts. This finding suggests that the institution of education may not only serve as an opportunity for knowledge, but may also provide a unique opportunity structure for developing social connections. Also, the control for race (white) was also significant: White women have larger networks, post-Katrina, than non-white women. All of these post-Katrina findings (for both men and women) are consistent with the pre-Katrina (2003) results for network size. Hence, the same social structural factors that influenced core discussion networks for men and women in 2003 remained influential for men and women in 2006.

To assess whether the effects of the predictor variables were the same for men and women in 2006, I computed a series of z-scores. Panel C (Table 4.8) presents the results of the test for the equality of regression coefficients. For men and women in 2006, none of the structural factors that were predicted to shape networks size differently for men and women were significant. Nor did any of the social structural factors differ significantly between men and women in 2003. Generally speaking, I consider the lack of significant findings for gender differences to be significant itself. Contrary to reports in the social network literature that maintain that men and women differentially experience life events, resulting in core networks of different sizes, my results indicate that the effects of structural characteristics do not differ significantly for men and women. For the most part, the effects of these social structural factors on network size are more similar than they are different for men and women in the New Orleans metropolitan area in 2003 and 2006.

**Table 4.9. Unstandardized Ordinary Least Squares Coefficients for Regression of
PROPORTION KIN**

	2006 Gender Differences				
	Panel A		Panel B		Panel C
	Men 2006		Women 2006		M2 to W2
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	$Z^{\ddagger}$
Age	.001	.002	.003	.002	-.707 (ns)
Education	-.047	.024	-.014	.021	-1.03 (ns)
Married (Yes)	.298***	.065	.243***	.047	.686 (ns)
Health Status	.048	.035	.048	.026	0 (ns)
Kids < 18	.011	.028	.000	.024	.298 (ns)
Family Income	.000	.001	-.001	.001	.707 (ns)
Race (White)	.027	.069	-.075	.047	1.22 (ns)
Intercept	.375		.302		
R^2	.123		.106		
Adjusted R^2	.096		.086		
N	233		320		

* $p \le .05$; ** $p \le .01$; *** $p \le .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M2 = Men 2006; W2 = Women 2006

What are the significant predictors of proportion kin in core discussion networks for men
and women in 2006? Marital status exerts a significant, positive effect for both men and women
in 2006 (Panels A and B, Table 4.9). Both married men and married women, in the aftermath of
Hurricane Katrina, are embedded in networks with higher proportion kin than their unmarried
counterparts. Although being married is a significant and positive predictor for women pre-
Katrina, its significance for men is unique to the post-Katrina data. My results clearly indicate
how being married exposes individuals to a wider array of potential kin relationships, which
provides increased opportunities to form, develop, and maintain social relationships with kin.
Especially in the post-Katrina New Orleans metropolitan region, where a large majority of kin
reside in relatively close proximity to one another, both married men and women were likely to
discuss important matters with relatives rather than non-relatives.

Panel C (Table 4.9) presents the results of the test for the equality of regression coefficients. For men and women in 2006, none of the structural factors that were predicted to shape proportion kin differently for men and women were significant. Also, none of the social structural factors differed significantly between men and women in 2003. The absence of significant gender differences in the effects of structural factors on proportion kin indicate that men and women are more similar than different in the characteristics that shape the kin composition of their core discussion networks.

Table 4.10. Unstandardized Ordinary Least Squares Coefficients for Regression of PROPORTION FEMALE on Individual Level Variables

	2006 Gender Differences				
	Panel A		Panel B		Panel C
	Men 2006		Women 2006		M2 to W2
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	Z[‡]
Age	.001	.002	.000	.001	.447 (ns)
Education	-.007	.023	-.039*	.018	1.09 (ns)
Married (Yes)	.103	.060	-.185***	.042	3.93***
Health Status	.021	.032	-.056*	.023	1.95 (ns)
Kids < 18	.013	.026	-.022	.021	1.05 (ns)
Family Income	.000	.001	-.001	.001	.707 (ns)
Race (White)	-.001	.064	-.021	.041	.263 (ns)
Intercept	.517		1.093		
R^2	.020		.151		
Adjusted R^2	-.010		.132		
N	233		319		

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M2 = Men 2006; W2 = Women 2006

In addressing the question of which social structural factors affect proportion female for men in 2006, none of my predictor variables exert significant effects (Panel A, Table 4.10). The lack of significant predictors for this variable, among men, is consistent with the 2003 findings. However, analysis of the proportion female in women's networks yields different findings. My results indicate that education, marital status, and health status exert significant, negative effects

on proportion female (Panel B, Table 4.10). Women with higher education had networks with a smaller proportion female than women with lower education. Married women are embedded in core discussion networks that have lower proportion female than unmarried women. Also, healthier women were embedded in core networks with lower proportions of female than unhealthy women. For women, education and marital status are consistent with my findings from 2003, while health status was not significant in 2003.

The effect of marital status on proportion female is the only social structural characteristic to differ significantly between men and women in 2006 (Panel C, Table 4.10); I only find support for my hypothesis for marital status. Whereas the main effect of marital status on men is not significant, its effect is significant and negative for women: Marital status is a stronger predictor of proportion female for women ($z = 3.93$, $p < .001$) than it is for men. This significant difference in the effect of marital status on proportion female is consistent with research by Pugliesi and Shook (1998), who maintain that, married women are likely to discuss important matters with their husband, thus reducing the opportunity to include an additional female in their core discussion network, thus significantly lowering the proportion female in married women's networks.

Although no predictors are significant for structural density among men in 2006 (Panel A, Table 4.11), only health status is a significant predictor of structural density among women in 2006 (Panel B, Table 4.11). Women who self-rate themselves as being healthier are embedded in networks with higher structural density than their less healthy counterparts. Measured as the average emotional closeness between ego and alters, my results indicate that healthier women, on average, report higher levels of emotional closeness to their alters than their unhealthy

**Table 4.11. Unstandardized 0rdinary Least Squares Coefficients for Regression of
STRUCTURAL DENSITY on Individual Level Variables**

	2006 Gender Differences				
	Panel A		Panel B		Panel C
	Men 2006		Women 2006		M2 to W2
Individual Characteristics	Coeff.	(S.E.)	Coeff.	(S.E.)	$Z^{\ddagger}$
Age	.000	.001	.000	.001	0 (ns)
Education	-.005	.010	.008	.008	-1.01 (ns)
Married (Yes)	.002	.026	.010	.017	-.257 (ns)
Health Status	.000	.014	.028**	.010	-1.63 (ns)
Kids < 18	.013	.011	-.007	.009	1.41 (ns)
Family Income	.000	.000	.000	.000	0 (ns)
Race (White)	.022	.028	-.001	.017	.702 (ns)
Intercept	.930		.847		
R^2	.012		.038		
Adjusted R^2	-.019		.017		
N	233		321		

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test of significance).
‡ Test for equality of regression coefficients.
Note. M2 = Men 2006; W2 = Women 2006

counterparts. Further, none of the effects of my predictors of structural density differ

significantly between men and women in 2006 (Panel C, Table 4.11).

4.4.2   Effects of Core Discussion Network Structure on Perceived Adequacy of Social Support in 2006: Gender Differences

Table 4.12 presents the direct effects of core discussion network structure on perceived

adequacy of social support, net of social structural characteristics. I predicted that network size,

proportion kin, proportion female, and structural density would all be positively associated with

perceived adequacy of social support. I only find support for network size and proportion kin

(Panel A, Table 4.12). Men who were embedded in larger networks reported higher levels of

Table 4.12. Unstandardized Ordinary Least Squares Coefficients for Regression of <u>SOCIAL SUPPORT</u> on Network Characteristics and Individual Level Variables, Nola 2006

	DV = Social Support				
	Panel A		Panel B		Panel C
	Men 2006		Women 2006		M2 to W2
	Coeff.	(S.E.)	Coeff.	(S.E.)	Z[‡]
Network Characteristics					
Network Size	.127*	.062	-.011	.047	1.77 (ns)
Proportion Kin	.294†	.173	.204	.153	.389 (ns)
Proportion Female	-.048	.190	.079	.169	-.499 (ns)
Structural Density	-.410	.388	.336	.481	-1.21 (ns)
Individual Characteristics					
Age	-.003	.005	.002	.004	-.781 (ns)
Education	-.005	.057	.001	.055	-.076 (ns)
Married (Yes)	.008	.157	-.056	.129	.315 (ns)
Health Status	.192*	.080	.362***	.070	-1.59 (ns)
Kids < 18	-.091	.065	-.028	.060	-.712 (ns)
Family Income	.000	.002	-.001	.002	.353 (ns)
Race (White)	.430**	.159	.171	.122	1.29 (ns)
Intercept	1.870		.933		
R^2	.146		.122		
Adjusted R^2	.098		.088		
N	211		294		

* $p \le .05$; ** $p \le .01$; *** $p \le .001$ (two-tailed test of significance); † $p \le .05$ (one-tailed test).
‡ Test for equality of regression coefficients.
Note. M2 = Men 2006; W2 = Women 2006

perceived support than men in smaller networks. Also, men with greater proportion kin reported more perceived support than men with lower proportion kin in their core networks. My results lend support to the social support strand of network analysis, which maintains core discussion network structures are beneficial for expressive actions. Framing social support as an expressive action, my findings indicate that for men, larger networks increase perceived availability of help. Also, being embedded in a core network with greater proportion of kin increases perceptions of available support. Consistent with both the social support and family sociology literatures, kin

relationships are perceived as outlets of help and assistance. Particularly in the aftermath of Hurricane Katrina, men embedded in core networks that contained greater proportion kin perceived more help and assistance available to them than men in networks containing lesser proportion kin. Following this natural disaster, men perceived kin as important sources of available help and assistance for the recovery process. Turning to the control variables, health status exerts a significant, positive effect on perceived support. Men who were healthier reported higher levels of perceived support than their less healthy counterparts. Also, the control for race (white) was also significant: White men reported greater perceived support than non-white men.

For women, none of the network structure measures (network size, proportion kin, proportion female, or structural density) significantly predicted perceived adequacy of social support (Panel B, Table 4.12). I find no support for the finding in the social support literature that core networks are beneficial for expressive actions for women. The only control variable with a significant effect was health status, which exerted a positive effect on perceived adequacy of social support: Healthier women had greater perceived adequacy of support than those who reported poorer health. The findings for women, post-Katrina, are consistent with the pre-Katrina findings. None of the core discussion network structures or control variables differed significantly between men and women in 2006 (Panel C, Table 4.12).

4.4.3 Effects of Core Discussion Network Structure and Perceived Adequacy of Social Support on Psychological Distress in 2006: Gender Differences

Table 4.13 presents the effects of core discussion network structure and perceived adequacy of social support on psychological distress, net of individual characteristics. I

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Table 4.13. Unstandardized ordinary least squares coefficients for regression of PSYCHOLOGICAL DISTRESS on Social Support, Network Characteristics, and Individual Level Variables, Nola 2006

	DV = Psychological Distress				
	Panel A		Panel B		Panel C
	Men 2006		Women 2006		M2 to W2
	Coeff.	(S.E.)	Coeff.	(S.E.)	$Z^{\ddagger}$
Social Support	-3.09***	.852	-2.49**	.778	-.521 (ns)
Network Characteristics					
Network Size	.398	.752	.733	.620	-.344 (ns)
Proportion Kin	.415	2.09	.880	2.01	-.161 (ns)
Proportion Female	-1.54	2.28	-.770	2.21	-.243 (ns)
Structural Density	-8.52†	4.68	-4.56	6.29	-.505 (ns)
Individual Characteristics					
Age	-.123*	.054	-.121*	.058	-.025 (ns)
Education	.113	.686	-1.18	.716	1.30 (ns)
Married (Yes)	-1.47	1.88	-2.58	1.69	.441 (ns)
Health Status	-5.09***	.977	-6.87***	.951	1.29 (ns)
Kids < 18	.673	.780	-.178	.786	.768 (ns)
Family Income	-.067**	.023	-.051*	.026	-.461 (ns)
Race (White)	1.50	1.94	.369	1.60	.451 (ns)
Intercept	51.42		58.03		
R^2	.317		.301		
Adjusted R^2	.275		.271		
N	211		294		

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test of significance); † $p \leq .05$ (one-tailed test).
‡ Test for equality of regression coefficients.
Note. M2 = Men 2006; W2 = Women 2006

predicted a positive relationship between network size and psychological distress, but fail to find support for this relationship, among men in 2006 (Panel A, Table 4.13). I also predicted negative effects of proportion kin, proportion female, and structural density on psychological distress. I find support for my hypothesis for structural density: Men embedded in more dense networks reported less distress than men in less dense networks. For men in 2006, being embedded in networks with larger average emotional closeness reduced psychological distress. I also find support for the significant, negative relationship between perceived adequacy of social support

and psychological distress: As perceived adequacy of social support increases, psychological

distress decreases, among men in 2006. This effect was not seen in the pre-Katrina data.

For women, I find no support for my hypothesis that network size would increase

psychological distress; I also fail to find any support for my hypothesis that proportion kin,

proportion female, and structural density would decrease psychological distress (Panel B, Table

4.13). Consistent with my results for men in 2006, I do find evidence of the direct, negative

effect of perceived adequacy of social support on psychological distress for women: As

perceived adequacy of social support increases, psychological distress decreases, among women

in 2006. This finding was not found in pre-Katrina results.

Turning to the control variables (social structural variables), results indicate that age,

health status, and family income are all significantly and negatively associated with

psychological distress, among both men and women, post-Katrina. Older men and women report

lower levels of psychological distress than younger men and women. Healthier men and women

report lower levels of psychological distress than less healthy men and women. As family

income increases, psychological distress decreases, among both men and women in 2006.

Results fail to detect any significant differences of the effects of perceived adequacy of social

support, core discussion network structure, or social structural factors on psychological distress

for men and women in 2006.

4.4.4   Indirect Effect of Core Discussion Network Structure, through Perceived Adequacy of Social Support, on Psychological Distress in 2006: Gender Differences

In addition to examining the direct effects, I also examined the indirect effects of core

discussion networks, through perceived adequacy of social support, on psychological distress.

For men, structural density exerts a direct, negative effect on psychological distress: As network

density increases, distress decreases. However, both network size and proportion kin influence

psychological distress indirectly, through their impact on perceived adequacy of social support.

Being embedded in a larger network, and being embedded in a more kin-centered network

positively impact perceived adequacy of social support, which decreases psychological distress.

For women, I find no evidence of direct effects of core network structure on psychological

distress or perceived adequacy of social support. Therefore, my results do not lend support to an

indirect relationship for women in 2006.

4.5   Detecting Differences between 2003 and 2006

I conduct a series of tests of the equality of regression coefficients between 2003 and

2006 among (a) men and (b) women. These tests examine the extent to which the effects of

social structural factors, core discussion network structures, and perceived adequacy of social

support differ significantly between 2003 and 2006, among men and women. Here I report the

results of these tests. I present my results in Table 4.14.

Table 4.14. Tests for Equality of Regression Coefficients Across Years for Men and Women

Panel A. <u>NETWORK SIZE</u>‡

	Differences between 2003 and 2006	
	Model 1 Men 2003 to Men 2006	Model 2 Women 2003 to Women 2006
	Z = M1 to M2	Z = W1 to W2
Individual Characteristics		
Age	1.28 (ns)	.781 (ns)
Education	-.239 (ns)	-.299 (ns)
Married (Yes)	.537 (ns)	-.246 (ns)
Health Status	.568 (ns)	-.601 (ns)
Kids < 18	.301 (ns)	1.46 (ns)
Family Income	-1.39 (ns)	1.77 (ns)
Race (White)	1.30 (ns)	-.633 (ns)

* p ≤ .05; ** p ≤ .01; *** p ≤ .001 (two-tailed test of significance).
‡ Coefficients used in these tests come from Table 4.2 (2003) and Table 4.8 (2006)
Note. M1 = Men 2003, M2 = Men 2006; W1 = Women 2003, W2 = Women 2006

(Table 4.14 Continued)

Panel B. PROPORTION KIN‡

	Differences between 2003 and 2006	
	Model 1 Men 2003 to Men 2006	Model 2 Women 2003 to Women 2006
	Z = M1 to M2	Z = W1 to W2
Individual Characteristics		
Age	.277 (ns)	0 (ns)
Education	.494 (ns)	.064 (ns)
Married (Yes)	-1.65 (ns)	-1.46 (ns)
Health Status	-.249 (ns)	-.195 (ns)
Kids < 18	.153 (ns)	.144 (ns)
Family Income	-.707 (ns)	.707 (ns)
Race (White)	-.943 (ns)	.755 (ns)

* p ≤ .05; ** p ≤ .01; *** p ≤ .001 (two-tailed test of significance).
‡ Coefficients used in these tests come from Table 4.3 (2003) and Table 4.9 (2006)
Note. M1 = Men 2003, M2 = Men 2006; W1 = Women 2003, W2 = Women 2006

Panel C. PROPORTION FEMALE‡

	Differences between 2003 and 2006	
	Model 1 Men 2003 to Men 2006	Model 2 Women 2003 to Women 2006
	Z = M1 to M2	Z = W1 to W2
Individual Characteristics		
Age	-1.11 (ns)	-1.79 (ns)
Education	.159 (ns)	-1.01 (ns)
Married (Yes)	.087 (ns)	.771 (ns)
Health Status	-1.95 (ns)	-.167 (ns)
Kids < 18	1.46 (ns)	.294 (ns)
Family Income	.707 (ns)	1.41 (ns)
Race (White)	.167 (ns)	-.914 (ns)

* p ≤ .05; ** p ≤ .01; *** p ≤ .001 (two-tailed test of significance).
‡ Coefficients used in these tests come from Table 4.4 (2003) and Table 4.10 (2006)
Note. M1 = Men 2003, M2 = Men 2006; W1 = Women 2003, W2 = Women 2006

(Table 4.14 continued)

Panel D. STRUCTURAL DENSITY‡

	Differences between 2003 and 2006	
	Model 1 Men 2003 to Men 2006	Model 2 Women 2003 to Women 2006
	Z = M1 to M2	Z = W1 to W2
Individual Characteristics		
Age	1.41 (ns)	0 (ns)
Education	1.66 (ns)	.485 (ns)
Married (Yes)	.438 (ns)	.509 (ns)
Health Status	1.41 (ns)	-1.96 (ns)
Kids < 18	-.912 (ns)	-.364 (ns)
Family Income	-1.00 (ns)	0 (ns)
Race (White)	-1.60 (ns)	1.54 (ns)

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test of significance).
‡ Coefficients used in these tests come from Table 4.5 (2003) and Table 4.11 (2006)
Note. M1 = Men 2003, M2 = Men 2006; W1 = Women 2003, W2 = Women 2006

Panel E. SOCIAL SUPPORT‡

	Differences between 2003 and 2006	
	Model 1 Men 2003 to Men 2006	Model 2 Women 2003 to Women 2006
	Z = M1 to M2	Z = W1 to W2
Network Characteristics		
Network Size	-.717 (ns)	.685 (ns)
Proportion Kin	-1.62 (ns)	-.751 (ns)
Proportion Female	-.478 (ns)	.686 (ns)
Structural Density	1.05 (ns)	-.354 (ns)
Individual Characteristics		
Age	-.141 (ns)	-.884 (ns)
Education	.629 (ns)	.125 (ns)
Married (Yes)	.127 (ns)	.171 (ns)
Health Status	-2.25*	-1.71 (ns)
Kids < 18	1.03 (ns)	-.137 (ns)
Family Income	.353 (ns)	.707 (ns)
Race (White)	-.128 (ns)	-.101 (ns)

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test of significance).
‡ Coefficients used in these tests come from Table 4.6 (2003) and Table 4.12 (2006)
Note. M1 = Men 2003, M2 = Men 2006; W1 = Women 2003, W2 = Women 2006

(Table 4.14 continued)

Panel F. <u>PSYCHOLOGICAL DISTRESS</u>‡

	Differences between 2003 and 2006	
	Model 1 Men 2003 to Men 2006	Model 2 Women 2003 to Women 2006
	Z = M1 to M2	Z = W1 to W2
Social Support	1.57 (ns)	1.04 (ns)
Network Characteristics		
Network Size	-.395 (ns)	-.718 (ns)
Proportion Kin	-1.02 (ns)	-.863 (ns)
Proportion Female	1.54 (ns)	-.621 (ns)
Structural Density	2.20*	.981 (ns)
Individual Characteristics		
Age	.221 (ns)	.113 (ns)
Education	-2.01*	-.090 (ns)
Married (Yes)	.685 (ns)	1.04 (ns)
Health Status	1.05 (ns)	2.58**
Kids < 18	.637 (ns)	1.84 (ns)
Family Income	1.35 (ns)	1.41 (ns)
Race (White)	.407 (ns)	-.427 (ns)

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test of significance).
‡ Coefficients used in these tests come from Table 4.7 (2003) and Table 4.13 (2006)
Note. M1 = Men 2003, M2 = Men 2006; W1 = Women 2003, W2 = Women 2006

4.5.1 Differences between 2003 and 2006: Men Only

In testing the equality of regression coefficients between 2003 and 2006 among men, my results reveal significant differences in the effects of (a) health status on social support (Table 4.14, Panel E, Model 1) and (b) structural density and education on psychological distress (Table 4.14, Panel E, Model 1). To address the first significant difference here, although the direct effect of health status on perceived adequacy of social support was not significant in 2003, its effect was significant and positive in 2006. This indicates that health status was a stronger predictor of perceived adequacy of social support in 2006 among men than it was in 2003 among men.

My results further indicate two significant differences for men between 2003 and 2006 for psychological distress. Whereas the direct effect of structural density on psychological distress was not significant in 2003, its effect was significant and negative in 2006. Therefore, structural density was a stronger predictor of psychological distress in 2006 than in 2003, among men. Being embedded in an emotionally close core network significantly reduced psychological distress for men, post-Katrina, but had no effect for men, pre-Katrina. Regarding the effect of education on psychological distress, its effect was significant and negative in 2003, but not significant in 2006.

4.5.2 Differences between 2003 and 2006: Women Only

In testing the equality of regression coefficients between 2003 and 2006 among women, my results reveal only one significant difference for the effect of health status on psychological distress (Table 4.14, Panel F, Model 2). Although the effect of health status on psychological distress was negative and significant in both 2003 and 2006, the magnitude of the regression coefficient indicates that health status was a stronger predictor of psychological distress in 2006 than it was in 2003. For women, self-reported physical health status was more significant in reducing psychological distress following Hurricane Katrina than it was for women in 2003.

CHAPTER 5: DISCUSSION AND CONCLUSIONS

5.1   Introduction

The robust literature on social resources demonstrates that social networks are important: Above and beyond personal resources, the effects of social networks matter for both economic and noneconomic outcomes. Social network analysis informs us that one's overall social network contains different sectors, and that certain network sectors are more advantageous or beneficial for certain resources and outcomes. Whereas weaker ties and less dense networks are beneficial for instrumental actions, stronger ties and denser networks are beneficial for expressive actions, such as social support and psychological health. As consistently demonstrated by previous social network research, one sector of social networks, core discussion networks, are characterized as dense network sectors that contain strong, homophilous ties. It is no surprise that academia and the public at large were shocked to learn that, over the past two decades, the average size of core discussion networks of Americans has gotten smaller (McPherson et al. 2006). If, as Durkheim initially argued, the number of social contacts indicates social integration, these findings suggest Americans are currently in a precarious state of vulnerability: Social isolation. However, are Americans experiencing greater social isolation today than they were two decades ago, and if so, do these effects differ between men and women?

The first aim of this dissertation extends McPherson et al.'s (2006) analysis of core discussion networks to ask how the effects of social structural characteristics on core discussion network structures differ between men and women. First, I examined the General Social Survey (GSS) data; the 1985 GSS served as the baseline measure for making comparisons with the 2004 GSS data. These comparisons provided important information regarding the structure of core

discussion networks over the past two decades and allowed me to explore whether, and to what extent, the effects of structural characteristics on social networks differed between men and women.

The second aim of this dissertation examined the effects of core discussion network structures on health-related outcomes. Social network data collected from Orleans and Jefferson parishes in 2003 (pre-Katrina) served as the baseline to which I compared the 2006, post-Katrina social network data. My analysis examined how social network structures impacted both the social support process and psychological health status in different ways, for men and women. Specifically, I explored (a) the direct effects of social network structure on perceived adequacy of social support, (b) the direct effects of social network structure on psychological distress, and (c) the indirect effects of social network structure, through perceived adequacy of social support, on psychological distress.

I presented the detailed results for my analysis in Chapters 3 and 4. In this chapter, I summarize the major findings for both the national and regional data and place these findings within the context of my theoretical expectations; Table 5.1 summarizes all research hypotheses and findings from my analysis. Then, I address the limitations of my research. Lastly, I discuss the future directions of my research agenda.

5.2 Summary of Major Findings

5.2.1 National Data

The overarching structural features of society affect the ways in which social relationships (and therefore core discussion networks) are formed. Further, as Durkheim argued, social integration benefits health. Building upon Durkheim's original research in *Suicide*, social

Table 5.1. Summary of Research Hypotheses and Findings

Panel A. National Data

Hypothesis	Findings
H1.1 The core discussion network size of men is different from the core discussion network size of women in (a) 1985 and (b) 2004.	(a) 1985: Not significant (b) 2004: Significant; women larger size
H1.2 The proportion kin in core discussion networks for men is different from the proportion kin in core discussion networks for women in (a) 1985 and (b) 2004.	(a) 1985: Significant; women greater proportion kin (b) 2004: Not significant
H1.3 The proportion female in core discussion networks for men is different from the proportion female in core discussion networks for women in (a) 1985 and (b) 2004.	(a) 1985: Significant; women greater proportion female (b) 2004: Significant; women greater proportion female
H1.4 The structural density in core discussion networks for men is different from the structural density in core discussion networks for women in (a) 1985 and (b) 2004.	(a) 1985: Not significant (b) 2004: Not significant
H1.5 The core discussion network size of 1985 is different from the core discussion network size of 2004 for (a) men and (b) women.	(a) Men: Significant; larger in 1985 (b) Women: Significant; larger in 1985
H1.6 The proportion kin in core discussion networks of 1985 is different from the proportion kin in core discussion networks of 2004 for (a) men and (b) women.	(a) Men: Significant; larger in 2004 (b) Women: Not significant
H1.7 The proportion female in core discussion networks of 1985 is different from the proportion female in core discussion networks of 2004 for (a) men and (b) women.	(a) Men: Significant; larger in 2004 (b) Women: Not significant
H1.8 The structural density in core discussion networks of 1985 is different from the structural density in core discussion networks of 2004 for (a) men and (b) women.	(a) Men: Significant; larger in 2004 (b) Women: Not significant

(Table 5.1 continued)

H1.9 The effects of social structural variables on network size will be different for men and women in (a) 1985 and (b) 2004.	(a) 1985: Race (b) 2004: None
H1.10 The effects of social structural variables on proportion kin will be different for men and women in (a) 1985 and (b) 2004.	(a) 1985: Race (b) 2004: None
H1.11 The effects of social structural variables on proportion female will be different for men and women in (a) 1985 and (b) 2004.	(a) 1985: Marital status and race (b) 2004: Age, marital status, and race
H1.12 The effects of social structural variables on structural density will be different for men and women in (a) 1985 and (b) 2004.	(a) 1985: Marital status (b) 2004: Family income
H1.13 The effects of social structural variables on core discussion network size will differ between 1985 and 2004 for (a) men and (b) women.	(a) Men: Age (b) Women: Age, kids under 18
H1.14 The effects of social structural variables on proportion kin will differ between 1985 and 2004 for (a) men and (b) women.	(a) Men: None (b) Women: Marital status, family income
H1.15 The effects of social structural variables on proportion female will differ between 1985 and 2004 for (a) men and (b) women.	(a) Men: Age (b) Women: Age
H1.16 The effects of social structural variables on structural density will differ between 1985 and 2004 for (a) men and (b) women.	(a) Men: None (b) Women: Marital status, family income

(Table 5.1 continued)

Panel B. Regional Data

Hypothesis	Findings
H2.1 The core discussion network size of men is different from the core discussion network size of women in (a) 2003 and (b) 2006.	(a) 2003: Significant; women larger size (b) 2006: Significant; women larger size
H2.2 The core discussion network size of 2003 is different from the core discussion network size of 2006 for (a) men and (b) women.	(a) Men: Significant; 2006 larger size (b) Women: Significant; 2006 larger size
H2.3 The proportion kin in core discussion networks for men is different from the proportion kin in core discussion networks for women in (a) 2003 and (b) 2006.	(a) 2003: Significant; women greater proportion kin (b) 2006: Not significant
H2.4 The proportion kin in core discussion networks of 2003 is different from the proportion kin in core discussion networks of 2006 for (a) men and (b) women.	(a) Men: Significant; 2006 greater proportion kin (b) Women: Significant; 2006 greater proportion
H2.5 The proportion female in core discussion networks for men is different from the proportion female in core discussion networks for women in (a) 2003 and (b) 2006.	(a) 2003: Significant; women greater proportion female (b) 2006: Not significant
H2.6 The proportion female in core discussion networks of 2003 is different from the proportion female in core discussion networks of 2006 for (a) men and (b) women.	(a) Men: Significant; 2006 greater proportion female (b) Women: Not significant
H2.7 The structural density in core discussion networks for men is different from the structural density in core discussion networks for women in (a) 2003 and (b) 2006.	(a) 2003: Not significant (b) 2006: Not significant
H2.8 The structural density in core discussion networks of 2003 is different from the structural density in core discussion networks of 2006 for (a) men and (b) women.	(a) Men: Significant; 2006 greater structural density (b) Women: Significant; 2006 greater structural density

(Table 5.1 continued)

H2.9 The perceived adequacy of social support for men is different from the perceived adequacy of social support for women in (a) 2003 and (b) 2006.	(a) 2003: Not significant (b) 2006: Not significant
H2.10 The perceived adequacy of social support in 2003 is different from the perceived adequacy of social support in 2006 for (a) men and (b) women.	(a) Men: Significant; 2003 greater perceived support (b) Women: Significant; 2003 greater perceived support
H2.11 The psychological distress for men is different from the psychological distress for women in (a) 2003 and (b) 2006.	(a) 2003: Not significant (b) 2006: Significant; women greater psychological distress
H2.12 The psychological distress in 2003 is different from the psychological distress in 2006 for (a) men and (b) women.	(a) Men: Significant; 2006 greater psychological distress (b) Women: Significant; 2006 greater psychological distress
H2.13 The effects of social structural variables on network size will be different for men and women in (a) 2003 and (b) 2006.	(a) 2003: None (b) 2006: None
H2.14 The effects of social structural variables on network size will differ between 2003 and 2006 for (a) men and (b) women.	(a) Men: None (b) Women: None
H2.15 The effects of social structural variables on proportion kin will be different for men and women in (a) 2003 and (b) 2006.	(a) 2003: None (b) 2006: None
H2.16 The effects of social structural variables on proportion kin will differ between 2003 and 2006 for (a) men and (b) women.	(a) Men: None (b) Women: None
H2.17 The effects of social structural variables on proportion female will be different for men and women in (a) 2003 and (b) 2006.	(a) 2003: Marital status (b) 2006: Marital status
H2.18 The effects of social structural variables on proportion female will differ between 2003 and 2006 for (a) men and (b) women.	(a) Men: None (b) Women: None

(Table 5.1 continued)

H2.19 The effects of social structural variables on structural density will be different for men and women in (a) 2003 and (b) 2006.	(a) 2003: None (b) 2006: None
H2.20 The effects of social structural variables on structural density will differ between 2003 and 2006 for (a) men and (b) women.	(a) Men: None (b) Women: None

H2.21a
Network size, proportion kin, proportion female, and network density will be directly and positively related to perceived adequacy of social support for men and women in (a) 2003 and (b) 2006.
	(a) 2003: Men: None
	          Women: Proportion Female
	(b) 2006: Men: Proportion Kin
	          Women: None

H2.21b These effects will differ significantly between men and women in (a) 2003 and (b) 2006.	(a) 2003: None (b) 2006: None
H2.21c These effects will differ significantly between 2003 and 2006 for (a) men and (b) women.	(a) Men: None (Health status control) (b) Women: None

H2.22a
Proportion kin, proportion female, and network density will be directly and negatively related to psychological distress for men and women in (a) 2003 and (b) 2006.
	(a) 2003: Men: None
	          Women: None
	(b) 2006: Men: Density
	          Women: None

H2.22b These effects will differ significantly between men and women in (a) 2003 and (b) 2006.	(a) 2003: None (b) 2006: None
H2.22C These effects will differ significantly between 2003 and 2006 for (a) men and (b) women.	(a) Men: Density (Education control) (b) Women: None (Health status control)

H2.23a
Network size will be directly and positively related to psychological distress for men and women in (a) 2003 and (b) 2006.
	(a) 2003: Men: None
	          Women: None
	(b) 2006: Men: None
	          Women: None

H2.23b This effect will differ significantly between men and women in (a) 2003 and (b) 2006.	(a) 2003: None (b) 2006: None

H2.24a
As perceived adequacy of social support increases, psychological distress will decrease for men and women in (a) 2003 and (b) 2006, with corresponding network structures.
	(a) 2003: Men: None
	          Women: Significant
	(b) 2006: Men: Significant
	          Women: Significant

(Table 5.1 continued)

H2.24b This effect will differ significantly between men and women in (a) 2003 and (b) 2006.	(a) 2003: None (b) 2006: None

scientists maintain that social network size is one indicator of social integration. However, social network structure, which is the aspatial arrangement of social relationships that surround individuals, also reflects one's level of social integration. This dissertation answers the call of the sociological research enterprise to address the effects of social structural factors on social networks, and whether these effects differ between men and women.

For the national data, I first assessed the mean differences in core discussion network structures for men and women in both 1985 and 2004. This analysis served to pinpoint gender differences as they relate to the structure and composition of ego-centric social networks. As my results indicate, men and women differed significantly in proportion kin and proportion female in 1985; women were embedded in networks with greater proportion kin and greater proportion female than men. In 2004, network size and proportion female differed significantly between men and women; women were embedded in larger networks and networks with greater proportion female than men. To address the repeated finding that women, in both 1985 and 2004, were embedded in networks with greater proportion female, I draw upon the network homophily literature. Homophily, or similarity between ego and alter, occurs within social networks across multiple characteristics, such as race and ethnicity, to age, gender, religion, occupation, and education (McPherson, Smith-Lovin, and Cook 2001). Although multiple explanations exist regarding the cause of network homophily, the findings all echo the same message: "Similarity breeds connection" (McPherson, Smith-Lovin, and Cook 2001:415). When asked with whom respondents discuss matters important to them, women are more likely to turn

to other women. Women in 1985 were also embedded in networks with greater proportion kin than men. Drawing upon the gender socialization research that explores gender role differentiations, my results lend support to the notion that women are responsible for carrying out a "third-shift," such as caring for and maintaining connections with kin (Gerstel 2000, 2003; Hochschild and Machung 2003). Furthermore, women's networks were significantly larger than men's in 2004. Regardless of the content of discussions, women reported having more people with whom they discussed important matters than men. Again, in addressing these significant findings, it is important to remember that the methodology used in this research builds upon ego-centric social networks as perceived by the respondent. Although accuracy in recall and representativeness may be questioned by some social scientists, the GSS social network data are the best available social network data of a nationally representative sample. Although caution should be addressed in interpretations, these data provide a glimpse into social environments, as perceived by men and women, across the nation.

Next, I explored how men's networks differed between 1985 and 2004, with my results indicating that all four core discussion network structures differed significantly between 1985 and 2004 for men, with network size decreasing, while proportion kin, proportion female, and structural density increasing. For women, only network size differed between 1985 and 2004, with size being significantly smaller in 2004 than in 1985. Although a single-cause explanation for these changes is beyond the scope of my analysis here, I maintain that the passage of time is the best way to contextual these findings. Over the past two decades, multiple social forces have been at work in changing and impacting social environments of Americans, and this analysis highlights several of the effects of such social forces over time.

To investigate whether social structural factors would impact social network structures differently for men and women, my results indicate modest findings. In the national data, the effect of marital status on proportion female differs significantly between men and women in both 1985 and 2004. Drawing upon the research of Pugliesi and Shook (1998) and the social support literature, married men and women are likely to turn to their spouse to discuss important matters. While being married had a significant, negative effect on proportion female for women in both 1985 and 2004, it had significant, positive effects for men in both years. Being married reduces the gender homophily effect for both men and women; married men are embedded in core networks with higher proportion female, whereas married women are embedded in networks with lower proportion female. Although this is a modest finding, it does yield credibility to the notion that both men and women include their spouse within their core discussion network.

The effect of marital status on structural density also differs significantly between men and women in 1985; it exerts a positive effect for both men and women, but demonstrates greater significance for women. Recalling that the national data measured density as the interconnections among alters within the networks, both married men and women find themselves embedded in core networks with high levels of interconnectedness among alters. As the national data indicate, both married men and women are embedded in core networks with high degrees of interconnectedness. As social resources theory demonstrates, network density provides advantages for expressive actions (such as social support, mental health status, physical health status), but this same network structure may not be ideal for instrumental actions, such as exposure to nonredundant, or new information.

Although I use race as a control variable for the national data analysis, it produced significant and interesting findings. In 1985, the effect of race on social network size differed significantly between men and women; white women were embedded in larger networks than non-white women. However, the effect of race on network size was not significant for men. While this gender difference supports previous research reporting race and ethnic differences in regard to network size (i.e., Marsden 1987), the finding that race is only significant for women is a new contribution to the literature. The effect of race on proportion kin and proportion female also differed significantly between men and women in 1985. Whereas the networks of white men contained greater proportion of kin than non-white men, race was not significant for women. Further, white women were embedded in networks with lower proportion female than non-white women, while race was non-significant for men. In 2004, the effect of race on proportion female differed significantly between men and women, such that non-white women had greater proportion female in their networks than their white counterparts. This finding lends support to the robust literatures of sociology of the family and demography, whereby research demonstrates that non-white women are less likely to be married than white women due to limitations on the eligible marriage market of non-white males. Without the availability of potential male significant others, non-white women turn to other females, accounting for the significantly greater proportion of female in the social networks of non-white women. Additional research into the race/ethnicity and gender interaction would greatly benefit the social network discourse.

Examining core discussion networks in 1985 and 2004 provide a glimpse into the changing trends within core discussion networks of Americans over the past 20 years. In interpreting these results for the national data, it is important to understand that the changes in

networks at these two years represent how networks change as a result over time – time as the explanation of the changes in social networks. However, how do social networks fare in the event of a natural disaster? My regional data analysis addresses how the specific event of a natural disaster alters social environments.

5.2.2 Regional Data

A unique contribution of my research here is that it draws upon a very unique data source: core network data both before and after a catastrophic natural disaster (Hurricane Katrina). First, I assessed the mean differences in core discussion network structures, perceived adequacy of social support, and psychological distress for men and women in both 2003 and 2006. The results of these independent sample t-tests provide several interesting findings to discuss.

In routine, day to day life, social networks between men and women take on different sizes and different structural arrangements, with women having larger networks with more female and kin, compared to men's networks. As the social support and social health literatures maintain, these differences are not deemed as either good or bad, but rather relative in relation to social resource availability and outcome of interest. In examining perceived adequacy of social support as a social resource, gender matters: As proportion female increases, perceived adequacy of social support increases, for women only. Further, if we look at psychological distress as a health-related outcome, in day to day life, social support is significant and negative for psychological distress, for women only.

In 2003 (pre-Katrina), I only find support for the significant, and positive main effect of proportion female on social support for women only. Women embedded in networks with larger proportion female reported higher levels of perceived support than women embedded in

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networks with smaller proportion female in everyday life. My results lend support to the social support strand of social network analysis, indicating that women are typically the ones to offer support and assistance to others, moreso than men do (Fuhrer and Stansfeld 2002). As Taylor et al. (2000) maintain, in stressful times, women respond with the "tend-and-befriend" strategy, seeking out support from their friends; my results further offer credit to the "tend-and-befriend" stress response of women.

Turning to the predictors of psychological distress, my results fail to find support for any direct effects of core discussion network structure for men or women in 2003. I do, however, find evidence for the direct, and negative, effect of perceived support on psychological distress for women in 2003. As perceived support increased, psychological distress decreased. My results also demonstrate an indirect effect of perceived support on psychological distress for women in 2003. Proportion female had a direct and positive effect on social support for women, therefore resulting in an indirect effect, through social support, on psychological distress for women in 2003. In routine times, the perceived availability of social support reduced psychological distress for women in the New Orleans metropolitan. Seemingly, for women, surrounding themselves with other women reduced their distress. In the southern region of Louisiana, being embedded in what some call the "Ya Ya Sisterhood" benefits women's psychological health and well-being. However, are these effects the same in the aftermath of a catastrophic natural disaster?

However, following Hurricane Katrina, men and women differed significantly in network size and their experience of psychological distress. To tease apart gender differences compared to event differences, I examined social networks, social support, and psychological distress in 2003 and 2006 for men and women. For men, all of their network structures, social support, and

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psychological distress differed significantly between 2003 and 2006, with mean values increasing while social support decreased significantly. The same results hold for women, with the exception of no changes in proportion female between 2003 and 2006. What do these significant findings reveal?

Both men and women experience less psychological distress as their perceptions of social support increase; the relationship between social support and psychological distress is not a gender specific phenomenon. For men in 2006, perceptions of support increased as both network size and proportion kin increased. For men in 2006, both social support and structural density reduced psychological distress. However, no network structures impact perceptions of social support for women in 2006.

To examine the effects of social network structures on social support and psychological distress following Hurricane Katrina, I find that post-Katrina, network size and proportion kin significantly predicted perceived adequacy of social support, for men only. Although these effects did not differ significantly between men and women, they indicate that for men in post-Katrina Orleans metro area, being embedded in larger networks with greater proportion kin increased perceived adequacy of social support. Although I anticipated that these effects would differ significantly between men and women, the interpretation of these findings are quite interesting. Following this natural disaster, men in Orleans and Jefferson parishes felt as though they had help in their recovery if they were embedded in networks that were large and contained lots of kin. By sheer numbers alone, network size indicates that men were aware of a large pool of potential help available to them. Also, during this rough time, kin relationships served as an advantageous resource in recovery and repair. Being aware of the unique southern Louisiana

culture, family relationships are vital to this region, and following Katrina, family ties increased men's level of perceived support.

For men in 2006, I find evidence for the direct, and negative, effect of both social support and structural density on psychological distress. In post-Katrina Orleans metropolitan area, men's networks that reflect greater levels of emotional closeness between ego and alter reduce psychological distress. Although my data are cross-sectional, I argue that experiencing such an event opens the emotional connections among people, and such strong emotional connections provide support, if needed. Further, as perceived support increases, distress decreased for men. This direct effect of perceived support on psychological distress indicates that both network size and proportion kin have indirect effects on psychological distress, through perceived support. My findings show that network size and proportion kin are significant, positive predictors of social support for men in 2006. Given the direct, and negative relationship between perceived support and distress for men in 2006, this indicates that network size and proportion kin exert indirect effects on psychological distress. The distress levels for men indirectly decreased when embedded in larger networks containing high proportion kin. Knowing you have available contacts to help, and that your family members are willing to assist facilitates mental well-being following a natural disaster. For women in 2006, my results only indicate the direct effect of perceived support on distress: Women who perceive greater levels of social support experience less psychological distress in the aftermath of Hurricane Katrina. Thus, simply knowing they had access to help if they needed it was enough to ease their mind and reduce distress for both men and women, post-Katrina. Following Hurricane Katrina, Louisiana residents, men and women alike, "got by with a little help from their friends," if they perceived support was available to them.

5.3 Limitations of the Study

Although this dissertation improves upon past scholarship involving gender differences in social networks, social resources, and health-related outcomes, several limitations need to be addressed. First and foremost, what exactly does the GSS name generator-name interpreter sequence of questions tap? While the standard GSS name generator is consistently shown to elicit routine confidants from respondents, the ways in which respondents interpret the question could be improved upon. For example, the limitation of core discussion network size to five for both the national data and regional data may alter measures of network size.

In 2009, Claude S. Fischer, a prominent sociologist, published an article entitled "The 2004 GSS Finding of Shrunken Social Networks: An Artifact" (Fischer 2009) to address the possible errors that may have occurred with the 2004 GSS social network data. First, it has been recently brought to the attention of NORC that 41 cases in the 2004 GSS network data were incorrectly coded as "0" for network size when in reality these were missing data. As Fischer (2009) points out, although this error is important to address, the miscode of these 41 cases alone is not responsible for the "suspicious" nature of the 2004 GSS network data. Fischer (2009) argues that scholars should cautiously interpret the results from McPherson et al. (2006) that indicate a large scale magnitude of decreasing network size over the past two decades, especially since no other social situations have changed at such a rate. In considering exactly what the GSS name generator-name interpreter sequence captures, it is important to understand that the egocentric social networks that are generated are networks as they are perceived by the respondent.

As this dissertation is fundamentally concerned with the contextual effects on behaviors and outcomes, what about considering the contextual effects of survey administration? As

Fischer (2009) points out, the 2004 GSS was administered during the spring season where abundant news coverage focused on military and political issues. Is it possible that respondents interpreted the "important matters" to be reflective of only military and political issues? Although Bailey and Marsden (1999) examined a similar situation, their results indicate that close to half of their respondents interpreted the GSS name generator question literally, meaning they generated names according to the important topics that were most salient to them at the time. Bailey and Marsden (1999) conclude that people discuss important matters with people who are important to them. Therefore, although it may warrant a second look at contextual impacts on surveys, it is likely that the political situation in 2004 did not impact how respondents answered the name generator question.

Secondly, the administration of the GSS name generator-name interpreter sequence does bring into awareness the amount of respondent burden placed upon respondents in answering these questions (Marsden 2003). However, the use of one single name generator is another limitation of the present study. Within social network analysis, an important consideration is on the use of questions that generate answers. In this dissertation, core discussion network structures were generated through the use of one, single name generator. Therefore, the social networks discussed here are egocentric, in that these networks are described from the perspective of a focal person (ego) and those with whom ego discusses matters they consider important (alters). Past research on core networks indicate that the names (alters) generated from the standard GSS question is of those who have a great deal of influence on the attitudes and behaviors of ego (Burt 1984; Marsden 1987; Straits 2000). Although these alters are important to ego, does a single name generator accurately depict the inner core of ones social network? In other words, what is at the "core" of core discussion networks?

Regarding the limitations of the national data and analysis, as mentioned in the methodology, the data from 2003 (pre-Katrina) is exclusively from Orleans Parish, whereas the 2006 (Post-Katrina) data come from both Orleans and Jefferson Parishes. This distinction in geographic parish location is pertinent given the level and degree of destruction experienced by these two parishes following Hurricane Katrina.

5.4   Directions for Future Research

5.4.1   The Potential "Dual" between Self-Efficacy and Social Networks

As addressed in Chapter 1, social resources theory answered the call to include structural and relational characteristics in understanding social mobility patterns. Prior to the inclusion of structural characteristics, scholars differentiated between achieved and ascribed characteristics to determine status attainment. However, as the wheel of science ebbs and flows, what about the reintroduction of personal characteristics into contextual studies, especially the concept of self-efficacy? Defined as "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations," self-efficacy can be viewed as the academic relative to the "power of positive thinking" (Bandura 1995:2). Scientific research across multiple health disciplines consistently show the positive benefits of self-efficacy, ranging from its improvements on multiple sclerosis, elderly quality of life, rheumatoid arthritis, dietary behaviors, and physical activity (Grembowski et al. 1993; Brekke, Hjortdahl, and Kvien 2001; Riazi, Thompson, and Hobart 2004; Kim et al. 2008). However, minimal research synthesizes the contextual realms of both self-efficacy and social networks on psychological health. I argue that there may be a bidirectional relationship between social networks and self-efficacy on psychological health, and one aim of my future research agenda is to explore these possibilities.

5.4.2 A One-to-One Correspondence between Core Networks and Expressive Actions

As one limitation of this dissertation, the use of a single name generator may not be the most efficient method to capture the network sector that is beneficial for expressive actions. As an attempt to partially create a typology of network structures and benefits, it is possible that a one-to-one correspondence between core discussion network structures, as measured by a single name generator, and expressive actions does not exist. Rather, the inclusion of multiple name generators could assist in further refining the development of a typology between social network structures and possible resource availability.

5.4.3 Social Networks and Behavioral Health

Not only would multiple name generators be beneficial to identify different sectors within social networks, but examining different behavioral health outcomes would also benefit the sociology of health literature. However, would behavioral health be classified as instrumental or expressive action? For example, what are the network structures that promote and facilitate smoking cessation? Or weight loss management? These health-related outcomes can not only be viewed as expressive actions, but access to information and tangible resources is part of these health behaviors, so instrumental actions may also promote these outcomes. The social sciences would benefit greatly by applying social structural contexts to a wider variety of health-related behaviors.

As the social sciences demonstrate, social networks impact both economic and noneconomic outcomes. Recent applications of social network models to the study of the obesity epidemic suggest that obesity spreads through social associations (Christakis and Fowler 2007). Although pounds are not physically contagious, their 32-year longitudinal analysis indicates the possibility of obesity being socially contagious, such that social networks serve as

the referent or framework for establishing acceptable attitudes, opinions, and behaviors. Interestingly, framing obesity as a socially contagious illness also indicates a social treatment. It is possible that social network analysis, and modifications to one's social network, may very well be a possible social cure for this widespread epidemic.

5.5   Concluding Remarks

Core discussion networks illustrate the inner-most, intense aspatial environment that surrounds individuals. These social networks have been shown to provide benefits to individuals, particularly expressive actions such as social support and psychological health. As my results indicate, some of the effects of networks on health-related outcomes differ between men and women.

The findings from my dissertation are applicable to three distinct areas of scholarship: the general social network literature, the literature on networks and health, and studies of the role networks play in disaster response and recovery. At the same time, my research also contributes to gender studies, particularly gender and social networks. However, this project serves as a starting point for further examination of social networks, social resources, and health-related behaviors.

My research agenda centers on the intersection between interpersonal social structures and individual outcomes, and how social structures stratify these outcomes. Using my dissertation as a springboard, I plan to focus my future research agenda on the relationship between social networks and a variety of health-related behaviors, such as weight loss maintenance and smoking cessation. The goal of my future research agenda is to emphasize the importance of sociological paradigms as new tools for health promotion. By better understanding the social factors related to lifestyle behaviors, we can begin to develop and tailor

lifestyle interventions and preventive treatments. I am dedicated to conducting sound research that has the potential to improve the quality of life and health of individuals.

Another goal of mine is to begin investigating the online social networks to determine whether there is a connection, or disconnect that exists between online social networks and offline resource needs. In conclusion, through applying sociological constructs to resource availability and health-related outcomes, my present and future research agenda addresses the importance of the social context on individuals.

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