

Social Network Typologies and Mental Health among African Americans

by

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To Indra Wangasawiredja,
for your love and patience

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Table of Contents

DEDICATION	ii
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	viii
ABSTRACT	ix
CHAPTER ONE: INTRODUCTION	1
Theoretical Frameworks	2
Literature Review	9
Dissertation Aims	21
Significance and Practice Implications	22
References	25
CHAPTER TWO: SOCIAL NETWORK TYPOLOGIES AMONG AFRICAN AMERICANS	37
Literature Review	38
Methods	46
Results	49
Discussion	52
References	67

CHAPTER THREE: SOCIAL NETWORK TYPOLOGIES AND SERIOUS PSYCHOLOGICAL DISTRESS AMONG AFRICAN AMERICANS	75
Literature Review	76
Methods	84
Results	88
Discussion	90
References	101
CHAPTER FOUR: SOCIAL NETOWRK TYPOLOGIES AND SUICIDALITY AMONG AFRICAN AMERICANS	112
Literature Review	115
Methods	123
Results	126
Discussion	128
References	141
CHAPTER FIVE: CONCLUSION	148
Summary of Findings	148
Themes of Dissertation Findings	150
Social Work Practice Implications	153
Future Directions	160
Conclusion	162
References	165

LIST OF TABLES

TABLE

2.1	Demographic Characteristics of the Sample and Distribution of Study Variables	61
2.2	Latent class multinomial logistic regression analysis of social network types on sociodemographic correlates among African Americans (N = 3343)	63
3.1	Sociodemographic Characteristics of the Sample and Distribution of Study Variables	96
3.2	Bivariate Relationships Between Sociodemographic and SPD Variables and Social Network Types among African Americans	98
3.3	Comparison of SPD Means Based on Social Network Type and Age	99
4.1	Demographic Characteristics of the Sample and Distribution of Study Variables	135
4.2	Intercorrelations of Latent Class Indicators	137
4.3	Bivariate Relationships Between Demographic and Suicide Variables and Social Network Types among African Americans	138
4.4	Comparison of Suicidal Behaviors Based on Social Network Type Membership	139

LIST OF FIGURES

FIGURE		
2.1	Conditional item probability profile. Social network type size information presented in the legend.	64
2.2	Predicted probability of membership in the ambivalent network type by parental status and age among African Americans	65
2.3	Predicted probability of membership in the strained network type by parental status and age among African Americans	66
3.1	Conditional item probability profile. Social network type size information presented in the legend.	100
4.1	Conditional item probability profile. Social network type size information presented in the legend.	140
5.1	Social network types for Chapters Two and Three.	163
5.2	Social network types for Chapter Four.	164

ABSTRACT

This dissertation examined social network typologies among African Americans and the relation between network types and mental health. The first study explored network types, with specific aims of 1) identifying distinct network types and their prevalence rates and 2) examining the sociodemographic correlates of the identified network types. This study used typology indicators of the family and church networks. The second study examined the relationship between network types and serious psychological distress. Network types were derived using typology indicators of the family and friendship networks. The third study investigated the association between network types and suicidality. Typologies were derived from indicators of the family and church networks.

Results from the first study indicated that four distinct social network types exist among African American adults. The identified types were: ambivalent, optimal, family-centered, and strained. These four types were distinguished by 1) the degree of social integration, 2) network composition, and 3) the level of negative interactions with network members. The analysis indicated that network type membership varied by sociodemographic characteristics. Findings for the second study indicated that respondents in the ambivalent type (high social integration and negative interactions) reported higher levels of serious psychological distress than their counterparts in the optimal type (high social integration, low negative interactions). Finally, the third study found that network types were associated with suicidal plans and attempts. Most notably, the results revealed that African Americans belonging to the optimal type were more

likely to have attempted suicide in their lifetime than those in the isolated, strained (high social isolation and negative interactions), and ambivalent types.

Overall, the collective findings of this dissertation indicate that family, friends, and church members make unique contributions to African Americans' mental health. The results also suggest that network types vary by race. Moreover, this dissertation confirmed that not only were negative interactions with family and church members associated with worse mental health outcomes but also that this association is stronger than the association between social integration and positive mental health. Network typologies have a number of practice implications, as they can inform the development of prevention and intervention programs.

CHAPTER ONE

Introduction

Social networks are systems of interconnected individuals, within which exchanges of material, informational, and psychological resources occur between network members that are important for a person to effectively cope with life stressors. Social networks are comprised of family, friends, neighbors, co-workers, congregants, and other persons significant to the individual's social environment. Social networks are important sources of informal social support, a process in which care and assistance are exchanged between members of a social network. As such, social networks have significant implications for mental and physical health and social well-being.

Research findings among the general population have consistently confirmed the importance of social support for a variety of health and well-being outcomes (Antonucci, Lansford, & Akiyama, 2001; Fuller-Iglesias, Webster, & Antonucci, 2015; Pinquart & Sörensen, 2000). Research among African Americans has confirmed that family, friends and, particularly church members, provide informal support which is important for coping with a range of social issues and physical and mental health problems. For example, among African Americans, social support is protective against chronic poverty (Stack, 1975) and homelessness (Taylor, Chatters, & Celious, 2003) and is a resource for identifying employment opportunities (Taylor & Sellers, 1997). Social support is also important for coping with life stressors (Benin & Keith, 1995; Lincoln, 2000), serious problems (Chatters, Taylor, & Neighbors, 1989), emergencies (Taylor, Chatters, & Mays, 1988), the loss of a loved one (Neighbors, Musick, & Williams, 1998) and

assistance during illness (Dilworth-Anderson, 1994; Dilworth-Anderson, Williams, & Cooper, 1999b; Taylor, Chatters, & Levin, 2004). With respect to mental health and subjective well-being, a large body of research has demonstrated that social support is associated with higher levels of subjective well-being (Lincoln, 2000; Nguyen, Chatters, Taylor, & Mouzon, in press; Taylor, Chatters, Hardison, & Riley, 2001) and lower levels of mental health problems (Levine, Taylor, Nguyen, Chatters, & Himle, in press; Lincoln & Chae, 2012; Lincoln, Chatters, & Taylor, 2003; Lincoln, Taylor, Chatters, & Joe, 2012).

This dissertation integrates social work perspectives and psychological theories to examine the relationship between social network typologies and mental health among African Americans. In this chapter, I review two theoretical models of social relationships that represent the framework of this dissertation. I then review previous research on social relationships and mental/physical health and subjective well-being. I conclude with a description of the dissertation aims and the implications of the three studies described here.

Theoretical Frameworks

Convoy Model of Social Relations

The convoy model of social relations (Kahn & Antonucci, 1980) conceptualizes an individual's social network as a convoy of associations that are maintained over time. The convoy is comprised of persons with whom the individual is socially involved, such as family, friends, co-workers, church members, and neighbors. In using the term convoy, this model implicitly assumes that the relationships between the individual and their convoy/network members are interdependent and characterized by mutual support. According to the convoy model, subjective and objective relationship qualities are critical indicators of the network and its functioning. In other words, the convoy model jointly considers the individual's perceptions of

their relationships (e.g., relationship quality and satisfaction, social support quality and satisfaction) and structural characteristics of the network (e.g., network size, geographic propinquity) (Antonucci & Akiyama, 1995; Kahn & Antonucci, 1980). In fact, Kahn and Antonucci (1980) suggested that subjective qualities of a relationship have a stronger bearing on mental/physical health and subjective well-being outcomes than objective characteristics of the convoy. Moreover, the convoy model recognizes that negative social interactions are normative aspects of relationships, and thus accounts for both positive and negative qualities of a relationship.

The convoy model's nuanced conceptualization of social relationships and networks also takes into account the degree of subjective closeness between the individual and each of their convoy members. This is achieved by visually depicting the convoy as three concentric circles surrounding the focal individual. Each of the three concentric circles depicts varying degrees of subjective closeness between the individual and each convoy member, with the closest, most intimate relationships contained in the inner circle and the least intimate relationships contained in the outermost circle (Kahn & Antonucci, 1980). The boundaries between these circles are permeable, such that convoy members in one circle are able to transition to another circle. For example, an acquaintance in an individual's outer circle can become a close friend over time and move into the middle or inner circle. Conversely, a neighbor in an individual's middle circle could transition to the outer circle when the individual relocates to a different city and social interactions between the individual and the former neighbor diminishes.

Persons in the outer circle are the least subjectively close members of the individual's convoy. Relationships in the outer circle are likely to be role dependent and are susceptible to role changes. That is, these relationships tend to be based on the individual's social roles (e.g.,

neighbor, co-worker, church member) rather than on a more meaningful relational foundation and, as such, can easily dissolve as the individual's social roles change (e.g., relocation, retirement, leaving a church). Although the outer circle encompasses the most distant relationships, convoy members in this circle are nonetheless important to the individual with regards to social support.

The inner circle of an individual's convoy includes people who are subjectively closest to the individual and are important attachment figures and relationships, such as parents, spouses, and confidants. Members of the inner circle are perceived as important providers of social support, and the support they provide tends to be specific to the person's need rather than specific to the social circumstances. Relationships in the inner circle are for the most part stable over time and often include spouses, parents, and children. The middle circle of an individual's convoy includes people who are close to the individual but not as close as those in the inner circle. Relationships in this circle are less stable than those in the inner circle and can be more easily substituted. Although support provided by these convoy members tends to depend less on the individual's social roles, it is not completely independent of their social roles.

Research has indicated that the composition of convoy circles change over the life course (Antonucci & Akiyama, 1987; Antonucci, Akiyama, & Takahashi, 2004). For example, studies have indicated that children are more likely to identify their parents and siblings as members of their inner circle. However, this pattern changes as one ages; among 20 to 39 year olds, spouses and children begin to emerge in the inner circle and siblings transition to the middle and outer circles. For 40 to 59 year olds, spouses are most frequently listed as members of the inner circle followed by children. Up to this point, mothers are consistently one of the most frequently nominated members of an individual's convoy. However, beginning in their 60s, older adults are

no longer as likely to list their mothers in their inner circle, as their own mothers are likely deceased. Finally, among 80 year olds and older, grandchildren begin to appear in their outermost circle. Collectively, these findings highlight the fluidity of the convoy throughout the life course, with convoy members moving in and out of the three circles in response to life transitions and changes.

The convoy model of social relations is an especially well-suited theoretical framework for understanding the influence of social relationships on mental/physical health and subjective well-being. It is particularly useful because convoys represent important sources of social support (Antonucci & Akiyama, 1995; Kahn & Antonucci, 1980) and the model takes a life course perspective that captures social relationships across the life span rather than at a single stage of development. Consequently, the convoy model can explain the connections between social relationships and mental/physical health and subjective well-being changes over the life span of an individual. Furthermore, the convoy model accounts for not only the structural characteristics of social networks, but also the individual's subjective evaluations of their relationships with network members. Recognition of both objective and subjective relationship qualities, including negative interactions, underscores the important interplay between the structural aspects of a social network and an individual's perceptions of their relationships with network members.

Family Solidarity Model

The family solidarity model is a conceptual framework for understanding family integration and cohesion (Bengtson & Roberts, 1991; McChesney & Bengtson, 1988). This model proposes that there are six dimensions of behaviors, sentiments, and cognitive perspectives that contribute to family cohesion. These dimensions are referred to as solidarity

dimensions that represent different ways in which family members are socially connected to each other. The six solidarity dimensions are: affect, association, structure, function, consensus, and norms. *Affectual solidarity* characterizes the types and degree of positive sentiments that exist between family members and the degree to which these sentiments are reciprocated between family members. The *associational solidarity* dimension assesses the frequency and patterns of social interactions between family members. *Structural solidarity* represents the opportunity structures, which facilitate family cohesion, such as geographic propinquity and family size. *Functional solidarity* refers to the degree to which support is exchanged between family members. *Consensual solidarity* characterizes the degree to which family members agree with each other on values, attitudes, and beliefs, and *normative solidarity* characterizes the degree to which family members embody commitment to their familial obligations. The family solidarity model assumes that these six dimensions are interrelated (Bengtson & Roberts, 1991; Roberts & Bengtson, 1990). For example, Roberts and Bengtson (1990) found that an adult child's sense of familial obligation (normative solidarity) led to subjectively closer relationships with their parents (affectual solidarity). Subjectively closer relationships with their parents in turn led to more frequent interactions with their parents (associational solidarity). Furthermore, the authors found that adult children who lived closer to their parents (structural solidarity) reported more frequent interactions with their parents.

Although negative interactions with family members are not considered within the six solidarity dimensions, the family solidarity model does take into account the presence and impact of negative interactions with family members. The solidarity-conflict model (Bengtson, Giarrusso, Mabry, & Silverstein, 2002) is an adapted version of the family solidarity model, which recognizes that negative interaction with family members is a normal part of family life.

The solidarity-conflict model considers negative interactions to be an aspect of familial relations that is separate from the six solidarity dimensions. However, the six solidarity dimensions and negative interactions are interdependent with one another, and are not mutually exclusive. For example, the existence of affectual solidarity does not exclude the existence of negative interactions. In fact, relationships with family members that are characterized by high levels of both solidarity and negative interactions are considered ambivalent relationships (Bengtson et al., 2002; Lüscher & Pillemer, 1998).

Although the family solidarity model was conceptualized to understand family relationships, it has been applied to non-kin relationships as well. In particular, a number of researchers have used the family solidarity model to conceptualize relationships among church members (e.g., Krause, 2002; Krause, 2008; Taylor, Lincoln, & Chatters, 2005). A long tradition of research has established the family-like qualities of relationships among congregants in African American churches (Lincoln & Mamiya, 1990), making the family solidarity model a particularly well-suited theoretical framework for understanding African Americans' relationships with church members. In fact, African Americans' church networks have been referred to as constituting a "church family" due to how closely these relationships parallel family kinship terms (e.g., 'brother', 'sister') and relationships (Lincoln & Mamiya, 1990). Furthermore, the church has been a long-standing institution of importance for African Americans, and a source of formal and informal social support. For instance, a number of respondents in Taylor et al.'s (2004) focus group study of African Americans on religion and church-based support likened their congregation to their family. In fact, some even indicated that their fellow church members were more important sources of support than their extended family. This was an especially common sentiment among respondents who did not have strong

family ties, suggesting that for some individuals, church members act as substitutes for family members.

Moreover, previous studies have identified solidarity dimensions among relationships with church members. For instance, Taylor et al. (2005) identified aspects of African American's social relationships with church members that reflect the associational, affectual, and functional solidarity dimensions. Further, they found that higher levels of subjective closeness with church members (affectual solidarity) led to more frequent interactions (associational solidarity) and higher levels of support from church members (functional solidarity). They also reported that more frequent interactions contributed to higher levels of support from church members. Additionally, Krause's (2002) study of older African Americans and whites identified a functional solidarity dimension among respondents' relationships with church members. Moreover, this study found that older African Americans exchanged more support with their church members than did older whites. This pattern included both receiving support from church members and providing support to church members, underscoring the importance of church members as a source of informal support for African Americans. In keeping with prior research on social networks, this dissertation specifically focuses on associational, affectual, and functional solidarity, as these dimensions have been previously and consistently identified in both family and church networks.

In sum, the family solidarity model has several advantages as a guiding theoretical framework for this dissertation. First, dimensions of family cohesion are treated as separate and unique dimensions that characterize family relationships. This feature lends itself to an approach that develops distinct profiles or typologies of family interactions. Second, the conceptualization of family relationships in the family solidarity model can also be extended to non-kin groups,

such as church members, who are particularly important sources of social support among African Americans. Third, by recognizing both positive and negative qualities of social relationships the family solidarity model acknowledges common features of social interactions that are not mutually exclusive of one another and provides a more nuanced and accurate representation of social relationships. Further, the inclusion of negative interactions with others contributes to a deeper understanding of how social relationships impact physical and mental health.

Literature Review

African American's Social Networks

African Americans' social networks are often comprised of family members, relatives, friends, fictive kin, neighbors, and church members (Chatters, Taylor, & Jayakody, 1994; Chatters, Taylor, Lincoln, & Schroepfer, 2002; Neighbors, 1997; Taylor & Chatters, 1988; Taylor et al., 2003; Taylor et al., 2004; Taylor, Chatters, Woodward, & Brown, 2013). Studies indicate that African Americans tend to rely more heavily on family members for social support than on friends and other members of their networks (Chatters et al., 1989; Neighbors, 1997). In particular, adult children are significant sources of informal support for many African Americans (Kim & McKenry, 1998). In coping with serious problems, mothers are most often called upon for help (Chatters et al., 1989; Neighbors, 1997), while sisters, spouses, and female friends are the next most frequent sources of support for dealing with serious problems (Chatters & Taylor, 1989). Among the types of support and assistance network members provide are goods and services, companionship, advice, help during sickness, transportation assistance, financial aid, and baby-sitting (Neighbors, 1997; Taylor et al., 2004; Taylor, Hernandez, Nicklett, Taylor, & Chatters, 2014).

Research has shown that, on average, African Americans are in frequent contact with their family (i.e., nearly every day or at least once a week) and frequently receive support from their family and relatives (Lincoln, Taylor, & Chatters, 2012; Neighbors, 1997). Only a small proportion of individuals neither has contact with their family nor receives any kind of support from family (Neighbors, 1997). Research on the sociodemographic correlates of social network characteristics has found that women are in more frequent contact with their family and friends and have larger networks than men (Chatters et al., 1989; Taylor, Jackson, & Chatters, 1997). Moreover, women and unmarried persons receive emotional support from their families more frequently than do men and married persons (Lincoln, Taylor, & Chatters, 2012). On the other hand, older African Americans tend to receive emotional support less frequently than their younger counterparts (Lincoln, Taylor, & Chatters, 2012).

With respect to race comparative research, findings are mixed regarding differences in social network characteristics between African Americans and whites. Evidence has suggested that in comparison to whites, African Americans have smaller networks (Ajrouch, Antonucci, & Janevic, 2001; Antonucci, Ajrouch, & Birditt, 2006; Pugliesi & Shook, 1998). Overall, African Americans have more frequent contact with their network members than whites (Ajrouch et al., 2001; Antonucci et al., 2006). However, this discrepancy attenuates with age, such that among older adults, African Americans and whites do not differ in frequency of contact with network members (Ajrouch et al., 2001). When examining frequency of contact with specific networks (i.e., family vs. friendship), some work has suggested that African Americans, as compared to whites, are in more frequent contact with their family (Kim & McKenry, 1998; Taylor et al., 2013), while whites are in more frequent contact with their friends than are African Americans (Taylor et al., 2013).

With respect to supportive exchanges, Taylor et al. (2013) found that African Americans provided support to family members more often than whites, and whites provided support to friends more frequently than African Americans. Additionally, whites more frequently received support from friends than did African Americans. With respect to support reciprocity among older adults (ages 65 to 74), African Americans are less likely than whites to report that their relationships with network members are reciprocal and are more likely to perceive that they receive less support than they provide (Antonucci, Fuhrer, & Jackson, 1990). When social support is examined across the adult age range, African Americans do not differ from whites in the level of support they receive from family members or the degree of subjective closeness to family members (Taylor et al., 2013). Overall, African Americans tend to have larger family networks as compared to friendship networks (Ajrouch et al., 2001) and, as compared to whites, rely more heavily on family than friends for support (Pugliesi & Shook, 1998)

A large proportion of African Americans also rely on church members for informal support. Taylor et al.'s (2005) examination of African Americans' relationships with church members showed that the majority of respondents perceived themselves to be fairly to very close to church members in terms of subjective feelings of closeness. About half of these respondents reported interacting with their fellow congregants on either a daily or weekly basis and more than half of respondents indicated receiving moderate to high levels of support from church members. Another study of relationships in the church found that the most common types of informal support African Americans received from church members were emotional support and tangible aid, such as financial assistance and transportation (Taylor et al., 2004). Race comparative research on church-based support, which has been conducted primarily in the field of social gerontology, shows that older African Americans receive more support from church

members than do older whites (Krause, 2002; Krause & Bastida, 2011). More specifically, older African Americans receive more emotional, tangible, and spiritual support. These findings indicate that church members are a more significant source of informal support for older African Americans than for older whites.

A number of sociodemographic characteristics are associated with church-based support among African Americans. Taylor and Chatters (1988) found that married African Americans received higher levels of support from church members than their unmarried counterparts. Findings related to gender are mixed, with some studies reporting that men receive more support from church members than women (Taylor & Chatters, 1988), while others have indicated that women receive more support from church members than their male counterparts (Taylor et al., 2005). However, the association between gender and support in the latter finding is indirect. That is, Taylor and colleagues (2005) found that frequency of contact with church members was correlated with receiving higher levels of support from church members. Because women have more frequent contact with congregants than men, they, as a result, also receive more support from congregants than men. Findings related to age are also inconclusive, with some studies indicating that age is inversely associated with church-based support (Taylor & Chatters, 1986, 1988), while others have indicated that age is positively associated with church-based support (Taylor et al., 2005).

Negative social interactions are a common aspect of social relationships and include problematic issues such as criticism, conflicts, and demands. Despite the fact that negative interactions are a part of all social relationships, overall, they are relatively infrequent among African Americans. According to study by Lincoln and colleagues (2012), only 13% of their nationally representative sample of African Americans reported experiencing frequent negative

interactions with their families. Similarly, Taylor et al. (2004) reported low levels of negative interactions with church members among African American respondents. Despite their relative infrequency, it is important to note that even low levels of negative interactions can adversely affect mental health and subjective well-being (Antonucci et al., 2001; Rook, 2014). Indeed, some argue that it is their infrequency that makes negative interactions' effects on mental health and subjective well-being so potently deleterious (Rook, 1984). Research examining sociodemographic differences in negative interaction levels among African Americans indicate that women are more likely to experience negative interactions with their families than men (Lincoln, Taylor, & Chatters, 2012). Persons residing in the Northeast and North Central regions of the U.S. also experience greater levels of negative interactions relative to persons residing in the South (Lincoln, Taylor, & Chatters, 2012). Finally, older adults report lower levels of negative interactions than their younger counterparts (Lincoln, Taylor, & Chatters, 2012).

Social Relationships, Health, and Subjective Well-being

Research among African Americans has indicated that positive social ties are protective against depression (Artinian, Washington, Flack, Hockman, & Jen, 2006; Haines, Beggs, & Hurlbert, 2008; Lincoln & Chae, 2012), suicidal ideation and attempts (Compton, Thompson, & Kaslow, 2005; Kaslow et al., 2005; Vanderwerker et al., 2007), and psychological distress (Dilworth-Anderson, Williams, & Cooper, 1999a; Lincoln et al., 2003). In particular, support from family members and satisfaction with support is inversely associated with psychological distress (Dilworth-Anderson et al., 1999a; Lincoln et al., 2003). Higher levels of emotional support are associated with decreased odds of meeting DSM-IV criteria for major depressive disorder (Lincoln & Chae, 2012). Social support is also associated with fewer depressive symptoms (Lincoln, Chatters, & Taylor, 2005; Okun & Keith, 1998), and satisfaction with social

support is correlated with decreased depression severity (Zea, Belgrave, Townsend, Jarama, & Banks, 1996). Among women, network size and adequacy of support are predictive of fewer depressive symptoms (Haines et al., 2008), while, conversely, the lack of social support is predictive of more severe depressive symptoms (Artinian et al., 2006).

With regards to suicidal ideation and attempts, African Americans who receive higher levels of social support, especially emotional support, are less likely to report suicidal ideation and suicide attempts (Lincoln, Taylor, Chatters, et al., 2012; Vanderwerker et al., 2007; Wingate et al., 2005). In contrast, individuals who report lower levels of support and social integration are at increased risk of having attempted suicide (Compton et al., 2005; Kaslow et al., 2005). Additionally, a seemingly paradoxical finding indicates that more frequent contact with family, friends, and church members is associated with suicide attempts and completion (Chatters, Taylor, Lincoln, Nguyen, & Joe, 2011; Willis, Coombs, Drentea, & Cockerham, 2003). However, this relationship is consistent with the resource mobilization model, in suggesting that adversity prompts the individual to seek out support and assistance from their social network (Cobb, 1976). Thus, individuals who are experiencing or have previously experienced self-harming thoughts and/or behaviors may be in more frequent contact with network members as they reach out for help to prevent themselves from engaging in suicidal behaviors or for help coping with current suicidal behaviors.

Relationships with church members also exert positive influences on physical/mental health and subjective well-being. Research on the healthful effects of church-based support among older adults has indicated that it is associated with positive self-rated health (Krause, 2006b), lower mortality rates (Krause, 2006a), greater subjective well-being (Krause, Ellison, & Wulff, 1998) and life satisfaction (Krause, 2004), fewer depressive symptoms (Nooney &

Woodrum, 2002), and more positive health behaviors (Krause, Shaw, & Liang, 2011). For instance, studies have shown that individuals who receive higher levels of support from congregants report fewer depressive symptoms than those who receive lower levels of church-based support (Nooney & Woodrum, 2002). Additionally, support from church members is associated with more positive affect and less depressed affect (Krause et al., 1998). Among African Americans, support from congregants is linked to fewer depressive symptoms (Chatters, Taylor, Woodward, & Nicklett, in press) and the use of religious coping as a means to deal with racial discrimination (Krause, 2004).

Studies have consistently indicated that negative interactions, though a normal feature of social relationships, has deleterious effects on mental/physical health and subjective well-being. Indeed, negative interactions can offset the salutary influences of positive relationships on mental/physical health and subjective well-being (Gray & Keith, 2003; Lincoln et al., 2003, 2005; Okun & Keith, 1998). For these reasons, it is important to examine negative interactions in its own right. Research among African Americans has demonstrated that negative interactions with family members are associated with greater odds of meeting criteria for major depressive disorder (Lincoln & Chae, 2012) and higher levels of depressive symptoms (Lincoln, Chatters, Taylor, & Jackson, 2007). Moreover, negative interactions are positively associated with suicidal ideations and attempts (Lincoln, Taylor, Chatters, et al., 2012). Higher levels of negative interaction are also predictive of decreased sense of well-being (Todd & Worell, 2000). Among older adults, negative interactions with congregants are predictive of psychological distress (Ellison, Zhang, Krause, & Marcum, 2009) and elevated levels of negative affect (Krause et al., 1998). Additionally, older adults who experience higher levels of negative

interactions with church members are at a greater risk for heart disease than older adults who experience lower levels of negative interactions (Krause, 2005).

In addition to its deleterious impact on mental/physical health and subjective well-being, the impact of negative interactions persist over time (Bolger, DeLongis, Kessler, & Schilling, 1989), erode positive self-perceptions (i.e., self-esteem, self-efficacy), and hinder effective coping behaviors (Lincoln, 2000) and psychological functioning (Rook, 1984). The collective findings for the positive and negative aspects of social relationships argue for a research approach capable of effectively capturing their distinctive contributions to mental/physical health and emotional well-being.

Social Network Typologies

A small but emerging body of research uses an innovative approach to examining social relationships by aggregating a number of social network characteristics in order to derive social network types. This area of research identifies distinct profiles of social networks using structural (e.g., network size and density), functional (e.g., provision and receipt of social support), and interactional (e.g., frequency of contact) characteristics of the network. For example, Fiori, Antonucci, and Cortina's (2006) study of older adults used six typology indicators (i.e., marital status, number of children, contact with children, religious service attendance, contact with friends, meeting attendance) to define five distinct network types using cluster analysis. The identified network types were: 1) nonfamily-restricted, 2) non-friends, 3) family, 4) diverse, and 5) friends. Respondents in the nonfamily-restricted typology were characterized by social isolation. The non-friends type was primarily characterized by infrequent contact with friends. Members of the family type consisted of persons with a relatively large number of children and who are in frequent contact with their children. The friends network

type was characterized by frequent contact with friends and children but infrequent participation in organized social activities. The diverse type included respondents who were highly socially active and integrated into their family and friendship networks.

The extant literature on network typology has indicated that the identification of network types can vary depending on the study sample, cultural context, and typology indicators used. For instance, Litwin's (2001) study of older Jewish Israelis also found five distinct network types: diverse, friends, neighbors, family, and restricted. However, these five types only partially overlapped with the types identified by Fiori et al. (2006). The diverse, friends, family, and restricted types were congruent with those identified by Fiori et al. However, the neighbors type diverged from those identified by Fiori et al. and was characterized by frequent contact with neighbors and adult children and infrequent contact with friends. Differences in network types identified in these studies may have resulted from differences in the samples' characteristics (Jewish Israeli vs. American) or the typology indicators used (marital status, number of adult children residing near respondents, frequency of contact with adult children, frequency of contact with friends, frequency of contact with neighbors, frequency of attendance at synagogue, frequency of attendance at a social club).

These differences notwithstanding, overall research on network typologies has consistently identified four general types: diverse, family-focused, friend-focused, and restricted (Fiori et al., 2006; Litwin, 2001; Wenger, 1991). The diverse type is characterized by high levels of social integration and diverse network role composition, whereas the restricted type is characterized by high levels of social isolation. The family-focused and friend-focused types are characterized by high levels of social integration into the family and friendship networks, respectively. The constellations of network types identified in these studies varied by several

factors. However, kin versus non-kin relationships was a distinguishing factor for network types across all these studies. In addition, degree of social integration was also a defining feature of network types.

Social Network Types, Health, and Subjective Well-Being

Given the few studies focusing on the association between social network types and mental health outcomes, this literature review focuses on a range of mental/physical health and subjective well-being outcomes. Previous work has indicated that older adults belonging to the diverse type (i.e., socially interactive with family and friends) enjoy the best mental/physical health and well-being outcomes among the four types (Litwin, 1998). For example, compared to the other three types, respondents in the diverse type are less likely to report functional impairments in daily living activities (e.g., dressing, cleaning oneself) and instrumental tasks (e.g., cooking, cleaning, running errands) (Litwin, 1998). These individuals also have the highest levels of self-rated health relative to those in the friend-focused, family-focused, and restricted types (Litwin, 1998), as well as the highest levels of morale and lowest mortality rate (Litwin, 1998, 2001; Litwin & Shiovitz-Ezra, 2006). Generally, health and subjective well-being findings related to the friend-focused type have also tended to be positive, albeit less positive than those related to the diverse type. Litwin (1998) found that among older Jewish Israelis, those in the friend-focused type had lower rates of functional impairments and higher self-rated health relative to their counterparts in the family-focused and restricted types. Relative to those in the restricted types, older adults belonging to the friend-focused type are also less likely to report feelings of anxiety and more likely to report positive affect (Litwin & Shiovitz-Ezra, 2011).

Health and well-being outcomes for individuals belonging to the family-focused type are equivocal. Some studies showed positive health and well-being outcomes for members of this type (Fiori, Smith, & Antonucci, 2007; Litwin & Shiovitz-Ezra, 2011), while others showed negative outcomes (Litwin, 1998, 2003; Litwin & Shiovitz-Ezra, 2006). For instance, Fiori et al.'s (2007) examination of network types and mental/physical health among older Germans indicated that respondents in the family-focused type reported fewer depressive symptoms and lower rates of morbidity than respondents in the friend-focused and restricted types. On the other hand, Litwin and Shiovitz-Ezra (2006) found that older Jewish Israeli respondents in the family-focused type had higher rates of mortality than those in the friend-focused and diverse types. Overall, the restricted type is associated with the worst health and subjective well-being outcomes. Studies have indicated that older adults in the restricted type have the lowest levels of self-rated health, are more likely to have moderate to high levels of disability, and experience the greatest level of functional impairments compared to members of the other three types (Litwin, 1998, 2003).

Studies on network types have made significant contributions to the literature on social relationships. While previous studies on social relationships examined various relationship aspects separately, network types simultaneously examine multiple aspects of relationships collectively by organizing interrelated data (i.e., social network characteristics) into meaningful groups (i.e., typologies). This approach to examining social relationships captures the complex and dynamic nature of social interactions and networks. Despite these contributions, this developing area of research has several limitations. First, research on network types in the U.S. has focused mainly on the general population, which is predominantly non-Hispanic white. Only a few studies have examined network types in minority populations; for example, Park et al.

(2013) have identified six network types in a sample of older Korean immigrants. It is important that network types be reexamined with racial and ethnic minority populations as cultural factors are important for understanding the correlates and consequences of social interactions and networks. Further, racial and ethnic minority groups comprise a significant proportion of the American population and are continuing to grow in number. As indicated by prior evidence, African Americans' social networks are structurally, compositionally, and functionally different from that of whites (e.g., Ajrouch et al., 2001). Thus, it is reasonable to surmise that network types may vary by racial and ethnic groups as well. Unfortunately, this is yet to be confirmed or disconfirmed, as no studies to date specifically investigate social network typologies in the African American population.

Second, the majority of studies examining this topic have used European or Israeli samples (e.g., Auslander & Litwin, 1990; Fiori et al., 2007; Litwin & Landau, 2000; Wenger, 1991) and fewer studies have used American samples (e.g., Litwin, 2011; Fiori et al., 2006). Consequently, because results from studies with international samples may not be generalizable to Americans, little is known about network types among Americans. Third, all extant studies, to my knowledge, have focused on older adults. As a result, there is no information on network types in the general adult population. Prior research has demonstrated that older adults' social networks differ from those of younger adults. For example, compared to younger adults, older adults tend to have smaller networks and more family and fewer friends and peripheral social partners in their networks (Lang & Carstensen, 1998). Additionally, younger adults are in more frequent contact with their network members than their older counterparts and receive more support from network members (Antonucci & Akiyama, 1987). These differences may lead to the identification of a different set of network types among younger adults.

Fourth, in terms of methodological approaches, most previous studies have used cluster analysis to identify network types. While cluster analysis is a valid and frequently used statistical method for classifying respondents into meaningful groups (i.e., clusters), it, nevertheless, has several limitations. Cluster analysis cannot provide information on the probabilities of response to typology indicators within the clusters/types (Raykov, 2014). Cluster analysis also is not able to determine the probability of a respondent being in a certain cluster/type (Raykov, 2014). Moreover, prevalence rates for clusters/types based on probabilistic estimates are not available through cluster analysis (Raykov, 2014). As a result, it is not possible to estimate the prevalence of each network type in the population.

Dissertation Aims

This dissertation addresses the noted gaps and limitations in the extant literature on social network types. Specifically, while previous research has focused on network types among older adults in the general U.S. and international populations, this dissertation explores network types that exist among African Americans across the life span. Moreover, latent class analysis is used to derive network types rather than cluster analysis. Although cluster analysis is a well-established analytical method for identifying typologies, latent class analysis provides more probabilistic information on typology prevalence and response patterns to typology indicators than cluster analysis. Chapter Two explores network types among African American adults. Its two aims are to: 1) identify distinct network types and determine the prevalence rates for each type in order to assess their distribution among the African American population and 2) examine the sociodemographic correlates of the identified network types. This analysis determines whether certain sociodemographic characteristics are associated with an increased probability of belonging to a particular network type. Chapter Three examines the relationship between

network types and serious psychological distress among African American adults. Chapter Four investigates the association between network types and suicidality among African American adults.

These three chapters use data from the National Survey of American Life: Coping with Stress in the 21st Century (NSAL), which was collected by the Program for Research on Black Americans at the University of Michigan's Institute for Social Research. The African American sample of the data set is nationally representative of households located in the 48 coterminous states with at least one Black adult 18 years or older who did not identify ancestral ties in the Caribbean ($N = 3,570$). The sample consists of 64 primary sampling units (PSUs), of which 56 of these primary areas overlap substantially with existing Survey Research Center National Sample primary areas. The remaining eight primary areas were chosen from the South in order for the sample to represent African Americans in the proportion in which they are distributed nationally. In order to address the limitations of cluster analysis, these studies use latent class analysis to identify network types.

Significance and Practice Implications

This dissertation extends previous scholarship on social relationships, as it simultaneously takes into account multiple facets of a social network using a typology approach. Additionally, to my knowledge, this is the first investigation of network types among a nationally representative sample of African American adults. Further, the current study uses latent class analysis to identify network types. Although cluster analysis is the typical analytic approach of most extant studies on network types, latent class analysis has several advantages over cluster analysis.

The findings from this dissertation offer several potential benefits in the area of practice and intervention. First, study findings could lend themselves to the development of prevention and intervention programs for African Americans in major social work practice settings, such as hospitals and community mental health and social service agencies. As a preventive intervention, network types can be used as a screening instrument to identify vulnerable subpopulations (i.e., individuals in socially isolated and/or unsupportive types) who may be at risk for diminished mental and physical health and well-being. Previous research has indicated that certain network types, such as the restricted type, are associated with higher levels of depressive symptoms (Fiori et al., 2006; Litwin, 2011), disability (Litwin, 1998, 2003), and mortality (Litwin & Shiovitz-Ezra, 2006), and lower levels of happiness (Litwin & Shiovitz-Ezra, 2011). Therefore, network types can be used to screen for clients who are at risk of developing/worsening mental/physical health problems. Subsequently, vulnerable clients could be targeted for preventive interventions in order to mitigate these risk factors.

In a similar vein, network types can be used to inform the development of interventions. Research has shown that individuals who are most vulnerable, with respect to mental/physical health and subjective well-being, belong to network types that are characterized by social isolation, less diverse role composition, and a lack of functional support relationships. With this knowledge, intervention programs could be designed and tailored to ameliorate these specific deficits. Furthermore, research has shown that social support can influence positive changes in health behaviors (Hogan, Linden, & Najarian, 2002; Krause et al., 2011). As such, information about network types could inform the development of health behavior intervention programs that incorporate clients' social networks. In fact, Israel and Rounds (1987) have argued that with the wealth of knowledge we have on social relationships and mental/physical health and well-being,

social support and social networks are promising modalities for interventions. LCA can facilitate a deeper understanding of the different configurations of social networks and how specific network characteristics interact with each other. This information can lead to the development of more effective social support and social network interventions.

The use of social networks in interventions has several clear advantages. Interventions using informal support are cost-effective, as social networks are naturally occurring systems. Moreover, members of clients' social networks, particularly family members and other close social partners, have long-term commitments to the client, which makes social support interventions more sustainable than interventions involving formal services. Lastly, preliminary evidence has suggested that social support interventions are effective for treating a range of mental and physical health issues (Hogan et al., 2002). In sum, the potential uses and benefits of information about social network typologies as an innovative means of assessing social networks hold promise for enhancing the lives and functioning of individuals who may be at risk for poor physical and mental health and lowered well-being.

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CHAPTER TWO

Social Network Typologies among African Americans

Social networks are important contexts for the exchange of social support and have significant implications for mental and physical health and social well-being. For example, among African Americans, family and friendship networks provide informal support for coping with a range of social issues such as chronic poverty (Stack, 1975), physical and mental health problems (Cohen, Brittney, & Gottlieb, 2000; Lincoln, 2000), homelessness (Taylor, Chatters, & Celious, 2003), daily life stressors (Benin & Keith, 1995; Lincoln, 2000), and identifying employment opportunities (Taylor & Sellers, 1997). Moreover, social support has been linked to higher levels of well-being (e.g., life satisfaction, happiness) (Lincoln, 2000; Taylor, Chatters, Hardison, & Riley, 2001) and lower rates of mental health issues, such as serious psychological distress (Lincoln, Chatters, & Taylor, 2003), depression (Lincoln & Chae, 2012), social anxiety disorder (Levine, Taylor, Nguyen, Chatters, & Himle, in press), and suicidality (Lincoln, Taylor, Chatters, & Joe, 2012). These associations have been identified in the general population as well. For example, Antonucci, Lansford, and Akiyama (2001) reported that older women who had a confidant indicated lower levels of depressive symptoms than older women who did not have a confidant. Further, Fuller-Iglesias, Webster, and Antonucci (2015) found that among older adults, the number of subjectively close family ties is associated with fewer depressive symptoms. Although most research has focused on social support from family members, a small but emerging area of research on church-based social support (i.e., informal social support exchanged between congregants) has indicated that support from congregants also protects

against a range of mental and physical illnesses (Chatters, Taylor, Lincoln, Nguyen, & Joe, 2011; Krause, 2006; Krause & Bastida, 2011). For these reasons, social networks are integral for human functioning and play an important role in health and well-being.

The present study explores social network typologies among African Americans using several indicators of family and church networks. Network typology indicators include both positive and negative network characteristics. The literature review begins with a discussion of the family solidarity model, which theoretically frames the current analysis. This is followed by a review of scholarship on African Americans' social networks and research on network types.

Literature Review

Family Solidarity Model

The family solidarity model is a multidimensional model that assesses familial relations and family cohesion (Bengtson & Roberts, 1991). This model is particularly informative as a guiding theoretical framework for the current study, as it specifically conceptualizes the distinct facets of social ties within the family network rather than the social network as a whole. Relationships between family members are assessed based on six dimensions of behaviors, sentiments, and attitudes: 1) affection, 2) association, 3) consensus, 4) function, 5) norms, and 6) structure. The association, affect, and function dimensions are the focus of this study. The association dimension examines social interactions between family members; increased social interactions between members indicate a greater degree of associational solidarity. The affect dimension assesses intimacy, or subjective closeness, between family members; higher subjective closeness between family members indicates higher affectual solidarity. The function dimension examines exchanges of social support between family members, with high levels of support exchanged demonstrating high functional solidarity. The solidarity model also accounts

for negative interactions with family members. An elaboration of this model, called the solidarity-conflict model (Bengtson, Giarrusso, Mabry, & Silverstein, 2002), recognizes that conflict is a normal aspect of familial relations and can simultaneously exist with positive sentiments in family relations. Relationships that are high in both solidarity and negative interaction are thus considered ambivalent relationships (Bengtson et al., 2002; Connidis & McMullin, 2002).

The family solidarity model can also be applied to non-kin groups, such as church members. Historically, the church has been an enduring institution in the lives of African Americans. Some have noted the family-like qualities of the church congregation and the concept of a church family underscores the integral role of church members in the lives of African Americans (Lincoln & Mamiya, 1990). Additional research confirmed the existence of comparable solidarity dimensions operating in church networks (Krause, 2002; Taylor, Lincoln, & Chatters, 2005). Given these similarities, the family solidarity model is well-suited to serve as a framework for understanding supportive relationships with both family and church members among African Americans. Moreover, because the solidarity dimensions represent discrete categories, which are not additive in nature, the family solidarity model lends itself well to the study of network typologies. Further, these dimensions have been previously used to derive family solidarity typologies (Silverstein & Bengtson, 1997).

African Americans' Social Networks

Previous studies have indicated that many African Americans report frequent contact with their family (i.e., nearly every day or at least once a week) and high levels of support from family members and relatives (Lincoln, Chatters, & Taylor, 2005; Lincoln, Taylor, & Chatters, 2012; Taylor, Chatters, Woodward, & Brown, 2013). Only a small proportion of African

Americans indicate that they neither have contact with their family nor receive any kind of support from family (Lincoln et al., 2005; Lincoln, Taylor, & Chatters, 2012; Neighbors, 1997). Studies of social network characteristics (e.g., contact, affection) have indicated that they are influenced by sociodemographic factors. For example, African American women tend to maintain more frequent contact with their family and friends and have larger networks than their male counterparts (Chatters, Taylor, & Neighbors, 1989; Pugliesi & Shook, 1998; Taylor, Chatters, & Jackson, 1997). African Americans who are employed also indicate more frequent contact with their networks and larger networks, compared to unemployed individuals (Pugliesi & Shook, 1998). Married persons have larger networks than their unmarried counterparts (Chatters et al., 1989; Pugliesi & Shook, 1998). Additionally, persons with higher levels of income report larger network sizes than persons with lower income levels (Chatters et al., 1989; Pugliesi & Shook, 1998). Prior research has also indicated that social support is contingent on a number of sociodemographic characteristics. For instance, African American women receive emotional support from their families more frequently than their male counterparts (Lincoln, Taylor, & Chatters, 2012), and persons who are widowed or never married also receive support from their families more frequently relative to married persons (Lincoln, Taylor, & Chatters, 2012). Older African Americans tend to receive less support than their younger counterparts (Lincoln, Taylor, & Chatters, 2012).

Although negative interactions with network members occur less frequently than positive social interactions they are, nonetheless, common features of social relations. Further, it is important to acknowledge negative interactions because they adversely impact mental/physical health and well-being. Moreover, a better understanding of how negative interactions affect patterns of social relationships contributes to greater insight into how these adverse relational

qualities influence mental/physical health and well-being. Lincoln and colleagues' (2012) study based on a national probability sample of African Americans, found that only 13% of their respondents experienced frequent negative interactions with their family. However, it is important to note that infrequent negative interactions can still adversely affect mental health and well-being. Findings for sociodemographic differences have indicated that African American women are more likely to experience negative interactions with kin than African American men (Lincoln, Taylor, & Chatters, 2012). On the other hand, older African Americans report lower levels of negative interactions than their younger counterparts (Lincoln, Taylor, & Chatters, 2012). Additionally, individuals who report higher levels of subjective closeness to family members are less likely to experience negative interactions with them (Lincoln, Taylor, & Chatters, 2012). However, individuals who report frequent contact with their relatives are more likely to also experience negative interactions with them (Lincoln, Taylor, & Chatters, 2012).

The research reviewed here has made significant contributions to the study of social networks among racially and ethnically diverse groups. However, few studies have examined social network characteristics simultaneously and in relation to each other. That is, while previous studies have examined multiple network characteristics individually, none have examined them jointly as constellations of network characteristics. Understanding these constellations of network characteristics in a more holistic manner can help us understand what types and prevalence of naturally occurring social networks.

Church Networks

Church networks constitute an important source of support for African Americans, as the church has historically been an important religious and social institution for African Americans. Among the types of support exchanged between African American congregants are emotional

support, tangible aid, informational support, and counseling and advice (Taylor, Chatters, & Levin, 2004). A range of sociodemographic characteristics are also associated with church-based support among older African Americans. For example, married persons are more likely to receive support from church members than their unmarried counterparts (Taylor & Chatters, 1988). Findings on the relation between gender and church-based support are mixed. Some studies have found that African American men receive higher levels of support from church members than African American women (Taylor & Chatters, 1988), while others have found the opposite pattern (Taylor et al., 2005). Findings on age and church-based support are also equivocal. Some studies have indicated that older African Americans receive less support from congregants relative to their younger counterparts (Taylor & Chatters, 1986, 1988), but others have found that older African Americans receive more support from congregants than their younger counterparts (Taylor et al., 2005). Parental status has also been linked to the receipt of church-based support among older African Americans. Parents tend to receive more support from congregants than individuals without children (Chatters, Taylor, Lincoln, & Schroepfer, 2002; Taylor & Chatters, 1986). This is likely due to the fact that adult children act as brokers between their parents and their mutual church networks. In other words, adult children facilitate the exchange of support between their parents and church members by connecting their parents with other congregants.

Social exchanges with fellow congregants can also include negative interactions. Overall, African Americans report relatively low levels of negative interactions with church members (Taylor et al., 2004). Further, research on the general older adult population has also indicated that church-based negative interactions are relatively infrequent (Ellison, Zhang, Krause, & Marcum, 2009; Krause, 1995). Despite their infrequency, the pernicious effects of

negative interactions on mental/physical health and subjective well-being are highly problematic. While a number of studies have examined mental/physical health outcomes of church-based negative interactions, little is known about the sociodemographic correlates of church-based negative interactions. Of the few studies that have examined this, findings have indicated that among the general population, negative interactions with church members occur less frequently among older adults (Krause, Ellison, & Wulff, 1998).

Social Network Typologies

An emerging area of research on social networks focuses on identifying *typologies*, or profiles, of social networks based on their characteristics (e.g., size, composition, function). These studies have identified varied configurations of social networks that are referred to as *social network typologies*. Two common themes that distinguish network types include the presence of kin versus nonkin relationships and the level of social integration (i.e., contact, social engagement, network size). Overall, the literature suggests that there are four main network types: family-focused, friends-focused, diverse, and restricted (Fiori, Antonucci, & Cortina, 2006; Fiori, Smith, & Antonucci, 2007; Litwin, 1997; Wenger, 1996). Members of the *family-focused* type are highly integrated into their family networks but are less integrated into non-family networks (e.g., friendship and church networks). Respondents in the *friend-focused* network type are more integrated into their friendship networks than family networks. Respondents in the *diverse* type are well integrated into both their kin and non-kin networks, and the composition of the network is highly diverse. In contrast, individuals in the *restricted* network type are socially isolated. These individuals report substantially smaller family and non-kin networks, infrequent contact with network members, and fewer confidants.

Previous studies on network typologies have made significant contributions to the literature on social networks. Their unique innovation has been in examining social networks by organizing interrelated data (i.e., network characteristics) into meaningful groups (i.e., typologies). This *person-centered approach* to examining social networks captures the complex and dynamic nature of social networks and reflects the multidimensionality of social relations. Moreover, network typologies contribute to insight into how various patterns of social relations influence social support exchanges (i.e., receiving and providing).

Despite these contributions, this developing area of research has several limitations. First, research on network types has focused mainly on selected groups, including the general U.S. population, which is predominantly non-Hispanic white, European, and Israeli populations. Although this represents an important source of information about network types, results from studies involving European and Israeli samples may not be generalizable to Americans. Network typologies research is particularly relevant to racial and ethnic minority populations, as these groups comprise of a significant proportion of the American population and are continuing to grow in number. Moreover, evidence suggests that African Americans' social networks are structurally, compositionally, and functionally different from that of whites. Thus, it is reasonable to surmise that network typologies also vary by population groups. Unfortunately, this is yet to be confirmed or disconfirmed, as no studies to date specifically investigate network types in the African American population.

Second, extant network typology studies have focused primarily on the older population. Thus, there is no information on network types in the younger adult population or across the adult life course. Research has indicated that older adults' social networks differ from those of younger adults. Differences in network characteristics may lead to the identification of different

network typologies among younger adults. Third, most network typology research has focused on the positive aspects of social relations, often overlooking negative aspects of social relations, which are equally important. As such, network types derived in these studies reflect only positive network characteristics but lack information on the negative aspects of the network. Fourth, most studies have used a single indicator (religious service attendance) to assess the church network. This fails to provide adequate information for a thorough assessment of an individual's relationships with church members. Lastly, the majority of extant studies have used cluster analysis to identify network typologies. Although cluster analysis is a valid and frequently used statistical method for classifying respondents into meaningful groups (i.e., clusters), it, nevertheless, has several limitations. Cluster analysis cannot provide information on the probability of response to indicator items within any of the clusters (Raykov, 2014). Further, cluster analysis cannot determine the probability of a respondent being in a certain typology or the typology prevalence rates based on probabilistic estimates (Raykov, 2014).

Focus of the Present Study

This study aims to address the noted limitations in the social network typology literature. The current analysis seeks to identify social network typologies among African American adults using typology indicators derived from the family solidarity model (Bengtson & Roberts, 1991) and the solidarity-conflict model (Bengtson et al., 2002). The specific indicators used reflect affectual, associational, and functional solidarity within family and church networks. Additionally, the inclusion of negative interactions with family and church members are assessed in relation to network typologies. Distinct network types are identified and the prevalence rates for each of these types are computed in order to assess which types are the most and least common among African Americans. Moreover, this investigation examines the

sociodemographic correlates of the identified network types in order to determine whether certain sociodemographic characteristics are associated with an increased probability of belonging to a particular network type. Given that previous studies have not examined network types among either African American or non-geriatric adult populations and because this is an exploratory investigation, no specific hypotheses are proposed for the network types that will be identified. However, I expect that the identified types will, to some extent, reflect the four previously established network typologies found in the literature (i.e., diverse, family-focused, friends-focused, restricted).

Methods

Sample

The African American sample for the current analyses was drawn from the National Survey of American Life: Coping with Stress in the 21st Century (NSAL), which was collected by the Program for Research on Black Americans at the University of Michigan's Institute for Social Research. The African American sample is the core sample of the NSAL. The core sample consists of 64 primary sampling units (PSUs), of which 56 of these primary areas overlap substantially with existing Survey Research Center National Sample primary areas. The remaining eight primary areas were chosen from the South in order for the sample to represent African Americans in the proportion in which they are distributed nationally. The African American sample is a nationally representative sample of households located in the 48 coterminous states with at least one Black adult 18 years or older who did not identify ancestral ties in the Caribbean. The data collection was conducted from February 2001 to June 2003. A total of 6,082 interviews were conducted with persons aged 18 or older, including 3,570 African Americans, 891 non-Hispanic whites, and 1,621 Blacks of Caribbean descent. The sample for

the current analysis was based exclusively on the African American sample. Fourteen percent of the interviews were completed over the phone and 86% were administered face-to-face in respondents' homes. Respondents were compensated for their time. The overall response rate was 72.3%. Final response rates for the NSAL two-phase sample designs were computed using the American Association of Public Opinion Research (AAPOR) guidelines (for Response Rate 3 samples) (AAPOR, 2006) (see Jackson et al., 2004 for a more detailed discussion of the NSAL sample). The NSAL data collection was approved by the University of Michigan Institutional Review Board.

Measures

Social network typology indicators. Sixteen latent class (i.e., typology) indicators were used in the identification of latent classes. Indicators of both family and church networks were included. *Frequency of contact with family*, which assessed associational solidarity, was measured by the question: "How often do you see, write or talk on the telephone with family or relatives who do not live with you? Would you say nearly everyday (7), at least once a week (6), a few times a month (5), at least once a month (4), a few times a year (3), hardly ever (2), or never (1)." *Subjective closeness to family*, which assessed affectual solidarity, was measured by the question: "How close do you feel towards your family members? Would you say very close (4), fairly close (3), not too close (2), or not close at all (1)." *Emotional support from family*, which assessed functional solidarity was measured by: "Other than your (spouse/partner), how often do your family members: (a) make you feel loved and cared for, (b) listen to you talk about your private problems and concerns, (c) express interest and concern in your well-being?" The response categories for these questions were *very often*, *fairly often*, *not too often*, and *never*. These three questions for emotional support represented three separate class indicators. *Negative*

interaction with family members was assessed by the following three questions: “Other than your (spouse/partner) how often do your family members: (a) make too many demands on you, (b) criticize you and the things you do, and (c) try to take advantage of you?” The response categories for these questions were *very often*, *fairly often*, *not too often*, and *never*. Each one of these three negative interaction questions served as separate class indicators. *Frequency of contact with church members*, *subjective closeness to church members*, *emotional support from church members*, and *negative interactions with church members* were measured by questions similar to the family network indicators. In order to facilitate analysis and interpretation of the results, all indicators were dichotomized using median split such that a value of 1 indicated low levels of the specific class indicator and a value of 2 indicated high levels of the specific class indicator.

Sociodemographic correlates. Sociodemographic correlates of social network types included: gender, age, education, marital status, household income, parental status, number of children the respondent had who are aged 13 or older, and employment status. Gender and parental status were dummy coded. Males were coded as “0” and females were coded as “1.” Similarly, respondents who were not parents were coded as “0” and parents were coded as “1.” Age, education, income, and number of children were scored continuously; age and education were assessed in years. Marital status was coded to differentiate respondents who were married, partnered, separated, divorced, widowed, and never married. Employment status was coded to differentiate those who were employed full-time, employed part-time, unemployed, retired, homemakers, students, and disabled/other. Missing data for income and education were imputed using an iterative regression-based multiple imputation approach incorporating information about age, sex, region, race, employment status, marital status, home ownership, and nativity of

household residents. Income was coded in dollars; the log of income was used in order to minimize variance and account for its skewed distribution.

Analysis Strategy

I used latent class analysis (LCA) to identify network types. LCA uses a person-centered approach to classify respondents into subgroups (i.e., latent classes) based on their patterns of response across a set of dichotomous class indicators. The latent classes identified from this procedure represented network types. Latent class multinomial logistic regression analysis, in which class probabilities are regressed on sociodemographic variables, was used to determine correlates of network types. This was conducted using the 3-step LCA approach in order to avoid the inclusion of the sociodemographic variables in the class extraction process (Asparouhov & Muthén, 2013). Prior research has suggested that parental status and age interact with one another in their effects on social support. A parental status by age interaction term was constructed and tested in latent class multinomial logistic regression models. All analyses used analytic weights. Statistical analyses accounted for the complex multistage clustered design of the NSAL sample, unequal probabilities of selection, nonresponse, and poststratification to calculate weighted, nationally representative population estimates and standard errors.

Results

Table 2.1 presents the means, frequencies, standard deviations, and range for the study variables. The sample consisted of 56% women and 44% men, with an average age of 43.15 years. The mean household income was \$32,037, and the mean educational attainment level was 12.30 years. About one third of respondents were married, and another third had never married. More than three quarters of respondents were parents. The majority of the respondents were employed either full-time (51%) or part-time (16%). On average, respondents reported moderate

to high levels of frequency of contact, subjective closeness, and emotional support with family and church members. Additionally, respondents reported relatively low levels of negative interaction with family and church members.

A series of LCAs indicated that the best model is a four-class model. Model fit was determined by the Akaike information criterion, Bayesian information criterion, and adjusted Bayesian information criterion. Item response probabilities are depicted in Figure 2.1. The four network types identified were: *optimal*, *ambivalent*, *family-centered*, and *strained*. Members of the *optimal* type reported high levels of contact, subjective closeness, and emotional support from both family and church members. They also reported low levels of negative interactions with family and church members. The *ambivalent* type was the most prevalent typology, comprising 30.78% of the sample. The ambivalent type was characteristically similar to the optimal type with a few exceptions. Notably, respondents in this type reported low subjective closeness to church members and high levels of negative interaction with both family and church members. The *strained* type consisted of respondents who were not in frequent contact with family and church members, had relatively low levels of subjective closeness to family and church members, and received minimal emotional support from both groups. Moreover, these respondents experienced high levels of negative interaction with family members, coupled with moderate levels of negative interaction with church members. The least prevalent network type was the *family-centered* type (19.26% of the sample), which was characterized by high levels of subjective closeness and emotional support from family and moderate levels of contact with family members. The family-centered type also had low levels of subjective closeness, frequency of contact, and emotional support from church members. Moreover, these individuals reported low levels of negative interactions with family and church members.

Results from the latent class multinomial logistic regression analysis are presented in Table 2.2. The optimal type was set as the comparison category. The analysis revealed that compared to respondents with less education, respondents with higher levels of education had a higher probability of belonging to the ambivalent or family-centered type. Similarly, respondents with higher income were more likely than their lower income counterparts to belong to the family-centered type. Relative to married respondents, widowed respondents had a greater probability of being in the ambivalent type. The probability of being a member of either the family-centered or strained network type was greater for respondents who were never married than for married respondents. Additionally, respondents who were separated were more likely than their married counterparts to be a member of the strained type. Parents were also more likely to belong to either the ambivalent or strained network type than childless respondents. With respect to employment status, relative to persons who were employed full-time, part-time employed and retired persons had a greater probability of being in the ambivalent type. Unemployed respondents were more likely than full-time employed respondents to be members of either the ambivalent or strained type. Lastly, homemakers were less likely to be members of the strained network type and more likely to be members of the optimal type relative to full-time workers.

Several significant interactions between age and parental status emerged. As illustrated in Figure 2.2, both young adults with and without children had similar likelihoods of being in the ambivalent type. However, as age increased, respondents without children had a greater likelihood of being in the ambivalent type compared to respondents with children. A second interaction effect revealed that among young adults, parents were more likely than respondents without children to belong to the strained type (Figure 2.3). Although this probability increased

with age for childless respondents, for respondents who have children, this probability only increased minimally and actually decreased among older parents. As a result, the relationship between parental status and network type membership reversed among older respondents such that childless respondents were more likely than parents to be in the strained type.

Discussion

Findings from this study revealed that there were four distinct social network types (optimal, ambivalent, family-centered, strained) among African Americans. Three main network characteristics distinguished the four identified typologies. The first two were the degree of social integration and network composition. The optimal and ambivalent types were characterized by high levels of social integration into both the family and church networks, whereas the strained type was characterized by low levels of social integration into both the family and church networks. The family-centered type had high levels of social integration into the family network but low levels of social integration into the church network. These distinguishing patterns are similar to those identified in previous studies on network types (Fiori et al., 2006; Litwin & Shiovitz-Ezra, 2011; Wenger, 1991, 1997). In comparison to those previously identified (i.e., diverse, restricted, family-focused, and friend-focused), the optimal type reflects the diverse type, both of which are marked by high social integration and diverse network composition. The current family-centered type is consistent with the previously identified family-focused type, as they are both characterized by social integration mostly into the family network and not integrated into the church network. In some respects, the strained type is comparable to the restricted type identified in previous research, as they are both characterized by high levels of social isolation.

The third distinguishing characteristic of network typologies is the level of negative interactions with network members. The optimal and family-centered types had low levels of negative interaction with family and church members. In contrast, the ambivalent type was marked by high levels of negative interaction with family and church members, and the strained type was marked by high levels of negative interaction with family members only. These two network types are consistent with patterns of emotional support and negative interaction from family members identified by Taylor et al. (2013) who found an ambivalent (high levels of emotional support and negative interactions) and a strained (low levels of emotional support and high levels of negative interactions) pattern of familial relationship among African Americans and Black Caribbeans. By including negative family and church interaction indicators, this study expands upon previously explored typologies, which rarely take into account negative interactions with network members. The inclusion of negative interaction indicators provides information on the interplay between negative and positive qualities of social relationships and the varied combinations in which they exist.

This study did not identify a nonkin-focused network type (e.g., friend-focused type) as previous studies have. This may have resulted from differences in the typology indicators used in this study as compared to previous research. The typology indicators used in this study partially overlapped with indicators used in previous studies. However, the indicators used here were specifically selected to reflect family solidarity dimensions that are associated with the conceptual framework for understanding familial and congregational relations. Additionally, the fact that some of the previously established network types were not replicated in this analysis suggests that there may be racial variations in network types. This is not surprising, as research has identified a number of differences in network characteristics between African Americans and

Whites (Ajrouch, Antonucci, & Janevic, 2001). The current findings coupled with Taylor and colleagues' (2013) findings reinforce the existence of racial differences in network types.

Turning to sociodemographic correlates of network types, socioeconomic status (SES) was related to membership in specific network types. Specifically, respondents with higher income and educational attainment levels were more likely to be members of the ambivalent type (high levels of social integration and negative family and church interactions). This is similar to other studies in which SES is positively correlated with negative interactions with network members (Antonucci, Akiyama, & Lansford, 1998; Newsom, Nishishiba, Morgan, & Rook, 2003). Moreover, in this study, respondents with higher education levels were more likely to be a member of the family-centered type than respondents with lower levels of education, which is consistent with numerous studies indicating that SES is positively associated with social integration, network size, and receipt of social support (Ajrouch, Blandon, & Antonucci, 2005; Campbell, Marsden, & Hurlbert, 1986; McPherson, Smith-Lovin, & Brashears, 2006; Turner & Marino, 1994).

Marital status was also associated with network typology membership. Widowed respondents, compared to their married counterparts, were more likely to be members of the ambivalent type. Ambivalence in the context of social relations often arise when sources of support are limited and, as a result, the individual is dependent on a select few network members for support (Smelser, 1998). In this study, in the absence of a spouse, widowed respondents were likely to be more dependent on their networks for support. Consequently, their dependence on a select few network members for support may have introduced conflict into their relationships (e.g., when support needs are onerous or persistent). Further, African Americans who were separated or never married were more likely to belong to the strained type

(characterized by infrequent contact, low levels of closeness, minimal support) than their married counterparts. This is congruent with results from previous works on network typologies demonstrating that unmarried respondents tend to predominate network types that are characterized by low levels of social integration (Fiori et al., 2006; Fiori et al., 2007; Litwin & Shiovitz-Ezra, 2011).

Respondents who were never married were more likely than their married counterparts to belong to the family-centered network type. This is contrary to findings in the literature that have indicated that married respondents tend to predominate the family-focused types (Fiori et al., 2007; Litwin & Shiovitz-Ezra, 2006, 2011). However, when examined within the context of religious participation, the current finding is consistent with this literature. It is important to note that the main difference in this study between the optimal and family-centered types is the level of social integration into the church network. Respondents in the optimal type were highly socially integrated into their church networks, while respondents in the family-centered type were socially isolated from their church networks. According to research on social relationships in the church, unmarried African Americans are less socially integrated into their church networks than their married counterparts. More specifically, unmarried African Americans attend religious services and receive support from congregants less frequently than their married counterparts (Chatters, Taylor, & Lincoln, 1999). This may explain why in the current analysis respondents who had never been married were more likely to belong to the family-centered type, which is characterized by low levels of social integration into the church network.

With respect to employment status, unemployed respondents were more likely than respondents who were employed full-time to belong to either the ambivalent or strained types. This finding supports the social exclusion theory, which hypothesizes that unemployed persons

tend to withdraw from their social networks due the stigma of unemployment (Gallie, Paugam, & Jacobs, 2003). Unemployed persons also tend to lack financial resources that are necessary for participation in some social activities (e.g., dining out with friends) and thus, may be more likely to withdraw from social activities. Furthermore, unemployment can lead to tensions over finances with family members (Gallie et al., 2003). In fact, research has indicated that financial strain leads to increased negative interactions with family members (Lincoln, 2007). Consequently, unemployed respondents were more likely than full-time employed respondents to belong to network types that are characterized by high levels of negative interactions with family members and/or social isolation. Additionally, unemployed respondents may be more likely to depend on network members for support due to their limited financial means, which could lead to ambivalence regarding these relationships. In fact, compared to respondents who were employed full-time, respondents who were employed part-time or retired were more likely to be members of the ambivalent type. Ancillary analysis (not shown) indicated that respondents who worked part-time and those who were retired experienced more financial strain than respondents who worked full-time suggesting a link between financial strain and negative interactions and ambivalence in family and church networks.

Findings further indicate that homemakers were less likely than their full-time employed counterparts to belong to the strained type and more likely to belong to the optimal type. This findings seems to be driven by the fact that the vast majority of respondents who identified as homemakers were women. Prior research has shown that women who are not employed full-time are more socially integrated into their family networks than women who are employed full-time because they have fewer constraints imposed by non-family roles (Moore, 1990; Pugliesi & Shook, 1998). Further, numerous studies on African American religion and church-based

support have indicated that women attend religious services, interact with congregants, and receive church-based support more frequently than men (Chatters et al., 1999; Taylor, 1988; Taylor et al., 2005). This indicates that African American women are more integrated into their church networks than their male counterparts. It may be for these reasons that respondents who identified as homemakers were less likely to belong to the strained type and more likely to belong to the optimal type, which is characterized by high levels of social integration into both the family and church networks.

The main effect for parental status revealed that respondents who had children had a higher likelihood of belonging to either the ambivalent or strained types, compared to their childless counterparts. However, the significant interaction effects between parental status and age indicated that the effects of parental status on network type varied by age. One interaction effect demonstrated that among younger respondents, both parents and persons without children had similar probabilities of belonging to the ambivalent type. As age increased, the probability of belonging to the ambivalent type decreased for both groups. However, this decrease was more pronounced among parents. Consequently, among older respondents, parents were less likely to belong to the ambivalent type than those without children. A second interaction effect indicated that the probability of being in the strained type among younger respondents was greater for those who had children than their childless counterparts. However, this relationship reversed among older adults, such that older respondents without children were more likely than older respondents with children to belong to the strained type. This finding is consistent with research indicating that older adults without children are more likely to belong to socially isolated network types, whereas older parents are more likely to belong to socially integrated types (Wenger, Dykstra, Melkas, & Knipscheer, 2007). This finding also supports the notion

that adult children often act as brokers between their parents and their mutual social networks in such a way that they facilitate social connections between their parents and the family and church networks (Chatters et al., 2002; Taylor & Chatters, 1986). As a result, older parents are more integrated into their networks than older adults without children. These interaction effects underscore the importance of adult children not only as a source of support but also as relationship brokers for older adults.

Findings from the present analysis must be interpreted within the context of the study's limitations. First, the African American adult sample of the NSAL is limited to non-institutionalized, community dwelling individuals. Thus, findings from this study are only generalizable to this population. African Americans who were homeless, institutionalized, or physically compromised and unable to participate in the interview were excluded. Second, all network measures were self-reported, which were subjected to recall and social desirability biases. Third, because the data for the current analysis is cross-sectional, causal inferences on the relationship between sociodemographic correlates and network typology membership cannot be made. For example, it is not possible to know if unemployment leads to social isolation or if being socially isolated leads to difficulties in transitioning out of unemployment.

Despite these limitations, this study has several notable strengths. The current analysis is the first, to my knowledge, to examine social network typologies among African American adults using a national probability sample. Previous studies of social network types have mostly focused on either the general U.S. population or European and Israeli samples. These samples present issues of generalizability, especially to racial and ethnic minority populations residing in the U.S. Additionally, this study examined a range of network indicators from both the family and church networks. The majority of research on network types uses a single indicator (i.e.,

religious service attendance) to assess the congregational network. The present analysis used multiple indicators of the church network including: subjective closeness, frequency of contact, emotional support, and negative interactions with congregants. The inclusion of multiple indicators of the church network substantially contributes to the literature on network types, as church members play an important role in the daily lives of African Americans and are a significant source of support for African Americans.

Further, both positive and negative aspects of social relations were assessed. Typically, research on network types assesses only positive aspects of social relations. However, negative interactions are ubiquitous aspects of social relations. By assessing negative interactions, this study provides a more in-depth understanding of African Americans' relationships with family and church members. Additionally, the use of LCA to derive network types extends the area of network typology research, as most previous studies have used cluster analysis to derive network types. As a type of structural equation modeling, LCA has several advantages over cluster analysis. LCA can calculate the probabilistic estimates of prevalence rates for each of the identified network types, whereas cluster analysis does not have this ability. LCA can also determine the probability of a particular respondent belonging to a specific network type and the item response probability for each network type.

In conclusion, this investigation of social network typologies among African Americans represents a preliminary effort to understand the different configurations of social networks within this population. This study demonstrated that network typologies vary across sociodemographic categories and underscores the importance of the congregational network among African Americans. The use of innovative, person-centered statistical approach permitted for the concurrent examination of multiple network characteristics, including negative

interactions with network members, in order to identify distinct patterns of social relations. The present study also makes a unique contribution in providing a deeper understanding of ambivalence in social relations, especially in non-kin relationships, and its correlates. Prior research indicates that supportive relationships confer beneficial effects on mental/physical health and well-being while negative interactions have detrimental effects on mental/physical health and well-being. However, little is known about the association between these health and well-being outcomes and relationships that are characterized by high levels of both positive and negative relationship qualities (i.e., ambivalent relationships). Future research should explore the precursors and outcomes of ambivalent relationships. In particular, more studies are required to understand how the ambivalent network type influences mental health and well-being. Studies such as these will help us better understand the interactive effect of positive and negative aspects of social relations on mental health and well-being. Finally, social network typologies have implications for clinical practice. Network types can be used to assess clients' social environments in order to identify mental/physical health risks and protective factors. In particular, they can be used to identify clients who are socially isolated and/or experiencing high levels of social conflict. This is important because extant research has indicated that social isolation and negative interactions are associated with diminished mental/physical health and subject well-being (Cacioppo & Cacioppo, 2014; Holt-Lunstad, Smith, & Layton, 2010; Rook, 2014).

Table 2.1
Demographic Characteristics of the Sample and Distribution of Study Variables

	% (Mean)	N (S.D.)	Range
Gender			
Male	44.03	1,271	
Female	55.97	2,299	
Age	43.15	16.32	18-93
Education	12.30	2.58	0-17
Household Income	32,037.15	32,687.94	0-520,000
Marital Status			
Married	32.91	960	
Partnered	8.74	260	
Separated	7.16	286	
Divorced	11.75	524	
Widowed	7.89	353	
Never Married	31.55	1,170	
Parental Status			
Does Not Have Child	21.76	668	
Has Child	78.24	2,769	
Number of Children Aged 13+	1.61	2.05	0-15
Employment Status			
Employed Full-Time	50.80	1,795	
Employed Part-Time	16.02	538	
Unemployed	10.08	366	
Retired	2.57	99	
Home Maker	2.73	77	
Student	9.84	371	
Disabled/Other	7.96	314	
Frequency of Contact with Family Members			
Low	49.71	1,674	
High	50.29	1,864	
Subjective Closeness to Family Members			
Low	27.93	978	
High	72.07	2,559	
Family Loves			
Low	36.01	1,252	
High	63.99	2,280	
Family Listens			
Low	41.74	1,440	
High	58.26	2,096	
Family Interested			
Low	40.58	1,420	
High	59.42	2,117	
Family Demands			
Low	35.38	1,304	
High	64.62	2,234	

Family Criticizes		
Low	42.52	1,530
High	57.48	1,994
Family Takes Advantage		
Low	60.31	2,149
High	39.69	1,388
Frequency of Contact with Church Members		
Low	56.56	1,640
High	43.44	1,350
Subjective Closeness to Church Members		
Low	64.55	1,892
High	35.45	1,090
Church Loves		
Low	41.41	1,227
High	58.59	1,746
Church Listens		
Low	58.93	1,743
High	41.07	1,237
Church Interested		
Low	52.31	1,566
High	47.69	1,413
Church Demands		
Low	49.97	1,551
High	50.03	1,429
Church Criticizes		
Low	66.23	2,020
High	33.77	942
Church Takes Advantage		
Low	79.11	2,378
High	20.89	601
Support Network Types		
Optimal	22.76	811
Ambivalent	30.78	1097
Family-Centered	19.26	686
Strained	27.21	970

Note: Percentages and N are presented for categorical variables and Means and Standard Deviations are presented for continuous variables. Percentages are weighted and frequencies are un-weighted.

Table 2.2

Latent class multinomial logisitc regression analysis of social network types on sociodemographic correlates among African Americans (N = 3343)

	Ambivalent vs. Optimal		Family-Centered vs. Optimal		Strained vs. Optimal	
	Logit	SE	Logit	SE	Logit	SE
Female	0.10	0.18	-0.08	0.16	-0.15	0.10
Age	-0.02	0.01	0.00	0.01	0.01	0.01
Education	0.11	0.03**	0.12	0.05*	0.04	0.03
Income	0.24	0.11*	0.15	0.11	-0.04	0.09
Marital status						
Partnered	0.11	0.29	0.46	0.35	0.50	0.28
Separated	0.22	0.28	0.01	0.29	0.72	0.24**
Divorced	0.21	0.21	0.10	0.25	0.36	0.23
Widowed	0.51	0.25*	-0.21	0.40	-0.23	0.27
Never married	0.29	0.26	0.53	0.26*	0.51	0.24*
Parent	1.00	0.43*	1.16	0.71	1.69	0.47***
Number of children 13+	0.06	0.04	0.00	0.05	-0.05	0.04
Employment status						
Employed part-time	0.54	0.22*	0.20	0.29	0.31	0.23
Unemployed	1.05	0.29***	0.56	0.36	0.82	0.29**
Retired	0.76	0.26**	0.31	0.26	0.09	0.36
Homemaker	-0.29	0.36	-0.78	0.54	-1.12	0.36**
Student	1.03	0.87	0.96	0.92	1.05	0.85
Disabled/other	0.27	0.25	-0.12	0.26	0.15	0.21
Parent*Age	-0.02	0.01*	-0.02	0.02	-0.03	0.01**

Reference category for gender = male, marital status = married, parent = no children, employment status = employed full-time.

*p < .05; **p < .01; ***p < .001

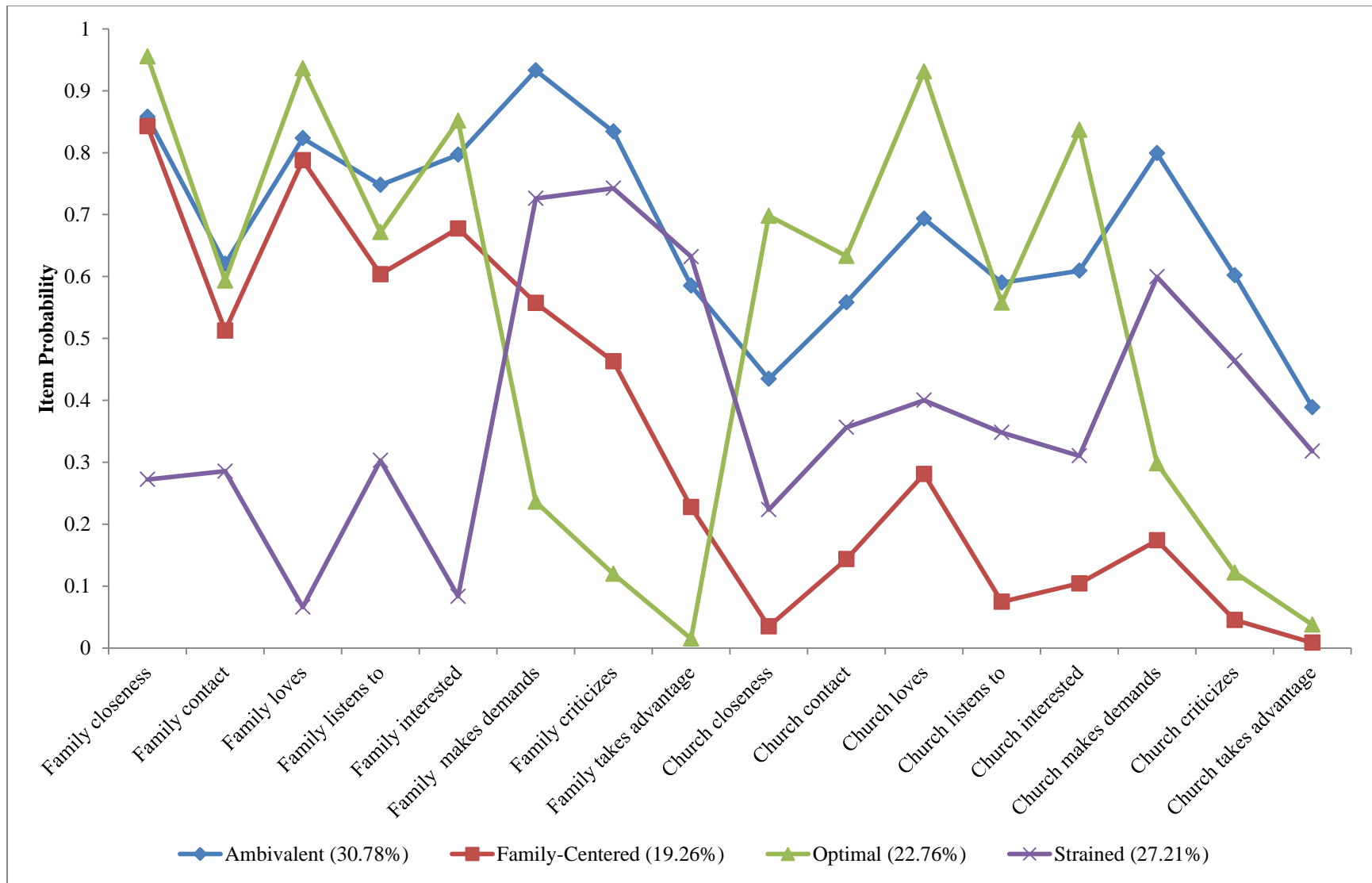


Figure 2.1. Conditional item probability profile. Social network type size information presented in the legend.

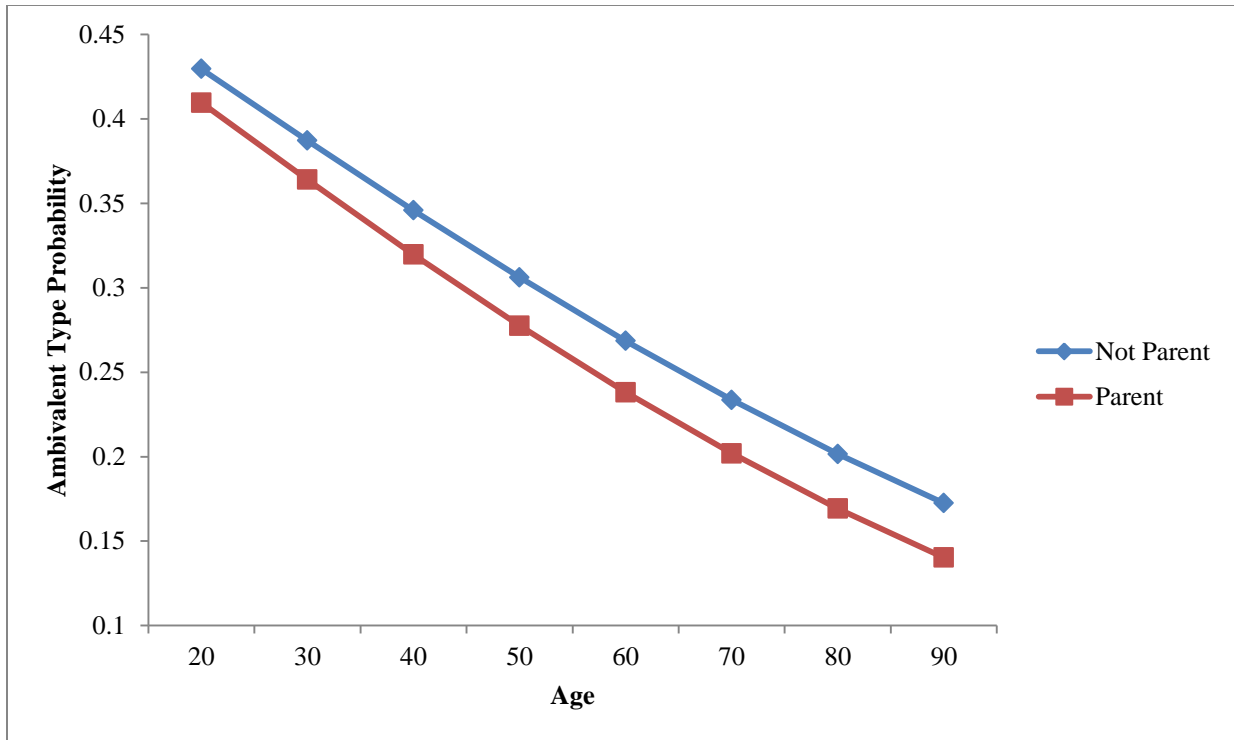


Figure 2.2. Predicted probability of membership in the ambivalent network type by parental status and age among African Americans.

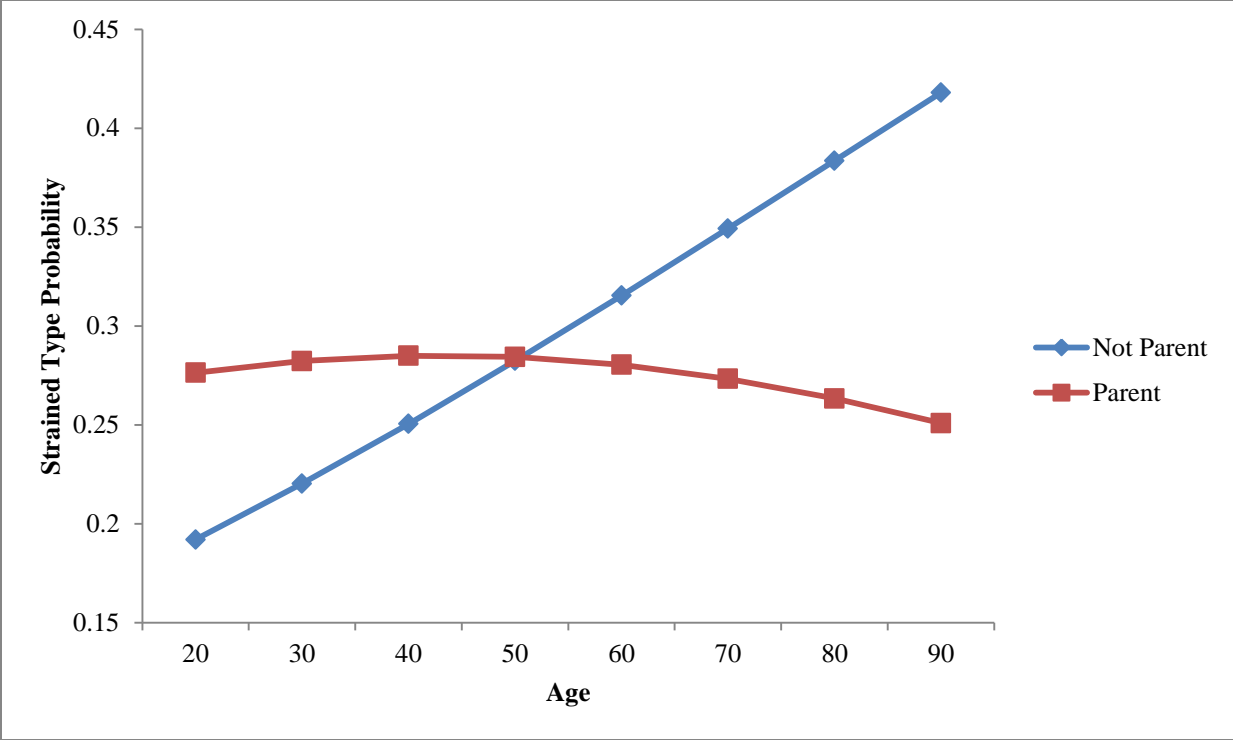


Figure 2.3. Predicted probability of membership in the strained network type by parental status and age among African Americans.

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CHAPTER THREE

Social Network Typologies and Serious Psychological Distress among African Americans

Social relationships are critical sources of informal social support, such as emotional support, instrumental assistance, and companionship. Research has consistently found that informal support protects against a range of mental disorders among African Americans. Social support has been linked to lower levels of depression severity (Artinian, Washington, Flack, Hockman, & Jen, 2006; Haines, Beggs, & Hurlbert, 2008) and psychological distress (Dilworth-Anderson, Williams, & Cooper, 1999b; K. D. Lincoln, Chatters, & Taylor, 2003). It is also protective against suicidality (Kaslow et al., 2005; K. D. Lincoln, Taylor, Chatters, & Joe, 2012), major depression (Lincoln & Chae, 2012), and social anxiety (Levine, Taylor, Nguyen, Chatters, & Himle, in press). Additionally, social support is associated with several distinct dimensions of subjective well-being, such as life satisfaction (Nguyen, Chatters, Taylor, & Mouzon, in press; Taylor, Chatters, Hardison, & Riley, 2001), happiness (Taylor et al., 2001), and self-esteem (Nguyen et al., in press). Furthermore, social support is important for coping with stressors and problematic social situations. For example, among African Americans, family and friends provide support for coping with chronic poverty (Stack, 1975), physical and mental health problems (Cohen, Brittney, & Gottlieb, 2000; Lincoln, 2000), homelessness (Taylor, Chatters, & Celious, 2003), and daily life stressors (Benin & Keith, 1995; Lincoln, 2000). Social networks, within which social relationships are embedded, are also important for coping with the loss of a loved one (Neighbors, Musick, & Williams, 1998), serious problems (Chatters, Taylor, & Neighbors, 1989) and emergencies.

The purpose of this study is to examine the association between social network typologies and serious psychological distress (SPD). Although previous research has linked various aspects of social relationships to SPD, no studies have examined network types in relation to SPD. Typologies provide a holistic way of concurrently examining varied aspects of social relationships. The literature review begins with a brief summary of the family solidarity model, which is the theoretical basis for this chapter. It then continues with an overview of the literature on social relationships and mental health, with a particular focus on psychological distress. The section concludes with an overview of extant empirical work on social network types and its relation to mental and physical health and subjective well-being.

Literature Review

Family Solidarity Model

The conceptualization of social networks in this study is based on the family solidarity model (Bengtson & Roberts, 1991; Roberts & Bengtson, 1990), which incorporates a multidimensional approach to family integration. The family solidarity model suggests that there are six distinct but interrelated dimensions of behaviors and sentiments that characterize family integration, otherwise referred to as family solidarity. These solidarity dimensions are: association, affect, function, structure, consensus, and norms. This model assumes that these dimensions can operate both interdependently as well as independently of each other. This study focuses on the association, affect, and function dimensions of family solidarity. Associational solidarity describes the frequency of interaction and shared activities between family members. Affectual solidarity assesses the degree of subjective closeness, affirmation, and intimacy between family members, and functional solidarity assesses the degree to which family members exchange social support. This conceptualization of family relations extends traditional

understanding of family relationships by examining multiple aspects of family relationships. While many other conceptualizations of family relations have traditionally focused solely on enacted support, the family solidarity model considers each of these aspects/solidarity dimensions to be an important characteristic of family relations.

Further, in addition to the six noted dimensions, the family solidarity model also takes into account negative social interactions with family members. An extended version of this model, called the solidarity-conflict model (Bengtson, Giarrusso, Mabry, & Silverstein, 2002), recognizes that negative social interactions among family members are normative aspects of familial relations and can co-occur with positive relationship qualities. Relationships that are characterized by high levels of both solidarity and negative interactions are considered ambivalent relationships (Bengtson et al., 2002; Connidis & McMullin, 2002). The family solidarity model has also been extended to non-kin groups, such as church members. Church members have historically been a significant source of informal support for African Americans. In fact, the structure and function of African American congregations have been compared to those of a family, thus giving rise to the concept of a “church family” (Lincoln & Mamiya, 1990). Due to its similarities to kinship networks, previous studies have identified a number of family solidarity dimensions that exist within church networks (Krause, 2002; Taylor, Lincoln, & Chatters, 2005). Accordingly, the family solidarity model’s focus on supportive relationships among both kin and non-kin and its attention to both negative and positive aspects of social relationships, makes it well-suited to serve as a theoretical framework for the current analysis.

Social Relationships and Mental Health

Research has consistently indicated that positive aspects of social relationships, especially social support, are associated with lower levels of psychological distress (Dunkley,

Blankstein, Halsall, Williams, & Winkworth, 2000; Lepore, 1992; Mirsky, Baron-Draiman, & Kedem, 2002; Salsman, Brown, Brechting, & Carlson, 2005). This relationship has been found in both the general population as well as among African Americans (Dilworth-Anderson, Williams, & Cooper, 1999a; Kelley, Whitley, Sipe, & Crofts Yorker, 2000; K. D. Lincoln et al., 2003; Thompson et al., 2000). Specifically, instrumental and emotional support has been shown to protect against psychological distress (Chatters, Taylor, Woodward, & Nicklett, in press; Krause & Liang, 1993; Miller et al., 2001; Thompson et al., 2000). Finch et al.'s (1999) meta-analysis of studies on social support, negative interactions, and psychological distress found that subjective measures of support, such as perceived support and support satisfaction, had a stronger effect on psychological distress than enacted support or structural characteristics of the social network, such as network size. Corresponding with this finding, Lakey et al.'s (1994) study of college students reported a negative association between perceived support and psychological distress but did not find a significant association between enacted support and psychological distress.

Previous findings have also indicated that other aspects of social relationships besides social support are related to psychological distress. For example, some studies have shown that frequency of contact with network members (Arling, 1987; Krause, Liang, & Keith, 1990) and network size (Eurelings-Bontekoe, Diekstra, & Verschuur, 1995; Olstad, Sexton, & Sjøgaard, 2001; Wilcox, 1981) are correlated with lower levels of psychological distress. Qualitative relationship aspects are also predictive of psychological distress. In a prospective study of patients at a Dutch mental health clinic, Eurelings-Bontekoe and colleagues (1995) reported that patients who indicated higher levels of satisfaction with their social relationships experienced lower levels of psychological distress than patients who indicated lower levels of satisfaction.

Similarly, a study on family caregivers conducted by Baillie et al. (1988) found that respondents who reported higher levels of satisfaction with the support they received reported lower levels of psychological distress.

Social relationships with church members are also significant sources of informal support. However, overall, church-based social support has only been examined in the general adult population and in studies on religious participation and social gerontology. Consequently, little is known about the relation between church-based support and mental health issues across the life span. Also, few studies have investigated church-based support in racially and ethnically diverse populations. Extant research has demonstrated that informal support from church members is associated with a range of mental health and subjective well-being outcomes. For instance, in a U.S. national probability sample, Nooney and Woodrum (2002) found that respondents who reported higher levels of support from church members reported lower levels of depression. Similarly, Krause and Wulff (2005) showed that among middle aged and older adults, having more close friends at church was associated with fewer depressive symptoms. Church-based support is also associated with self-forgiveness. In a national sample of older whites and African Americans, Krause (2010) found that respondents who were more satisfied with the emotional support they received from church members were more likely to forgive themselves than those who were less satisfied with the emotional support they received from church members. Other studies have reported that emotional support from church members is positively associated with personal control (Krause & Bastida, 2011) and positive affect (Krause, Ellison, & Wulff, 1998). Research focusing on African Americans has indicated similar findings. Chatters et al.'s (2011; in press) investigations of mental health and church-based social support in a nationally representative sample of African Americans found that emotional

support from church members was protective against suicidal ideation and associated with fewer depressive symptoms. Moreover, respondents who reported higher levels of subjective closeness to church members were less likely to experience suicidal ideations. Additionally, church-based social support is associated with higher levels of well-being (Walls & Zarit, 1991), and more frequent use of religious coping as a means to deal with racial discrimination (Krause, 2004).

While social relationships can be a source of support, companionship, and intimacy, they can also be a source of conflict and demands, which have deleterious effects on physical/mental health and subjective well-being. Negative interactions with network members are generally less frequent than positive social exchanges, but their harmful effects on health and well-being are typically more potent than those of positive social exchanges (Finch et al., 1999; Rook, 1984). According to the frequency-salience theory (Rook, 1984), which explains negative interactions' potency, social interactions, particularly those with close social partners, are expected to be positive in nature. Negative interactions, however, are unexpected occurrences that violate this normative assumption and are associated with several undesirable reactions and outcomes. Negative interactions are often experienced as stressful events, and customary responses to experiencing stressful events such as alarm, heightened vigilance, and emotional reactivity (Glanz & Schwartz, 2008) are frequent outcomes of negative interactions. Negative interactions are also associated with longer term adverse effects, such as impairments in psychological functioning and coping responses to stressors (Krause, 2005; Rook, 1984). Further, because negative interactions involve evaluative information about the individual, they can lead to diminished positive self-appraisals and erode perceptions of self-efficacy and self-worth (Lincoln, 2000). The frequency-salience theory suggests that since negative interactions deviate

from expectations of positive social exchanges, their detrimental impact on mental health and subjective well-being are more powerful than the beneficial effects of positive social exchanges.

A number of studies have linked negative interactions to psychological distress. Eurelings-Bontekoe et al. (1995) reported that respondents who experienced more intense negative interactions with parents, partner, or other significant social associates exhibited higher levels of psychological distress. Moreover, they found that the number of negative interactions respondents reported was positively associated with psychological distress. Similarly, findings from a study of older Chinese adults indicated that negative interactions were positively associated with psychological distress (Krause et al., 1990). This finding has also been replicated in African American samples. For example, Lincoln et al. (2003) found that respondents who reported higher levels of negative interactions with family members were also more likely to report higher levels of psychological distress. Findings for negative interactions with church members have indicated a similar association. Negative church interactions are positively associated with psychological distress (Ellison et al., 2009), depressed affect (Krause et al., 1998), and depressive symptoms (Chatters et al., in press). These studies have evidently demonstrated that negative interactions are associated with a range of adverse mental/physical health consequences and underscore the importance of understanding both positive and negative qualities of relationships.

Social Network Typologies

The majority of studies examining the connection between social relationships and mental/physical health and subjective well-being have parsed out the individual characteristics of social relationships and examined these characteristics separately. A growing area of innovation in social network research has combined these network characteristics to derive distinct profiles

of social networks. These profiles, referred to as *social network typologies*, are then examined in relation to mental/physical health and well-being outcomes. This approach to studying social relationships permits for the examination of multiple relationship characteristics simultaneously in relation to a range of outcome variables. Studies of network types have consistently identified four distinct network types: diverse, family-focused, friends-focused, and restricted (Fiori, Antonucci, & Cortina, 2006; Litwin, 2001; Litwin & Shiovitz-Ezra, 2011; Wenger, 1991, 1996). The *diverse type* is defined by high levels of social integration and diverse network role composition (i.e., family, friends, neighbors, etc.). In contrast, the *restricted type* is defined by high levels of social isolation. The *family-focused* and *friend-focused* types are characterized by high levels of social integration into the family and friendship networks, respectively.

Results from previous research on network types and health and well-being have indicated that individuals who belong to the diverse network type have the most favorable outcomes in comparison to the other three types. For instance, Litwin's (1998) study of older Jewish Israelis indicated that respondents in the diverse type reported lower levels of functional impairments than their counterparts in the other three network types. These respondents also reported the highest levels of self-rated health. Another study of older Jewish Israelis found that compared to respondents in the family-focused, friends-focused, and restricted types, respondents in the diverse type reported the highest levels of morale (Litwin, 2001). Membership in the diverse type is also associated with lower mortality rates (Litwin & Shiovitz-Ezra, 2006) and decreased feelings of loneliness and anxiety (Litwin & Shiovitz-Ezra, 2011).

Members of the friend-focused type also tend to enjoy more positive health and well-being outcomes relative to members of the family-focused and restricted types. Using a nationally representative sample of older Americans, Litwin and Shiovitz-Ezra (2011) found that

respondents in the friend-focused type reported lower levels of anxiety and higher levels of happiness relative to respondents in the restricted type. Individuals in the friend-focused type also have lower rates of functional impairments and higher self-rated health compared to those in the family-focused and restricted types (Litwin, 1998). In further support of this pattern, other studies have indicated that individuals in the friend-focused type have higher levels of morale and lower mortality rates than individuals in the family-focused and restricted types (Litwin, 2001; Litwin & Shiovitz-Ezra, 2006). Findings for the family-focused type have been inconclusive, with some studies indicating more positive health and well-being outcomes for individuals in the family-focused type relative to individuals in the restricted and friend-focused types (Fiori, Smith, & Antonucci, 2007; Litwin & Shiovitz-Ezra, 2011). For example, Fiori et al.'s (2007) study of older German adults revealed that respondents in the family-focused type reported fewer depressive symptoms, lower rates of morbidity, and higher levels of subjective well-being than respondents in the friend-focused and restricted types. On the other hand, some studies have indicated poorer health and well-being outcomes for members of the family-focused type relative to those of the diverse and friend-focused types (Litwin, 1998, 2003; Litwin & Shiovitz-Ezra, 2006). For instance, a study examining the relationship between network type and mortality among older Jewish Israelis indicated that members of the family-focused type had higher mortality rates than their counterparts in the friend-focused and diverse types (Litwin & Shiovitz-Ezra, 2006). Finally, overall, studies have consistently found that members of the restricted type have the worst health and subjective well-being outcomes among the four network types. Respondents in this network type are more likely to have moderate to high levels of disability, experience the highest levels of functional impairments, and report the lowest levels of self-rated health and morale (Litwin, 1998, 2003).

Focus of the Study

The goal of this study is to determine whether social network types are associated with SPD among African Americans. Although a number of studies have examined the relationship between network types and a range of mental/physical health and subjective well-being factors, these studies have focused mostly on older adults. Thus, there is a dearth of knowledge on the relationship between social network types and mental health across the life span. Moreover, few studies on network types have specifically focused on racially diverse groups. This study extends the current literature by examining the relationship between network type and SPD among a nationally representative sample of African Americans across the adult age range. The current analysis uses the network types identified in Chapter Two. The types were derived using indicators of the family and church networks, which yielded four distinct types: optimal, family-centered, ambivalent, and strained. As this study will use identical typology indicators, I hypothesize that I will identify an optimal, family-centered, ambivalent, and strained network type. Further, I hypothesize that respondents in network types characterized by high levels of negative interactions (i.e., strained and ambivalent types) will have higher levels of SPD than respondents in network types characterized by low levels of negative interactions (i.e., optimal and family-centered types). Lastly, I predict that respondents in the socially isolated type (i.e., strained type) will have higher levels of SPD than respondents in types characterized by high levels of social integration and low levels of negative interactions (i.e., optimal and family-centered).

Methods

Sample

The African American sample for the current analyses was drawn from the National Survey of American Life: Coping with Stress in the 21st Century (NSAL), which was collected by the Program for Research on Black Americans at the University of Michigan's Institute for Social Research. The African American sample is the core sample of the NSAL. The core sample consists of 64 primary sampling units (PSUs), of which 56 of these primary areas overlap substantially with existing Survey Research Center National Sample primary areas. The remaining eight primary areas were chosen from the South in order for the sample to represent African Americans in the proportion in which they are distributed nationally. The African American sample is a nationally representative sample of households located in the 48 coterminous states with at least one Black adult 18 years or older who did not identify ancestral ties in the Caribbean. The data collection was conducted from February 2001 to June 2003. A total of 6,082 interviews were conducted with persons aged 18 or older, including 3,570 African Americans, 891 non-Hispanic whites, and 1,621 Blacks of Caribbean descent. The current analysis is based exclusively on the African American sample. Fourteen percent of the interviews were completed over the phone and 86% were administered face-to-face in respondents' homes. Respondents were compensated for their time. The overall response rate was 72.3%. Final response rates for the NSAL two-phase sample designs were computed using the American Association of Public Opinion Research (AAPOR) guidelines (for Response Rate 3 samples) (AAPOR, 2006) (see Jackson, Neighbors, Nesse, Trierweiler, & Torres, 2004 for a more detailed discussion of the NSAL sample). The NSAL data collection was approved by the University of Michigan Institutional Review Board.

Measures

Social network typology indicators. Sixteen latent class (i.e., typology) indicators were used in the identification of latent classes. Indicators of both the family and church networks were included. *Frequency of contact with family*, which assessed associational solidarity, was measured by the question: “How often do you see, write or talk on the telephone with family or relatives who do not live with you? Would you say nearly everyday (7), at least once a week (6), a few times a month (5), at least once a month (4), a few times a year (3), hardly ever (2), or never (1).” *Subjective closeness to family*, which assessed affectual solidarity, was measured by the question: “How close do you feel towards your family members? Would you say very close (4), fairly close (3), not too close (2), or not close at all (1).” *Emotional support from family*, which assessed functional solidarity was measured by: “Other than your (spouse/partner), how often do your family members: (a) make you feel loved and cared for, (b) listen to you talk about your private problems and concerns, (c) express interest and concern in your well-being?” The response categories for these questions were *very often*, *fairly often*, *not too often*, and *never*. These three emotional support questions represented three separate class indicators. *Negative interaction with family members* was assessed by the following three questions: “Other than your (spouse/partner) how often do your family members: (a) make too many demands on you, (b) criticize you and the things you do, and (c) try to take advantage of you?” The response categories for these questions are *very often*, *fairly often*, *not too often*, and *never*. Each one of these three negative interaction questions served as separate class indicators. *Frequency of contact with church members*, *subjective closeness to church members*, *emotional support from church members*, and *negative interactions with church members* were measured by questions similar to the family network indicators. In order to facilitate the analysis and interpretation of the results, all indicators were dichotomized using median split such that a value of 1 indicated

low levels of the specific class indicator and a value of 2 indicated high levels of the specific class indicator.

Serious psychological distress. Serious psychological distress (SPD) was assessed by the K6, which is a six-item scale designed to assess non-specific psychological distress including symptoms of depression and anxiety in the past 30 days (Kessler et al., 2002; Kessler, Barker, Colpe, & et al., 2003). The K6 includes items designed to identify individuals: 1) with a high likelihood of having a diagnosable mental illness and associated limitations and 2) who have mental health problems severe enough to cause moderate to serious impairment in social and occupational functioning and to require treatment. Each item was measured on a five-point Likert-type scale ranging from 0 (none of the time) to 4 (all of the time). Positive valence items were reverse coded, and summed scores ranged from 0 to 24, with higher scores reflecting higher levels of SPD (Cronbach's alpha = 0.83).

Sociodemographic control variables. Sociodemographic differences (i.e., gender, marital status, education, family income, living alone) were statistically controlled for during testing of the association between network type and SPD. Missing data for family income and education were imputed using an iterative regression-based multiple imputation approach incorporating information about age, sex, region, race, employment status, marital status, home ownership, and nativity of household residents. Income was coded in dollars, and the log of income was used in order to minimize variance and normalize its distribution.

Analysis Strategy

Descriptive analyses were conducted using Stata 13.1, and latent class analysis (LCA) was conducted with Mplus (version 7.2). LCA uses a person-centered approach to classify respondents into subgroups (i.e., latent classes) based on their patterns of response across a set of

dichotomous latent class indicators. LCA was used to identify social network typologies. The latent classes identified from this procedure represented network types. A 3-step LCA approach was used in order to avoid the inclusion of the SPD and control variables in the class identification process (Asparouhov & Muthén, 2013). In this approach, the latent classes were first extracted and the distal outcome model was estimated afterwards. Using multiple group analysis, the distal outcome model tested the association between network types and SPD (i.e., the distal outcome) within three age groups – 18 to 34, 35 to 54, and 55+. All analyses used analytic weights. Statistical analyses accounted for the complex multistage clustered design of the NSAL sample, unequal probabilities of selection, nonresponse, and poststratification to calculate weighted, nationally representative population estimates and standard errors.

Results

Descriptive statistics for the study variables are presented in Table 3.1. The sample consisted of 44% male, and the mean age was 43. The average educational level was 12.3 years, and the average family income was \$32,037. Roughly four out of 10 of the sample were either married or partnered (41.65%), and one in five respondents lived alone (20.60%). Based on the binary indicators of family and church networks, respondents reported moderately frequent contact and high levels of subjective closeness and emotional support from family members. Negative interactions with family members were relatively low to moderate. Respondents maintained moderate levels of contact with church members and were low in subjective closeness to church members. Moreover, respondents indicated moderate levels of emotional support and low levels of negative interactions with church members.

A series of LCAs identified a four class model as the best fitting model. Goodness of fit was determined using the Bayesian information criterion (BIC), adjusted Bayesian information

criterion (adjusted BIC), and Akaike information criterion (AIC). The four network types (i.e., latent classes) identified were *optimal*, *family-centered*, *ambivalent*, and *strained*. Figure 3.1 presents the item response probabilities for each network type. Respondents in the *optimal* type (22.60% of the sample) reported high levels of frequency of contact, subjective closeness, and emotional support from both family and church members and low levels of negative interaction with family and church members. In terms of network characteristics, respondents in the *ambivalent* network type, which was the most prevalent type (30.92% of the sample), were similar to respondents in the optimal network type. However, unlike respondents in the optimal type, respondents in the ambivalent type reported moderate levels of subjective closeness and frequency of contact with church members and high levels of negative family and church interactions. The *family-centered* type was the least prevalent network type (19.16% of the sample). Respondents in this type indicated high levels of subjective closeness, frequency of contact, emotional support from family and low levels of negative interactions with family members. However, these respondents indicated low levels of subjective closeness, frequency of contact, emotional support, and negative interactions with church members. Lastly, members of the *strained* type (27.30% of the sample) reported low levels of subjective closeness, frequency of contact, and emotional support from family and church members, but high levels of negative family and church interactions.

Bivariate associations between sociodemographic and SPD variables and network types indicated that respondents in the four types varied at a statistically significant level on age, educational attainment level, income, and SPD (Table 3.2). The optimal type had the largest group of respondents aged 55 and older and the lowest educational attainment ($M = 11.84$, $SD = 2.79$) and income ($M = 28,916.36$, $SD = .87$) levels. Respondents in the strained ($M = 5.01$, $SD =$

4.74) type reported the highest levels of SPD followed by those in the ambivalent ($M = 4.05$, $SD = 4.08$) and family-centered ($M = 3.17$, $SD = 3.68$) types; respondents in the optimal type reported the lowest levels of SPD ($M = 2.72$, $SD = 3.66$).

In order to test the association between network type and SPD, a series of pairwise Wald tests were conducted to test for significant differences in the means of SPD across the four network types within each age group (Table 3.3). The results revealed that among 18 to 34 year olds and 55 year olds and older, respondents in the ambivalent type reported higher levels of SPD than respondents in the optimal type (Table 3.3). In particular, among respondents aged 55 and older, those belonging to the ambivalent type had SPD levels that were almost 10 times as high as respondents in the optimal type. For respondents aged 18 to 34, those in the ambivalent type reported higher SPD levels than their counterparts in the family-centered type. In contrast, among those aged 55 and older, respondents belonging to the family-centered type reported higher SPD levels than respondents belonging to the ambivalent type.

Discussion

This study examined the relationship between social network types and SPD in a nationally representative sample of African Americans. The LCA of family and church network indicators revealed four distinct network types: optimal, ambivalent, family-centered, and strained. The optimal and ambivalent types were characterized by high levels of social integration into the family and church networks. Respondents in the optimal type reported low levels of negative interactions with family and church members, but respondents in the ambivalent type reported high levels of negative family and church interactions. The family-centered type was marked by high levels of social integration into the family network, low levels of social integration into the church network, and low levels of negative interactions with family

and church members. The strained type was characterized by high levels of social isolation from the family and church networks and high levels of negative family and church interactions. Overall, these four network types correspond with the diverse, family-focused, and restricted types, which have been consistently identified in the network typology literature (Fiori et al., 2006; Litwin & Shiovitz-Ezra, 2011; Wenger, 1991).

The current findings support the established link between family and church networks and mental health. Furthermore, the results partially confirm the second hypothesis (i.e., network types characterized by high levels of negative interaction will have higher levels of SPD than network types characterized by low levels of negative interaction). Among the 18 to 34 and 55 plus age groups, respondents belonging to the ambivalent type reported higher levels of SPD than those in the optimal type. Moreover, for respondents aged 18 to 34, those in the ambivalent type reported higher levels of SPD than their counterparts in the family-centered type. This confirms previous findings, which have indicated that negative interactions with network members are predictive of a range of mental health issues. Prior studies on African Americans have reported that negative interactions are associated with elevated levels of psychological distress (Chatters et al., in press; Lincoln et al., 2003; Okun & Keith, 1998), suicidal ideation and attempts (Kaslow et al., 2000; Lincoln et al., 2012), depression (Lincoln & Chae, 2012; Okun & Keith, 1998) and lower levels of happiness (Nguyen et al., in press), self-esteem (Nguyen et al., in press), and general well-being (Todd & Worell, 2000). These patterns have been identified in the general population as well (Antonucci, Lansford, & Akiyama, 2001; Finch et al., 1999; Ingersoll-Dayton, Morgan, & Antonucci, 1997; Rook, 2014).

The present analysis also supports research on the negativity effect (Rook, 1984), which has found that the pernicious effects of negative interactions on mental health are more potent

than the positive effects of social support on mental health (Gray & Keith, 2003; Lincoln et al., 2003; Lincoln, Chatters, & Taylor, 2005). The ambivalent type, which was characterized by high levels of negative interactions, was associated with greater levels of SPD than the optimal type, which was characterized by low levels of negative interactions. This is consistent with the frequency-salience theory, which suggests that negative interactions' effects on mental health are more deleterious than social support's salutary effects due to the infrequent nature of negative interactions. This study underscores the important contributions of negative social interactions to mental health, especially in contrast to positive aspects of social relationships.

Interestingly, this negativity effect did not consistently hold for older respondents. Specifically, among respondents aged 55 and older, those in the family-centered type, which was characterized by low levels of negative interaction, had higher levels of SPD than those in the ambivalent type. This suggests that despite high levels of negative interactions, family and church support make unique positive contributions to older African Americans' mental health. Previous empirical works have indicated that support from family and church members is associated with lower levels of depressive symptoms (Aranda et al., 2012; Krause & Wulff, 2005; Lincoln, Chatters, & Taylor, 2005), depression severity (Zea, Belgrave, Townsend, Jarama, & Banks, 1996), and psychological distress (Lincoln et al., 2003). These studies have also indicated that African Americans who receive higher levels of support are less likely to experience suicidality (Chatters et al., 2011; Lincoln et al., 2012) and mood or anxiety disorders (Lincoln et al., 2010). Additionally, this finding underscores the important and complementary role of church members in older African Americans' mental health.

This finding also indicates that older adults may be less sensitive to the effects of negative interactions. That is, as compared to younger adults, older adults may be better able to

regulate negative emotions and cope with negative interactions. Consequently, negative interactions have a weaker effect on older adults' mental health than on younger adults' mental health. This is consistent with the socioemotional selectivity theory (Carstensen, 1993; Carstensen, 2003), which posits that older adults are at a developmental stage in which they perceive that their remaining time in life is limited. Due to this perception of time, older adults shift their goals from those that are future-oriented and knowledge-related to those that are present-oriented and emotion-related, which are focused on maximizing emotional satisfaction. As a result, older adults are more motivated to regulate their emotions in order to achieve emotional satisfaction. Thus in the current study, although for younger adults (18 to 34) membership in the ambivalent type was associated with higher levels of SPD than membership in the family-centered type, for older adults (55+) belonging to the ambivalent type was, in fact, associated with lower levels of SPD than belonging to the family-centered type.

The current analysis makes several contributions to the literature on social relationships and mental health. Although many studies have examined the relationship between various features of social relationships and psychological distress, few studies have examined this association among racial and ethnic minority populations. Focused research on minority groups yields a more nuanced understanding of social relationships and how they influence mental health among these populations. Additionally, while previous studies of network types tended to focus solely on positive features of relationships, this study examined both positive and negative relationship qualities, providing information about how combinations of positive and negative relationship characteristics influence mental health.

Previous studies have indicated that belonging to a socially integrated network type with diverse role composition is a necessary condition for more favorable mental health status.

However, the current findings demonstrate that this is not a sufficient condition and a combination of high social integration, diverse role composition, and low negative interactions yields the most positive mental health outcomes. Another contribution that this study makes is the inclusion of multiple indicators of the church network. Most studies have included only a single indicator of integration in church networks (i.e., religious service attendance). Given that church members are an important source of support for African Americans, this study is able to provide a more complete picture of African Americans' social networks by including multiple indicators of the church network that assess both positive and negative relationship qualities.

Several limitations of the study should be noted. First, this analysis was based on a non-institutionalized, community dwelling sample. African Americans who were institutionalized or physically compromised and unable to participate in the interview were excluded. As such, the current findings cannot be generalized to these populations. Second, the data used in this study is cross-sectional, thus causal interpretations cannot be drawn from the current findings. Future studies should examine the relationship between network types and psychological distress using prospective data in order to determine whether belonging to a particular network type is predictive of psychological distress. Finally, all measures in this study were self-reported, which were subjected to social desirability and recall biases.

Despite these limitations, this study contributes to the literature by demonstrating that negative interactions, as well as positive social relations are important in delineating network types. Further, the current analysis extends previous research by situating negative interactions within the context of social support. Prior empirical works have often examined negative interactions and support separately, and few studies have examined how these two aspects of social relationships interact with each other, especially to influence mental health. This analysis

examined how varying levels of negative interactions coupled with varying levels of support are associated with SPD; differing combinations of levels of negative interactions and support yielded different relationships with SPD. This type of analysis permits for the investigation of how social support interacts with negative social exchanges in relation to mental health. Moreover, this study demonstrated that lower levels of negative interactions coupled with high social integration produced optimal conditions for mental health. Future studies should examine what relational factors could attenuate the harmful effects of negative interactions. Further, attention should also explore what kinds of relational contexts could lead to lower levels of negative interactions. This is important, as subjective closeness did not appear to preclude negative interactions in this study.

Table 3.1

Sociodemographic Characteristics of the Sample and Distribution of Study Variables

	% (Mean)	N (S.D.)	Range
Gender			
Male	44.03	1,271	
Female	55.97	2,299	
Age			
18-34	35.73	1,232	
35-54	42.65	1,501	
55+	21.62	837	
Education	12.30	2.58	0-17
Income	32,037.15	32,687.94	0-520,000
Marital Status			
Married/Partnered	41.65	1220	
Not Married/Partnered	58.35	2,333	
Lives Alone			
Yes	20.60	1,113	
No	79.40	2,451	
Frequency of Contact with Family Members			
Low	49.71	1,674	
High	50.29	1,864	
Subjective Closeness to Family Members			
Low	27.93	978	
High	72.07	2,559	
Family Loves			
Low	36.01	1,252	
High	63.99	2,280	
Family Listens			
Low	41.74	1,440	
High	58.26	2,096	
Family Interested			
Low	40.58	1,420	
High	59.42	2,117	
Family Demands			
Low	35.38	1,304	
High	64.62	2,234	
Family Criticizes			
Low	42.52	1,530	
High	57.48	1,994	
Family Takes Advantage			
Low	60.31	2,149	
High	39.69	1,388	
Frequency of Contact with Church Members			
Low	56.56	1,640	
High	43.44	1,350	
Subjective Closeness to Church Members			

Low	64.55	1,892	
High	35.45	1,090	
Church Members Love			
Low	41.41	1,227	
High	58.59	1,746	
Church Members Listen			
Low	58.93	1,743	
High	41.07	1,237	
Church Members Interested			
Low	52.31	1,566	
High	47.69	1,413	
Church Members Demand			
Low	49.97	1,551	
High	50.03	1,429	
Church Members Criticize			
Low	66.23	2,020	
High	33.77	942	
Church Members Take Advantage			
Low	79.11	2,378	
High	20.89	601	
Psychological Distress	3.82	4.19	0-24

Note: Percentages and N are presented for categorical variables and Means and Standard Deviations are presented for continuous variables. Percentages are weighted and frequencies are un-weighted.

Table 3.2

Bivariate Relationships Between Sociodemographic and SPD Variables and Social Network Types among African Americans

	Ambivalent (<i>N</i> = 1082)	Family- Centered (<i>N</i> = 671)	Optimal (<i>N</i> = 791)	Strained (<i>N</i> = 957)	Test
Gender					1.13
Male	41.46	46.18	43.36	46.09	
Female	58.54	53.82	56.64	53.91	
Age					10.04***
18-34	39.93	35.11	28.69	37.37	
35-54	40.99	44.95	38.93	46.09	
55+	19.08	19.94	32.38	16.55	
Marital Status					0.82
Married/Partnered	40.85	44.81	42.55	39.69	
Not Married/Partnered	59.15	55.19	57.45	60.31	
Education	12.55	12.65	11.84	12.19	17.47***
Income	34,792.17	34,528.96	28,916.36	29,791.38	7.25***
Lives Alone					2.50
Yes	19.40	20.27	23.72	19.56	
No	80.60	79.73	76.28	80.44	
Psychological Distress	4.05	3.17	2.72	5.01	50.97***

Note: Percentages are shown for categorical variables and means are shown for continuous variables. Percentages are weighted.

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 3.3

Comparison of SPD Means Based on Social Network Type and Age

Social Network Types	Ages 18-34	Ages 35-54	Ages 55+
Ambivalent	4.98 (0.70)	3.70 (1.08)	3.24 (0.64)
Family-Centered	1.86 (0.60) ^a	2.66 (1.42)	3.49 (1.51) ^b
Optimal	3.03 (0.84) ^a	1.93 (1.02)	0.33 (0.67) ^b
Strained	2.73 (0.86)	3.24 (0.64)	2.81 (1.39)

^a Mean is significantly different from the ambivalent network type within the 18-34 age group at $p < .05$. ^b Mean is significantly different from the ambivalent network type within the 55+ age group at $p < .05$.

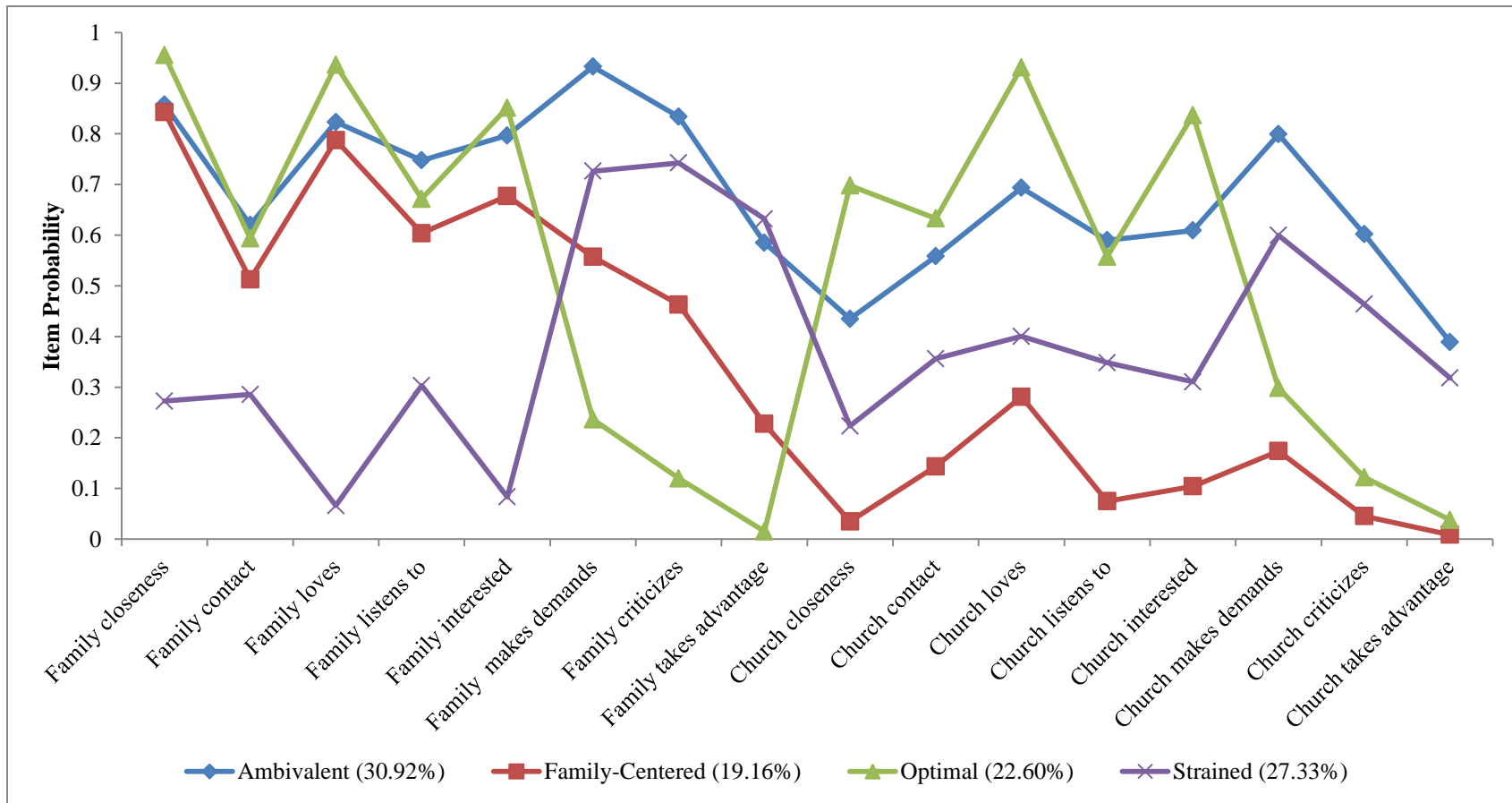


Figure 3.1. Conditional item probability profile. Social network type size information presented in the legend.

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CHAPTER FOUR

Social Network Typologies and Suicidality among African Americans

Suicide claimed the lives of 39,518 Americans in 2011 (most recent data available) (CDC, 2014). As the tenth leading of cause of death in the U.S., suicide accounts for 12% of all deaths (CDC, 2014; Murphy, Xu, & Kochanek, 2013). Among young adults (i.e., 18 to 34 year olds), it is the second leading cause of death (CDC, 2014; Murphy et al., 2013). Attempted and completed suicides total \$41.2 billion in medical and work loss costs annually (CDC, 2014). Prevalence rates for completed suicides are substantially higher among men, with men being four times more likely to die from suicide than women (CDC, 2014; Murphy et al., 2013). However, women are more likely than men to have suicidal ideation and attempts (CDC, 2014).

Annually, 3.7% of American adults experience suicidal ideation, 1% make plans for suicide, and .5% attempt suicide (CDC, 2012). Individuals in their late teens to late 20s are at greatest risk for initial suicidal ideation, plans, and attempts (CDC, 2014; Kessler, Borges, & Walters, 1999). In contrast, when examining completed suicide rates by gender, within gender comparisons for women indicated that those between the ages of 45 and 54 are at greatest risk of completion. On the other hand, within gender comparisons for men indicated that men aged 75 and older are at greatest risk of completion (CDC, 2012). Individuals who have both suicidal ideation and plans have a higher risk of attempting suicide than individuals with only suicidal ideation (Kessler et al., 1999). Risk factors associated with an increased probability for attempting suicide are being previously married, younger, and having lower levels of education

(Kessler et al., 1999). Having a psychiatric disorder, such as a mood, anxiety, or substance disorder, increases the odds of suicidal ideation and attempt (CDC, 2014; Kessler et al., 1999). In particular, individuals with three or more psychiatric disorders have a substantially elevated risk for ideation and attempt, demonstrating the deleterious impact of psychiatric comorbidity for suicidality.

Evidence for racial differences in suicidal behaviors has indicated that overall rates of suicide attempts and completion are lower among African Americans than Whites (Kessler et al., 1999; Murphy et al., 2013). Whites are two and a half times more likely to die by suicide than African Americans (Murphy et al., 2013). Although this race difference is not well understood, some speculate that lower rates of suicide may be due to higher levels of religiosity and beliefs that proscribe suicide among African Americans, effective coping strategies, and/or features of social connections such as familial relationships. Others have suggested that race differences in suicidal behavior is a consequence of underreporting due to methodological issues, misclassification of suicide deaths as accidental or undetermined, and state and national variations in suicide reporting protocols (Joe, 2006; Mohler & Earls, 2001). Further, despite existing empirical knowledge about suicide risk factors, little is known about factors that protect against suicide. More studies examining the types and features of protective factors may be helpful in explaining race differences in suicide rates. Despite these comparatively lower overall prevalence rates, some researchers have argued that suicide rates have been increasing among African American adolescents since 1980 (Satcher, 1998; Willis, Coombs, Cockerham, & Frison, 2002). A recent study of suicide trends among children aged five to 11 found that the suicide rate among African American children had significantly increased between 1993 to 1997 and 2008 to 2012 (Bridge, Asti, Horowitz, & et al., 2015). In fact, this study found that in 2012

suicide rates for African American boys (3.47 per 1 million) were higher than those of white boys (1.31 per 1 million). This is the first study to document higher suicide rates among African Americans than whites.

Prior research has demonstrated that social support and strong social ties protect against suicide. For example, Duberstein and colleagues' (2004) case-control study interviewed family members of individuals who completed suicide and found that compared to controls, cases had lower levels of social interaction and social activities. Despite the fact that prior studies have indicated the importance of social connections as protective against suicide, many of these studies have methodological limitations. For instance, Duberstein et al.'s (2004) study was retrospective, as are all case-control studies, and relied on reports from family members of the deceased. Moreover, a number of studies used institutionalized samples (e.g., Kotler et al., 1993; Vanderwerker et al., 2007). This is methodologically problematic, as studies such as those are susceptible to issues of recall accuracy and generalizability of findings to other groups (e.g., non-institutionalized persons).

Nonetheless, these and other findings indicate that suicide is both a significant and preventable public health problem. Further, although extant research has identified a range of risk factors associated with suicidal behaviors among the general population, there is scant empirical work on risk factors among racially and ethnically diverse populations. There is even less empirical work on factors that protect against suicidal behaviors, especially among racial and ethnic minorities.

The purpose of this study is to examine the relation between social ties with family and friends and suicidal behaviors among African American adults. In particular, this investigation examines whether social network types are associated with suicidal behaviors. The literature

review begins with a brief overview of research on suicidality among African Americans and concludes with a discussion of social support as a protective factor against suicidal behavior. The convoy model of social relations guides this discussion of the connection between social support and suicide.

Literature Review

Suicide among African Americans

The lifetime prevalence rate of suicide attempts is 4% for Black Americans and 12% for suicidal ideation (Joe, Baser, Breeden, Neighbors, & Jackson, 2006). Of individuals who reported suicidal ideation, 35% progress to planning their suicide attempts, which significantly increases the odds of an attempt. The majority of attempters attempt only once (64%). Prior research has identified several sociodemographic factors associated with suicide among African Americans. For instance, similar to evidence in the general population, African American women are more likely to attempt suicide than African American men (Ialongo et al., 2002; Joe et al., 2006; Joe & Kaplan, 2001; Lincoln, Taylor, Chatters, & Joe, 2012). Only 3% of African American men report having ever attempted suicide in their lifetime, while 5% of African American women report having ever attempted suicide in their lifetime. In particular, those born in recent cohorts and women are most likely to attempt suicide. However, African American men are six times more likely to die from their suicide attempts than their female counterparts (Joe & Kaplan, 2001; Willis, Coombs, Drentea, & Cockerham, 2003). The gender difference among African Americans is indeed greater than the gender difference among whites; white men are four times more likely to complete suicide than white women (Joe & Kaplan, 2001). In contrast to the general U.S. population, male adolescents and young adults are at greatest risk of completing suicide among African Americans (Joe & Kaplan, 2001).

Income and education are also associated with suicide risk. Individuals with low income and educational attainment levels are more likely to experience suicidal ideation, attempts, and completion (Chatters, Taylor, Lincoln, Nguyen, & Joe, 2011; Ialongo et al., 2002; Joe et al., 2006; Willis et al., 2003). Studies have also consistently demonstrated that younger African Americans have higher odds of ideation, attempts, and completion relative to their older counterparts (Chatters et al., 2011; Joe et al., 2006; Joe & Kaplan, 2001; Kaslow et al., 2005; Willis et al., 2003). Additionally, some studies have indicated that being previously married elevates the risk of suicide ideation and attempts (Joe et al., 2006; Lincoln et al., 2012), while others (Willis et al., (2003) have indicated that African Americans who have never been married are more likely to complete suicide than those who are either currently or previously married. Further, research has indicated that region of residence in the U.S. is predictive of suicide, but these findings are inconsistent. Several studies have indicated that residing in the South is a protective factor against suicide (Joe et al., 2006; Joe & Kaplan, 2001; Wingate et al., 2005). Yet, Willis et al.'s (2003) analysis of a national survey sample indicated that residing in the West was protective against suicide. Lastly, evidence has demonstrated that having a psychiatric disorder or experiencing psychological distress significantly elevates African Americans' risk for suicide (Chatters et al., 2011; Kaslow et al., 2000; Lincoln et al., 2012).

Social Relationships and Suicide

The convoy model of social relations conceptualizes an individual's social network over the life course as a convoy that surrounds the individual (Kahn & Antonucci, 1980). Convoys are important because they provide support, including emotional support, advice, friendship, and caregiving (Antonucci & Akiyama, 1995; Kahn & Antonucci, 1980). Family and relatives are particularly important sources of informal social support for African Americans that are integral

for effectively coping with life stressors. Consequently, convoys/social networks have significant implications for mental health and subjective well-being. In fact, social support and positive social relationships are particularly important as protective factors against suicidal behaviors. For example, Compton, Thompson, and Kaslow (2005) examined how family relationships influence suicidality among low-income African Americans. In that study, they found that respondents who reported lower levels of family cohesion were more likely to have made suicide attempts. Further, low levels of social integration and social support were associated with an increased risk for suicide attempts. Similarly, Kaslow et al.'s (2000) study of low income African American women reported that women who indicated low levels of social support were at greater risk for having attempted suicide than women who reported higher levels of social support. In a similar vein, Harris and Molock's (2000) study of African American college students identified higher levels of family cohesion and family support as protective factors against suicidal ideation. Additionally, Lincoln et al. (2012) linked emotional support from family to lower rates of suicide attempts and ideation among nationally representative samples of African Americans and Black Caribbeans. Further, studies of social support from nonkin have indicated that it is associated with a decreased likelihood of attempting or completing suicide (Cook, Pearson, Thompson, Black, & Rabins, 2002; Joe & Kaplan, 2001; Kaslow et al., 2005; Kaslow et al., 2000; Vanderwerker et al., 2007; Wingate et al., 2005).

Social Network Typologies

This body of research provides an important foundation for understanding how social relationships and support from different groups (family, non-kin) are associated with suicide behavior. However, an emerging area of research examines how composites of various network characteristics can be used to construct distinctive profiles of social networks that are referred to

as *social network typologies*. Research has indicated that social network typologies are associated with mental and physical health and subjective well-being. Given the limited research in this area, the studies discussed here are limited to older adults and encompass samples from a number of different countries.

Previous research on network types has generally identified four broad network types: diverse, friend-focused, family-focused, and restricted (Fiori, Antonucci, & Cortina, 2006; Litwin, 2001; Litwin & Shiovitz-Ezra, 2011a; Wenger, 1991). The diverse type is characterized by high levels of social integration and diverse network composition. The friend-focused type is characterized by high levels of social integration involving predominately the friendship network, and the family-focused type is characterized by high levels of social integration involving the family network. Distinct from the other network forms, the restricted type is marked by high levels of social isolation. In general, the diverse type, followed by the friend-focused type, is considered the most well endowed with respect to social resources. Conversely, the family-focused and, particularly, the restricted types are considered the most deficient in terms of social resources.

Of the four network types, older adults belonging to the diverse type tended to have the best health and well-being outcomes. For example, compared to members of the other three network types, Litwin (1998) found that Israeli respondents in the diverse type were less likely to have functional impairments in daily living activities (e.g., dressing, personal grooming) and instrumental tasks (e.g., cooking, cleaning, running errands) and had the highest self-rated health. Additionally, other studies have indicated that persons with the diverse type had the highest morale level and lowest mortality rate (Litwin, 2001; Litwin & Shiovitz-Ezra, 2006). Also, as

compared to those in the restricted type, persons with the diverse type were less likely to feel lonely or anxious (Litwin & Shiovitz-Ezra, 2011b).

In general, the friend-focused network type is also associated with positive health and subjective well-being. Individuals in the friend-focused type have lower rates of functional impairments in daily living activities and higher self-rated health compared to those in the family-focused and restricted types (Litwin, 1998). Relative to those in the restricted type, members of the friend-focused type are less likely to feel anxious and more likely to feel happy (Litwin & Shiovitz-Ezra, 2011b). Respondents in the friend-focused type also have higher levels of morale and lower mortality rates than their counterparts in the family-focused and restricted types (Litwin, 2001; Litwin & Shiovitz-Ezra, 2006). In contrast, health and subjective well-being outcomes for individuals belonging to the family-focused type are equivocal. Some studies have indicated more favorable health and well-being outcomes for members of the family-focused type relative to members of the restricted and friend-focused types (Fiori, Smith, & Antonucci, 2007; Litwin & Shiovitz-Ezra, 2011b). On the other hand, other studies have indicated more negative health and subjective well-being outcomes for members of the family-focused type relative to those of the diverse and friend-focused types (Litwin, 1998, 2003; Litwin & Shiovitz-Ezra, 2006). Finally, members of the restricted type have the least favorable health and well-being outcomes. Persons with this network type are more likely to have moderate to high levels of disability, experience the greatest level of functional impairments in daily living activities, and have the second highest level of impairment in instrumental tasks (Litwin, 1998, 2003). These individuals also report the lowest self-rated health and morale among the four network types (Litwin, 1998).

Negative Interactions and Mental Health

The convoy model assumes that both objective and subjective characteristics of the social network are critical indicators of the convoy and their functioning (Antonucci & Akiyama, 1995; Kahn & Antonucci, 1980). Indeed, Kahn and Antonucci (1980) suggested that an individual's perception of the quality of their relationships is more important than structural characteristics of the convoy, such as network size and composition. Qualitative aspects of relationships include relationship quality and satisfaction, satisfaction with social support provided by network members, and negative interactions with network members. As such, the convoy model is well suited for examining how negative interactions with network members affect mental health and subjective well-being. Negative interactions, which include conflicts, demands, and criticisms, are important, but often overlooked, features of social relations because they adversely affect mental health and well-being (Gray & Keith, 2003; Lincoln & Chae, 2012; Lincoln, Chatters, & Taylor, 2003; Lincoln et al., 2012; Rook, 1984, 2014). In fact, the harmful effects of negative interactions on mental health and subjective well-being are more potent than the beneficial effects of social support on mental health and subjective well-being (Gray & Keith, 2003; Lincoln et al., 2003; Lincoln, Chatters, & Taylor, 2005; Okun & Keith, 1998).

In explanation of the disproportionate effects of negative interactions, the frequency-salience theory hypothesizes that in general, social exchanges with network members, especially with subjectively close members, are expected to be positive (Rook, 1990). In fact, interactions with network members are oftentimes positive. Because social exchanges are in general expected to be positive, we often take them for granted. Given this, when negative social exchanges occur, they are experienced as upsetting and stressful events due to their unexpected nature. For this reason, negative interactions adversely impact mental health and subjective well-being. In contrast, social support, which is often taken for granted, has a weaker positive

effect on mental health and subjective well-being. The adaptive significance theory can also be used to explain why negative interactions' deleterious effects on mental health and subjective well-being are more potent than social support's salutary effects. The adaptive significance theory proposes that humans are more vigilant of negative events than positive events because the threatening consequences of negative events are perceived as more salient than the benefits and pleasures of positive events (Rook, 1990). As such, individuals are more sensitive to negative social exchanges than to positive social exchanges. Accordingly, due to this priming, the relationship between negative interactions and mental health and subjective well-being is stronger than the relationship between social support and mental health and subjective well-being.

Among African Americans, negative interaction with network members is a risk factor for suicidal ideations and attempts (Kaslow et al., 2000; Lincoln et al., 2012). Moreover, negative interactions are associated with greater odds of meeting criteria for major depressive disorder (Lincoln & Chae, 2012) and is also predictive of more severe depressive symptoms (Lincoln, Chatters, Taylor, & Jackson, 2007). High levels of negative interactions are associated with a decreased sense of well-being (Todd & Worell, 2000), while low levels of negative interactions are associated with increased resilience (Todd & Worell, 2000). Negative interactions' harmful effects on mental health and subjective well-being have also been documented in the general population among older adults. For example, Antonucci et al.'s (2001) study of older adults in the Detroit metropolitan area found that negative interactions with spouses were predictive of more severe depressive symptoms and lower levels of life satisfaction. In addition to its deleterious effects on mental health and well-being, the impact of negative interactions are also important because they persist over time (Bolger, DeLongis,

Kessler, & Schilling, 1989), erode positive self-perceptions, hinder effective coping behaviors (Lincoln, 2000) and psychological functioning (Rook, 1984), and are associated with negative affect (Newsom, Nishishiba, Morgan, & Rook, 2003). The collective findings for social networks, social support, and negative interactions argue for a research approach capable of effectively capturing their distinctive impacts on mental health and emotional well-being. Moreover, most studies that have examined negative interactions do not assess negative interactions' effect on mental health within the context of support. That is, although we know that negative interactions have a negative effect on mental health, we do not know if this effect is for high levels of negative interactions coupled with high or low levels of support. Further, few studies have examined whether the combination of high levels of negative interactions and support differ from the combination of high levels of negative interactions coupled with low levels of support in their impact on mental health.

Focus of the Paper

The purpose of this study is to identify social network typologies among African American adults using indicators of family and friendship networks. No previous studies, to my knowledge, have specifically examined network types among African Americans. As such, this analysis is exploratory; there are no specific predictions regarding the network types that will be identified. A second aim of this study is to examine the association between the identified network types and suicidal behavior. Prior research findings have indicated that network types that are characterized by high levels social integration and positive relationship qualities are predictive of more positive mental health and subjective well-being outcomes. Therefore, I hypothesize that membership in a network type characterized by high levels of social integration will be negatively associated with suicidal ideation, plan, and attempt. Additionally, I

hypothesize that membership in a network type characterized by high levels of negative interactions, regardless of the level of social integration, will be positively associated with suicidal ideation, plan, and attempt.

Methods

Sample

The African American sample for the current analyses was drawn from the National Survey of American Life: Coping with Stress in the 21st Century (NSAL), which was collected by the Program for Research on Black Americans at the University of Michigan's Institute for Social Research. The African American sample is the core sample of the NSAL. The core sample consists of 64 primary sampling units (PSUs), of which 56 of these primary areas overlap substantially with existing Survey Research Center National Sample primary areas. The remaining eight primary areas were chosen from the South in order for the sample to represent African Americans in the proportion in which they are distributed nationally. The African American sample is a nationally representative sample of households located in the 48 coterminous states with at least one Black adult 18 years or older who did not identify ancestral ties in the Caribbean. The data collection was conducted from February 2001 to June 2003. A total of 6,082 interviews were conducted with persons aged 18 or older, including 3,570 African Americans, 891 non-Hispanic whites, and 1,621 Blacks of Caribbean descent. This study was based exclusively on the African American sample. Fourteen percent of the interviews were completed over the phone and 86% were administered face-to-face in respondents' homes. Respondents were compensated for their time. The overall response rate was 72.3%. Final response rates for the NSAL two-phase sample designs were computed using the American Association of Public Opinion Research (AAPOR) guidelines (for Response Rate 3 samples)

(AAPOR, 2006) (see Jackson, Neighbors, Nesse, Trierweiler, & Torres, 2004 for a more detailed discussion of the NSAL sample). The NSAL data collection was approved by the University of Michigan Institutional Review Board.

Measures

Social network typology indicators. Ten latent class (i.e., typology) indicators were used in the identification of latent classes. Indicators of both the family and friendship networks were included. *Frequency of contact with family* was measured by the question: “How often do you see, write or talk on the telephone with family or relatives who do not live with you? Would you say nearly everyday (7), at least once a week (6), a few times a month (5), at least once a month (4), a few times a year (3), hardly ever (2), or never (1).” *Subjective closeness to family* was assessed by the question: “How close do you feel towards your family members? Would you say very close (4), fairly close (3), not too close (2), or not close at all (1).” *Emotional support from family* was measured by: “Other than your spouse/partner, how often do your family members: (a) make you feel loved and cared for, (b) listen to you talk about your private problems and concerns, (c) express interest and concern in your well-being?” The response categories for these questions were *very often* (4), *fairly often* (3), *not too often* (2), and *never* (1). These three emotional support questions represented three separate class indicators. *Negative interaction with family members* was assessed by the following three questions: “Other than your spouse/partner how often do your family members: (a) make too many demands on you, (b) criticize you and the things you do, and (c) try to take advantage of you?” The response categories for these questions were *very often* (4), *fairly often* (3), *not too often* (2), and *never* (1). Each one of these three negative interaction questions served as separate class indicators. *Frequency of contact with friends* and *subjective closeness to friends* were measured by

questions similar to the family network indicators. In order to facilitate the analysis and interpretation of the results, all indicators were dichotomized using median split such that a value of 1 indicated low levels of the specific class indicator and a value of 2 indicated high levels of the specific class indicator.

Suicidal behaviors. Suicidality was assessed in its own section of the World Mental Health Composite International Diagnostic Interview (WMH-CIDI) by a series of questions about lifetime suicidal behaviors (Joe et al., 2006; Kessler, Berglund, Borges, Nock, & Wang, 2005). Respondents who answered affirmatively to the question, “Have you ever seriously thought about committing suicide?,” were administered the suicidality section of the WMH-CIDI and were classified as having engaged in suicidal ideation. Following from this, only those who have engaged in suicidal ideation were asked the question “Have you ever made a plan for committing suicide?” These respondents were classified as having made a plan for suicide. Those who have engaged in suicidal ideation were further asked the question “Have you ever attempted suicide?” These respondents were classified as having attempted suicide.

Demographic control variables. Demographic differences (i.e., gender, age, marital status, education, family income) were statistically controlled for in analyses of the association between network type and suicidal behaviors. Marital status was coded as a binary variable, with a value of 0 representing respondents who were neither married nor partnered and a value of 1 representing married or partnered respondents. Missing data for family income and education were imputed using an iterative regression-based multiple imputation approach incorporating information about age, sex, region, race, employment status, marital status, home ownership, and nativity of household residents. Income was coded in dollars, and the log of income was used in order to minimize variance and account for its skewed distribution.

Analysis Strategy

Descriptive analyses were conducted using Stata 13.1, and latent class analysis (LCA) was conducted with Mplus (version 7.2). Latent class analysis was used to identify social network typologies. Latent class analysis uses a person-centered approach to classify respondents into subgroups (i.e., latent classes) based on their patterns of response across a set of dichotomous latent class indicators. The latent classes identified from this procedure represented social network types. A 3-step LCA approach was used in order to avoid the inclusion of the suicide and control variables in the class extraction process (Asparouhov & Muthen, 2013). In this approach, the latent classes were first extracted; then the distal outcome model, in which the association between network types and suicide (i.e., the distal outcome) is tested, was estimated secondarily. All analyses used analytic weights. Statistical analyses accounted for the complex multistage clustered design of the NSAL sample, unequal probabilities of selection, nonresponse, and poststratification to calculate weighted, nationally representative population estimates and standard errors.

Results

Social Network Types

Table 1 presents the demographic description of the sample and study variables. The sample was 56% male, and the mean age was 43 years. A little under half (42%) of the respondents were married or partnered. Respondents on average had some college education, and the mean family income was \$32,037. With respect to the family network, respondents reported relatively high levels of subjective closeness, frequency of contact, and emotional support and low levels of negative interaction with family. In contrast, respondents reported moderate to low levels of subjective closeness and frequency of contact with friends. As

expected, Table 2 shows that the majority of the latent class indicators were significantly intercorrelated.

A four class/network type model was identified as the best fitting model based on model fit statistics (i.e., AIC, BIC, adjusted BIC, Lo-Mendell-Rubin adjusted likelihood ratio test). The four network types identified were: *strained*, *isolated*, *ambivalent*, and *optimal*. The item response probabilities for each of the four network types are presented in Figure 1. The *ambivalent* network type was the most prevalent (34%), with respondents in this type reporting high levels of subjective closeness, contact, emotional support, and negative interactions with family members. With regards to the friendship network, members of the ambivalent type indicated moderate levels of subjective closeness and frequency of contact with friends. The *optimal* type (28% of the sample) was characterized by high levels of subjective closeness, contact, and emotional support from family and low levels of negative interactions with family members. Moreover, respondents in the optimal type reported high levels of subjective closeness and moderate frequency of contact with friends. The *strained* network type constituted 22% of the sample. Respondents in this network type reported low levels of subjective closeness and contact with family and friends, low levels of emotional support from family, and high levels of negative interactions with family members. The *isolated* type, which was the least prevalent type (16%), was similar to the strained type with the exception that respondents in this network type reported moderate levels of subjective closeness to family and low levels of negative interactions with family members.

Table 3 presents the bivariate associations between demographic and suicide variables and network types. Respondents in the four network types varied at a statistically significant level on all variables except for marital status. Women predominated the ambivalent (59.87%),

and optimal (58.73%) types, whereas men made up more than half of the isolated type (57.77%). The isolated ($M = 47$, $SD = 16.34$) and optimal ($M = 46$, $SD = 17.89$) types had the oldest respondents. Respondents in the isolated type also had the lowest education level ($M = 11.9$, $SD = 2.79$), while individuals in the ambivalent type had the highest education ($M = 12.7$, $SD = 2.39$) and income level ($M = 34,883$, $SD = .97$). Furthermore, respondents in the strained network type had the highest rates of suicidal ideation (19.76%), plans (6.40%), and attempts (6.12%), while respondents in the optimal type had the lowest rates of all three suicidal behaviors (ideation – 6.47%; plans – 1.92%; attempts – 1.38%).

Distal Outcome Analysis

Distal outcome analyses were conducted individually for each of the suicidal behavior variables. In these analyses, the suicidal behavior variables were treated as a binary distal outcome. In order to test whether the probability of having a lifetime suicidal ideation, plan, or attempt differed across network types, a series of Wald tests were conducted on all between-group comparisons of the proportions of suicidal ideation, plan, and attempt. These analyses indicated that network type was not associated with suicidal ideation but was associated with suicidal plans and attempts (Table 4). Respondents in the strained network type had a higher probability of having suicidal plans than their counterparts in the isolated type. Also, respondent belonging to the ambivalent or optimal types had a higher likelihood of having suicidal plans than respondents in the isolated type. Surprisingly, individuals belonging to the optimal type were more likely to have attempted suicide than those belonging to either the strained, isolated, or ambivalent network types.

Discussion

The goal of the present study was to test whether belonging to a particular network type is associated with several suicidal behaviors. The analysis revealed four distinct network types: optimal, ambivalent, strained, and isolated. In general, these network types varied in their levels of social integration and negative interactions with family. The optimal and ambivalent types were characterized by high levels of social integration, while the strained and isolated types were characterized by low levels of social integration. With regards to the level of negative family interactions, the strained and ambivalent types had high levels of negative interactions, and the optimal and isolated types were low in negative interactions. Overall, these derived network types reflect two of the four commonly identified types in the network typology literature (i.e., diverse, restricted, family-focused, friend-focused). The strained and isolated types in this study are similar to the previously established restricted type, and the optimal and ambivalent types are similar to the diverse type.

Findings from the distal outcome analysis partially confirmed the hypotheses. The results revealed that network types were associated with lifetime suicide plans and attempts. Network types that were characterized by high levels of negative interactions with family members were associated with higher rates of suicide planning than network types that were characterized by lower levels of negative interactions with family. This effect held despite the level of social integration. As hypothesized, African Americans in the strained and ambivalent types were more likely to have planned suicide than their counterparts in the isolated type. This is consistent with research indicating that negative interactions with network members adversely impact mental health (Antonucci et al., 2001; Okun & Keith, 1998; Todd & Worell, 2000). Previous studies have found that negative interactions with family members is a risk factor for suicidality (Kaslow et al., 2000; Lincoln et al., 2012) and major depressive disorder (Lincoln &

Chae, 2012) and is associated with higher levels of negative affect (Newsom et al., 2003) and depressive symptoms (Antonucci et al., 2001).

However, this finding also partially contradicts previous research on the association between network types and mental health and subjective well-being. Prior studies have consistently found that members of the restricted network type, which is characterized by high levels of social isolation, tend to have the worst outcomes in terms of mental health and subjective well-being. However, in the current investigation, respondents in the ambivalent type, which was marked by high levels of social integration into the family and friendship networks and high levels of negative interactions with family members, were more likely to have planned suicide than those in the isolated type. This finding seems to be driven by the negative interaction component of the network type and demonstrates the potency of the pernicious effects of negative interactions in relation to social support. Furthermore, this finding confirms the frequency-salience and adaptive significance theories. Additionally, these findings are consistent with the convoy model of social relations, which posited that qualitative evaluations of social relationships are stronger predictors of mental health and subjective well-being than structural characteristics of the social network (Kahn & Antonucci, 1980).

An unexpected finding in the current analysis indicated that African Americans belonging to the optimal network type were more likely to have planned suicide than their counterparts in the isolated type. Further, African Americans in the optimal type were more likely to have attempted suicide than their counterparts in the strained, ambivalent, and isolated types. Despite opposing findings in the extant literature on social support and suicide, these findings are consistent with the resource mobilization or stressor response model of social support and stress. The resource mobilization/stressor response model (Cobb, 1976) suggests

that adversity motivates individuals to seek out support and assistance from their social networks in order to cope with the presenting problem. In support of this model, a study examining the effects of social support from congregants on suicidal behaviors among African Americans found that frequency of contact with congregants was positively associated with suicidal attempts (Chatters et al., 2011). This may suggest that respondents with a history of suicidal attempts are more likely to reach out to fellow congregants as a means to protect themselves from future suicidal behavior. Additionally, a longitudinal Dutch study found that among respondents who attended religious services, as their depressive symptoms worsened, they were more likely to continue to attend religious services and, in some cases, increase their frequency of service attendance (Balbuena, Baetz, & Bowen, 2014). The continued and increased frequency of religious service attendance among Dutch respondents with worsening depression demonstrates an attempt to mobilize resources to cope with hardship. With regards to the present study, respondents who have previously planned or attempted suicide may be more likely to integrate themselves into positive support networks as a means to prevent future suicidal behaviors and/or to marshal support resources in coping with ongoing stressors. Alternatively, it may be that the social networks of respondents who have a history of suicide planning or attempts are more likely to mobilize themselves around these individuals as a means to support and prevent the respondents from engaging in self-harming behaviors. The resource mobilization model may alternatively explain why respondents in the ambivalent type reported higher rates of suicide planning than respondents in the isolated type.

These findings should be considered in light of several limitations. First, data from the NSAL is cross-sectional. Thus, it is not possible to determine causality between suicidal behavior and network type. Prospective studies would permit the examination of the temporal

ordering of social network type and suicidal behavior. Second, the analysis of this study is limited to a relatively small sample of respondents who reported suicidal behavior. Nevertheless, this is consistent with the low prevalence rates for suicidal behavior among the general population. Furthermore, the prevalence rates for suicidal behavior in this study are concordant with similar large scale, community-based psychiatric epidemiological studies (Kessler et al., 2005). Third, the network typology indicators used in this study may not fully represent the breadth of African Americans' friendship networks. That is, only two indicators of the friendship network were included, while there were eight indicators related to the family network. These two friendship indicators are not likely to capture the full spectrum of African American's friendship networks. Future studies should include more friendship indicators, particularly those related to support and negative interactions, in order to gain a more nuanced understanding of African Americans' friendship networks.

Despite these limitations, this study has several strengths. This investigation contributes to the existing empirical knowledge on social support and suicidality by examining how multiple features of the social network is related to suicidality. Traditionally research in this area has examined a number of network factors separately in relation to suicidality. By examining multiple aspects of the social network simultaneously in relation to suicidality, this study sheds light on how these various aspects interact with each other in relation to influence suicidality. In particular, the current analysis provides information on how varying levels of negative interactions coupled with varying levels of support is associated with suicidal behaviors.

Although previous research has consistently identified that high level of negative interactions is a risk factor for suicide, these studies did not differentiate between respondents who reported high levels of negative interactions and support and respondents who reported high levels of negative

interactions and low levels of support. This study extends the literature by examining the relationship between negative interactions and suicide within the context of differing levels of social support. Moreover, research on network typologies has examined network types in relation to a range of mental and physical health outcomes, such as depressive symptoms (Fiori et al., 2006), mortality (Litwin & Shiovitz-Ezra, 2006), and disability (Litwin, 2003), but few have specifically investigated suicidal behavior, as this analysis did. Additionally, the current analysis examined three specific suicidal behaviors: ideation, plans, and attempts. Further, no studies on network types and mental health have specifically examined this topic among African Americans using a nationally representative sample.

Another strength of this study is the use of a wide range of family network indicators, including emotional support and negative interactions. With the exception of studies such as Fiori et al.'s (2007), most studies of network types do not examine functional characteristics of the network (i.e., support) or negative aspects of social network relationships. This study also included indicators of the friendship network and demonstrated the important role of both family and friends in African Americans' mental health. Further, the inclusion of indicators of both the family and friendship network, emotional support from family members, and negative family interactions provides a more comprehensive picture of African Americans' social networks and greater insight into the qualitative aspects of relationships with network members.

In sum, this study underscores the important role of negative family interactions in mental health and confirms prior empirical work on the deleterious effects of negative interactions on mental health and subjective well-being. Future studies should examine methods to decrease negative interactions with network members. Reduction in negative interactions could lead to improved mental health status and subjective well-being. Social support and social

integration were also important factors associated with suicidal behavior. The findings suggest that African Americans use social support/integration as a suicide prevention strategy or, among those with a history of suicide attempts, as a means to mobilize social resources to reduce the risk of future suicide attempts. This underscores the importance of informal social support as a resource for coping with stressors among African Americans. Social network typologies also have implications for social work practice. The findings indicate that these network types represent differing suicide risk profiles. As such, social network types can be used to identify clients who are at risk for suicidality, especially upon intake. Additionally, based on insight gained from the current study, interventions can be designed to minimize negative interactions with network members and to help clients learn how to cope with negative interactions.

Table 4.1

Demographic Characteristics of the Sample and Distribution of Study Variables

	% (Mean)	N (S.D.)	Range
Gender			
Male	44.03	1,271	
Female	55.97	2,299	
Age	43.15	16.32	18-93
Education	12.30	2.58	0-17
Income	32,037.15	32,687.94	0-520,000
Marital status			
Not married/partnered	58.32	2,329	
Married/partnered	41.68	1,220	
Frequency of contact with family			
Low	49.71	1,674	
High	50.29	1,864	
Subjective closeness to family			
Low	27.93	978	
High	72.07	2,559	
Family loves			
Low	36.01	1,252	
High	63.99	2,280	
Family listens			
Low	41.74	1,440	
High	58.26	2,096	
Family interested			
Low	40.58	1,420	
High	59.42	2,117	
Family demands			
Low	35.38	1,304	
High	64.62	2,234	
Family criticizes			
Low	42.52	1,530	
High	57.48	1,994	
Family takes advantage			
Low	60.31	2,149	
High	39.69	1,388	
Frequency of contact with friends			
Low	56.56	1,640	
High	43.44	1,350	
Subjective closeness to friends			
Low	64.55	1,892	
High	35.45	1,090	
Suicidal ideation			
Yes	11.65	396	
No	88.35	3,023	
Suicidal plan			

Yes	3.90	139
No	96.10	3,280
Suicidal attempt		
Yes	4.03	141
No	95.97	3,278

Note: Percentages and N are presented for categorical variables and Means and Standard Deviations are presented for continuous variables. Percentages are weighted and frequencies are unweighted.

Table 4.2

Intercorrelations of Latent Class Indicators

Latent class indicators	1	2	3	4	5	6	7	8	9	10
1. Family closeness										
2. Family contact	0.38***									
3. Family loves	0.62***	0.34***								
4. Family listens	0.33***	0.27***	0.41***							
5. Family interested	0.50***	0.33***	0.64***	0.50***						
6. Family demands	-0.08***	0.04*	-0.09***	0.04*	-0.01					
7. Family criticizes	-0.23***	-0.05**	-0.27***	-0.03*	-0.16***	0.50***				
8. Family takes adv.	-0.25***	-0.02	-0.29***	-0.11***	-0.23***	0.50***	0.50***			
9. Friend closeness	0.20***	0.17***	0.22***	0.14***	0.22***	-0.06***	-0.08***	-0.11***		
10. Friend contact	0.11***	0.29***	0.14***	0.15***	0.16***	-0.01	-0.02	-0.06**	0.49***	

*p < .05; **p < .01; ***p < .001

Table 4.3

Bivariate Relationships Between Demographic and Suicide Variables and Social Network Types among African Americans

	Strained (N = 768)	Isolated (N = 547)	Ambivalent (N = 1,203)	Optimal (N = 1,038)	Test
Gender					11.54***
Male	43.86	57.77	40.13	41.27	
Female	56.14	42.23	59.87	58.73	
Age	40.33	46.82	40.28	46.22	43.30***
Marital status					.72
Not married/partnered	57.63	55.04	59.66	59.02	
Married/partnered	42.37	44.96	40.34	40.98	
Education	12.35	11.93	12.70	12.02	17.87***
Income	31,204	31,522	34,883	29,734	4.97**
Suicidal ideation					20.01***
Yes	19.76	10.74	10.93	6.47	
No	80.24	89.26	89.07	95.53	
Suicidal plan					6.15**
Yes	6.40	3.86	3.87	1.92	
No	93.60	96.14	96.13	98.08	
Suicidal attempt					8.12***
Yes	6.12	4.02	4.81	1.38	
No	93.88	95.98	95.19	98.62	

Note: Percentages are shown for categorical variables and means are shown for continuous variables. Percentages are weighted.

*p < .05; **p < .01; ***p < .001

Table 4.4

Comparison of Suicidal Behaviors Based on Social Network Type Membership

Social Network Types	Ideation	Plan	Attempt
Strained	1.88 (0.47)	4.11 (0.81) ^a	4.48 (0.74) ^b
Isolated	1.61 (0.66)	1.67 (0.96)	2.16 (0.97) ^b
Ambivalent	2.42 (0.39)	5.21 (0.86) ^a	4.15 (0.85) ^b
Optimal	3.48 (0.63)	6.76 (1.37) ^a	9.91 (2.16)

^a Mean is significantly different from the isolated support network type at $p < .05$.

^b Mean is significantly different from the optimal support network type at $p < .05$.

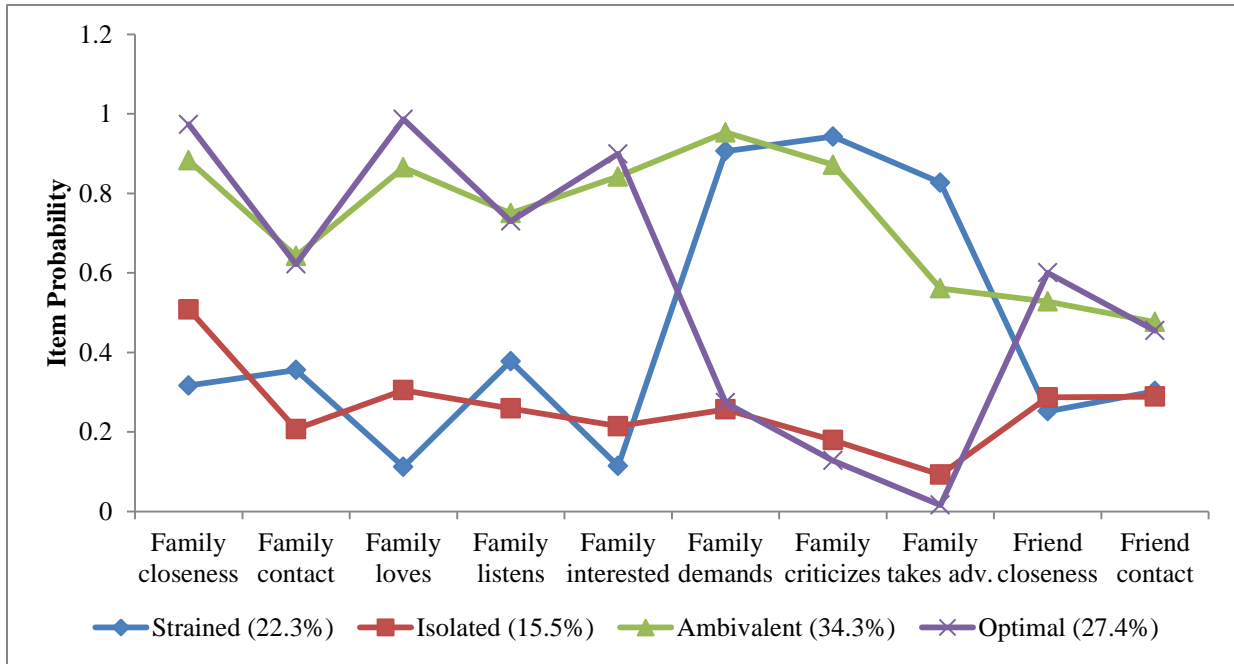


Figure 4.1. Conditional item probability profile. Social network type size information presented in the legend.

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CHAPTER FIVE

Conclusion

This dissertation explored profiles of social networks (i.e., social network typologies) among African American adults and whether these network profiles/types are associated with mental health. I conducted secondary data analyses using data from the nationally representative sample of African Americans from the National Survey of American Life to evaluate these dissertation aims. The findings extend previous empirical works on network types and provide important insights into how various aspects of social relationships are associated with mental health. This chapter discusses key findings and implications for social work practice. A discussion of limitations and direction for future research concludes this chapter.

Summary of Findings

The first study (Chapter Two) explored the different network types that existed among African Americans, their prevalence, and their sociodemographic correlates. Using typology indicators of the family and church networks, four types were identified: *optimal* (high social integration and low negative interaction), *ambivalent* (high social integration and negative interaction), *family-centered* (high social integration exclusively in the family network and low negative interactions), and *strained* (high social isolation and negative family interaction) (Figure 5.1). These types varied in their levels of social integration and negative interaction. These findings confirm the existence of dimensions of family solidarity within the church network, which indicates that the family solidarity model (McChesney & Bengtson, 1988) can be applied to non-kin groups as well. Additionally, this finding lends further credence to the notion of a

“church family.” The four network types identified in this study corresponded with types previously identified by Wenger (1996), Litwin (2001), and Fiori et al. (2007): diverse, family-focused, and restricted.

The analysis of the sociodemographic correlates of network types showed that membership in particular types is associated with a range of social and personal factors. For this analysis, the optimal type was set as the reference category. The analysis revealed that respondents from higher SES backgrounds were more likely to belong to the ambivalent and family-centered types. Unmarried African Americans were more likely to be in the ambivalent, family-centered, and strained types than married respondents. Respondents who were employed part-time, unemployed, and retired had higher odds of being a member of the ambivalent type than respondents who were employed full-time. Unemployed respondents were more likely to belong to the strained type, but homemakers were less likely to belong to the strained type. Respondents who were parents were more likely to be in the ambivalent and strained types. However, an interaction effect indicated that these odds differed by age.

The second study (Chapter Three) examined the association between network types (identified in Chapter Two) and serious psychological distress (SPD) across the life span. Findings showed that African Americans aged 18 to 34 and 55+ in the ambivalent type reported higher levels of SPD than their counterparts in the optimal type. Similarly, respondents aged 18 to 34 in the ambivalent type also had higher levels of SPD than 18 to 34 year olds in the family-centered type. Conversely, among those aged 55 and older, respondents in the family-centered type reported greater levels of SPD than their counterparts in the ambivalent type.

Finally, the last study (Chapter Four) investigated the association between social network types and suicidal behaviors. Social network types identified in this study are presented in

Figure 5.2. Using indicators of the family and friendship networks, this study identified an optimal, ambivalent, strained, and isolated type. The optimal, ambivalent, and strained types were characteristically similar to those identified in the first study. Findings indicated that social network types were associated with suicidal plans and attempts but not ideation. African Americans in the strained and ambivalent types are more likely to have planned suicide in their lifetime than their counterparts in the isolated type. However, contrary to the hypotheses, respondents belonging to the optimal type were more likely to have planned and attempted suicide in their lifetime than respondents in the isolated type. Moreover, compared to respondents in the strained and ambivalent types, respondents in the optimal type were more likely to have attempted suicide. This unexpected finding may be explained by the resource mobilization model, which will be discussed in the following section.

Themes of Dissertation Findings

Together, these studies indicate that family, friends, and church members make distinct contributions to an individual's mental health. These findings support the convoy model of social relations (Kahn & Antonucci, 1980), which posits that social networks' function plays a major role in the connection between social networks and mental health. In other words, social support mediates the positive relationship between social integration and mental health. Moreover, the findings confirm the convoy model's hypothesis that qualitative characteristics of the network have a greater influence on mental health than structural characteristics.

Another theme of this dissertation is the racial differences in network types. Race comparative literature on social networks has demonstrated that African Americans tend to have smaller friendship networks than whites and are more reliant on family members for support than on friends (Ajrouch, Antonucci, & Janevic, 2001; Taylor, Chatters, Woodward, & Brown, 2013).

Unsurprisingly, the first study (Chapter 2) did not identify a network type in which respondents were isolated from their family but well integrated into non-kin networks (e.g., friend-focused type). Consequently, the lack of a nonkin-focused/friend-focused type in this study suggests that network types do, in fact, differ by racial and ethnic groups and underscores the integral role of family in the lives of African Americans.

Further, the collective findings of this dissertation indicate that not only are negative interactions with family and church members associated with worse mental health outcomes but also that this association is stronger than the documented association between social integration and positive mental health. Surprisingly, social integration (i.e., high levels of contact, subjective closeness, and support) was not related to either suicidality or SPD. Although counterintuitive, previous research has demonstrated that positive aspects of social relationships, particularly social support, are less robust and reliable predictors of mental health and subjective well-being than negative relationship qualities, such as negative interactions (Lincoln, Chatters, & Taylor, 2005; Rook, 1998; Swindle, Heller, & Frank, 2000). Finch et al.'s (1999) meta-analysis of studies on negative interactions, social support and emotional well-being found that negative interactions tended to exert a stronger influence on emotional well-being than social support, especially when support is operationalized as enacted support or network size. This effect is referred to as the negativity effect (Rook, 1998).

In explanation of the negativity effect, the frequency-salience explanation suggests that in general, social interactions tend to be positive, especially those in close relationships (Rook, 1990). Because of this, positive interactions are considered normative. In fact, Rook (1990) posits that because positive exchanges are considered normative, they are often taken for granted. On the other hand, negative social exchanges are relatively infrequent and thus are

more salient than positive social exchanges. As a result, whenever negative interactions arise, they are often surprising and perceived as stressful events. Consequently, negative interactions' effect on mental health and subjective well-being tend to be more potent than positive relational qualities' effect on mental health and subjective well-being. An alternative explanation, the adaptive significance explanation, posits that people are more risk averse and vigilant of negative information and events because they have adaptive significance (Newsom, Nishishiba, Morgan, & Rook, 2003; Rook, 1990). Thus, the potential loss of resources are more emotionally and motivationally arousing than gain and the potential acquisition of resources (Rook, 1990, 1998). Because negative interactions are perceived as a potential loss of resources, people's reactions to relational problems tend to be more strongly negative than their reaction to positive aspects of their relationships, which are perceived as the acquisition of resources. For this reason, negative interactions have a stronger and more reliable effect on mental health and subjective well-being than positive relational aspects. These findings are also consistent with the convoy model of social relations (Kahn & Antonucci, 1980), which hypothesizes that subjective evaluations of relationships, such as relationship satisfaction and negative interactions, are more powerful predictors of mental health and well-being outcomes than objective relationship qualities (e.g., network size, frequency of contact).

The final theme of this dissertation is related to the resource mobilization model (Cobb, 1976). The resource mobilization model suggests that when individuals are presented with difficult circumstances, they are likely to marshal their social resources in response. Thus, these individuals are motivated to seek out support and assistance from network members in order to cope with a stressor. The findings from Chapter Four strongly support this model. Respondents in network types that were characterized by high levels of social integration were more likely to

have planned and attempted suicide than respondents in network types that were characterized by high levels of social isolation. Consistent with the resource mobilization model, respondents with a history of self-harming behaviors may have embedded themselves into more supportive network types as a preventive or coping strategy. That is, respondents who have previously planned or attempted suicide may have strategically embedded themselves into positive network types as a means to prevent further suicide attempts. Alternatively, respondents who were actively planning suicide may have embedded themselves into positive network types in order to garner help for coping with suicidality from network members.

Social Work Practice Implications

Social network typologies have a number of practice implications, as they can inform the development of prevention and intervention programs that promote health and well-being through the protective qualities of social support. Network types can contribute to the development of prevention and intervention programs for clients in major social work practice settings, such as hospitals, community mental health agencies, and senior centers. As a preventive intervention, network types can be used as a screening instrument to identify vulnerable clients. These typologies represent risk profiles, as research has demonstrated that individuals in some types have an increased risk of experiencing mental/physical health issues. This dissertation indicates that network types that are characterized by high levels of negative interactions with network members are associated with worse mental health outcomes, and previous research has indicated that network types that are characterized by social isolation are also indicative of poorer mental/physical health. In particular, social work practitioners can use these typologies to assess clients' social environments and resources and to screen for clients

who are at risk of developing/worsening mental/physical health problems, especially upon intake.

Nevertheless, the use of network typologies as a screening instrument must be done so with social and cultural contexts in mind. Previously identified associations between network types and mental health may not generalize to all clients. Specifically, social and cultural contexts may influence how network types impact mental health. For example, a number of previous studies have indicated that belonging to the family-focused type is predictive of worse health and well-being. However, this may not be the case for clients who come from cultures that are high in familism values (e.g., East Asian cultures). For clients who belong to cultures high in familism, membership in the family-focused type may not be harmful to their health and well-being, as this may actually be consistent with their cultural values and the family-focused type may represent a normative network type among these individuals.

In fact, Fiori et al.'s (2008) cultural comparison study of network types in the U.S. and Japan found that although the family-focused type was uncommon among Americans, it was the most prevalent type among the Japanese. Moreover, the authors found that the diverse type, while the most prevalent type in the American sample, was uncommon in the Japanese sample. Additionally, among American respondents, those belonging to the family-focused type reported high levels of negative interactions with their family, whereas this was not the case among the Japanese respondents. Collectively, these findings suggested that Japanese respondents placed more value on family relationships than did American respondents. Because Japanese respondents placed more value on their family relationships, the diverse type was less normative than the family-focused type. These findings also suggested that for Americans, intense and subjectively close family relationships, which are characteristic of relationships in the family-

focused type, could also foster high levels of negative interactions. However, due to the value placed on family in the Japanese culture, close family ties did not foster high levels of negative interactions among Japanese respondents. Finally, belonging to the family-focused type was not predictive of poorer mental and physical health for Japanese respondents in Fiori et al.'s (2008) study. This indicates that while belonging to the family-focused type can sometimes be predictive of poorer mental/physical health for Western respondents, this does not appear to be the case for persons belonging to cultures high in familism. Thus, practitioners should not automatically assume that clients who belong to the family-focused type are at risk of developing or worsening mental illness. Network typology assessments must be conducted with consideration of the client's sociocultural background in order to accurately identify the client's risk for mental/physical illness.

Subsequent to network typology screening, vulnerable clients could be targeted for interventions that would help them 1) bolster their existing social ties, 2) develop new social relationships and expand their social networks, and 3) minimize negative interactions with network members. These interventions can take the form of individual therapy, group therapy, and peer-led and professionally-led support groups. In particular, group therapy and peer-led and professionally-led support groups are suitable therapeutic settings for the modeling of supportive behaviors and social skills by the group facilitator as well as for group members to practice these newly learned skills with each other. Group interventions can also facilitate new relationships and strengthen existing relationships among group members as well as increase clients' level of social engagement.

In individual therapy interventions, practitioners can consider inviting the client's family to participate in the therapy sessions whenever it is appropriate to do so. According to the family

systems theory (Bowen, 1978), the behavior of one family member can influence the behavior of other family members, and dysfunctional behaviors within one family member is likely to be symptomatic of dysfunction within family system. Family members' participation in therapy is especially helpful in interventions focused on negative interaction reduction and strengthening clients' existing family relationships. Because clients are usually embedded within family systems, including family members can help the practitioner develop fuller assessments of clients' family and social relations and a better understanding of family dynamics, beliefs, and values. Moreover, including family members in therapy can help the practitioner more effectively diagnose problematic beliefs and behaviors within the family system and help the client deal with these problematic beliefs and behaviors. Additionally, some clients tend to blame themselves or their family members for the negative family interactions that they experience. From a family systems perspective, including family members in negative interaction reduction interventions can help the client understand that neither they nor their family members are the sole source of their family conflicts.

Despite the benefits of including the client's family members in individual therapy sessions, this may not be possible or appropriate under some circumstances. For example, in cases of intimate partner violence, in which the client is being victimized by their partner, it may not be appropriate to invite their partner to participate in the client's therapy sessions for a number of reasons. First, because the family systems theory assumes that an individual's behavior can influence family members' behaviors, focusing on the client's relationship with their partner may suggest to the client that they contributed to their partner's abusive behaviors. Second, having the partner present during the therapy session may cause the client to not provide honest disclosures out of fear for their personal safety and intimidation by the partner. Third,

sessions on which the partner's behaviors are focused may lead the partner to perceive that they are being blamed for the client's problems. This could anger the partner and escalate their abusive behaviors. Thus, it is important for the practitioner to thoroughly evaluate the client's family system in order to determine if it is appropriate to invite the client's family members to participate in therapy sessions.

An important area of focus for social support interventions is social skills training. Social skills training can be helpful for clients who have difficulty interacting with others or social anxiety. In particular, this type of intervention is likely to be most beneficial for clients belonging to network types characterized by high levels of social isolation (i.e., isolated and strained types). Additionally interventions that incorporate close network members into the client's sessions, as described above, can also teach network members and clients skills for providing appropriate and effective support. This will not only help network members effectively meet the needs of clients but also help clients provide effective support to their network members, as research has indicated that support reciprocity is an important aspect of positive social ties (Antonucci & Jackson, 1990; Schwarz, Trommsdorff, Albert, & Mayer, 2005). This type of intervention can also help network members who are already natural helpers become more effective helpers.

Negative interaction is another important area for intervention work. Interventions that focus on reducing negative interactions with network members are particularly useful for clients belonging to network types that have high levels of negative interactions (i.e. ambivalent and strained types). Krause and Rook's (2003) longitudinal study of negative social exchanges among older adults suggested that there is a subset of individuals who experience sustained negative interactions with network members over extended periods of time. This indicates that

for these individuals, negative interaction is continuous and a chronic strain. Furthermore, the authors found that negative interactions are not limited to one particularly problematic relationship, but are consistent across many relationships with family and friends. Together, these findings indicate that these individuals may play a role in creating these negative interactions. As such, interventions aimed at reducing negative interactions should teach clients social skills, interpersonal problem solving skills, and strategies for coping with relational conflict. Social skills training can teach clients how to interact with social partners in a socially competent manner in order to avoid conflict from inappropriate social behaviors. Social skills training can also help clients handle conflict in a more socially appropriate manner. Interpersonal problem solving skills can help clients identify social conflicts and effectively deescalate and resolve them. Finally, coping skills can help clients reframe negative interactions from stressors to more manageable events. Negative interaction reduction skills can also be incorporated into interventions designed for enhancing and enlarging clients' social networks, as negative interactions are ubiquitous aspects of social relationships. Interventions that not only seek to widen and shore up a clients support base but also to help clients deal with and minimize negative interactions with network members are more comprehensive. Negative interactions are important targets for interventions not only because they are detrimental to mental health and subjective well-being but also because they can erode a person's sense of self-efficacy (Antonucci & Jackson, 1987). Antonucci and Jackson (1987) argued that social conflicts diminish an individual's perception of self-efficacy, which then leads to poorer mental health and subjective well-being. Negative interactions are also important intervention targets because reducing negative interactions can result in improved relationship quality with network members.

In addition to enhancing clients' social networks as a preventive strategy for mental illness, social support interventions can also be used for the purpose of promoting positive health behaviors changes in clients. Berkman and Glass (2000) have noted that social networks can influence health behaviors through network members' social influence. Indeed, research has demonstrated that social support influences positive healthy lifestyle changes (Hogan, Linden, & Najarian, 2002; Krause, Shaw, & Liang, 2011). Network members can help clients make positive health behavior changes as well as help clients maintain these positive changes. Additionally, social support interventions can promote professional help-seeking in clients. The social behavior model (Andersen & Newman, 1973) suggests that three factors – 1) predisposing characteristics of the individual, 2) enabling resources, and 3) need – determine whether or not a person would seek professional help. Network members can act as enabling resources according to this model whereby they facilitate the individual's formal help-seeking process. For example, an adult child may encourage his mother to visit her doctor after noticing that she has been struggling to manage her worsening arthritic pain for the past month. In fact, he may even offer to make the appointment for her and drive her to the doctor's office. Therefore, strengthening clients' relationships with their network members could help facilitate the professional help-seeking process. This is especially important for male clients, as men are less likely than women to seek professional care for physical and psychological issues (Auslander & Litwin, 1990; Bertakis, Azari, Helms, Callahan, & Robbins, 2000; Mackenzie, Gekoski, & Knox, 2006).

Interventions that involve the client's social network have several advantages. It is cost-effective, as social networks are naturally occurring. Thus, this type of intervention does not require additional financial resources from either the client or the service provider. This approach also allows clients to utilize existing and accessible social resources in order to reduce

their reliance on formal sources of support (i.e., social service programs), which will reduce the burden of the already overtaxed social service system. Moreover, a number of studies have indicated that social support interventions are effective for treating a range of issues (Hogan et al., 2002). In particular these interventions are effective treatments for psychiatric disorders such as depression and anxiety (Greene & Monahan, 1989; Martire, Lustig, Schulz, Miller, & Helgeson, 2004; Pistrang, Barker, & Humphreys, 2008) as well as physical health issues (Martire et al., 2004). Research has found that social support interventions have both short-term (Greene & Monahan, 1989; Hogan et al., 2002) and long-term efficacy (Toseland, 1990). Another strength of social support interventions is that network members, especially family members and other close social partners, are well-positioned to provide continuous support, as they have a long-term commitment to the client and are part of the client's social environment.

Future Directions

Due to the cross-sectional nature of the National Survey of American Life, it is not possible to determine the temporal sequence between social network types and mental health in this dissertation. Future studies should use prospective data to determine whether belonging to network types characterized by high levels of negative interactions contribute to poorer mental health or whether mental health problems influence one's social network characteristics. Alternatively, the relationship between network types and mental health could be bidirectional. That is, poor mental health could lead to increased negative interactions with network members, and increased negative interactions could, in turn, lead to worsening mental health. Another area that future studies should expand upon is the social network typology indicators. Although this dissertation included multiple typology indicators of interactional and functional network characteristics, no indicators of structural characteristics were included. Further studies using a

breadth of functional, interactional, and structural characteristics will capture a fuller picture of African Americans' social environments and networks. Some social network characteristics to consider are network size and composition, network members' geographic distance from respondents, and relationship satisfaction. Additionally, future studies might consider the provision of support as a typology indicator in addition to receiving support in order to assess reciprocity between the individual and network members and how reciprocity is related to mental health. Furthermore, typologies derived from more exhaustive indicators of social network characteristics may more strongly and reliably predict mental health.

Another area of inquiry for future research is to examine whether different sources of negative interactions have a differential impact on mental health among African Americans. Although some studies have examined this topic in the general population, few studies have focused specifically on African Americans, especially with a nationally representative sample. Some evidence has suggested that differing sources of negative interactions have differing effects of mental health. For example, Antonucci et al.'s (2001) study of older adults found that negative interactions with spouses were predictive of lower levels of well-being. They also found that negative interactions with friends were associated with well-being. However, this association varied by gender. Men who experienced high levels of negative interactions with friends reported lower levels of well-being, while women who experienced high levels of negative interactions with friends reported higher levels of well-being. In another study of negative interactions in older adults, respondents who reported high levels of negative interaction with family members reported lower levels of positive affect (Rook, Luong, Sorkin, Newsom, & Krause, 2012). However, negative interactions with non-kin were not predictive of affect. These studies suggest that the source of negative interactions matter when examining mental health

outcomes. A final area of potential research inquiry is to test Cohen and Wills' (1985) stress buffering model using social network types. This dissertation tested the direct effect of social network types on mental health. That is, this dissertation tested the relationship between network types and mental health outside of the context of stressors. Nevertheless, limited information is available on the relationship between network types and mental health from a stress buffering perspective. Studies testing this perspective should examine whether belonging to a network type delineated by high levels of social integration and/or negative interactions moderates or mediates the relationship between stressors (e.g., financial strain, discrimination) and mental health outcomes.

Conclusion

Social network typologies are a promising area of research. Its conceptualization of social networks extends previous scholarship on social networks, as it simultaneously takes into account multiple facets of a social network (i.e., structure, function, interaction, quality). Further, network typologies permit the examination of negative interactions in the context of positive relationship features, such as social support. Information on the varying combinations of negative interactions and support levels provide a better understanding of how these two relationship qualities interact to influence mental health. Additionally, findings from this dissertation indicated that network types are linked to mental health. This suggests that social network types have applications for interventions in major social work practice settings, such as the hospital, nursing homes, and social service agencies.

		Social Integration	
		Low	High
Negative Interactions	Low		Optimal Family-Centered ¹
	High	Strained	Ambivalent

Figure 5.1. Social network types for Chapters Two and Three. ¹Social integration exclusively into the family network.

		Social Integration	
		Low	High
Negative Interactions	Low	Isolated	Optimal
	High	Strained	Ambivalent

Figure 5.2. Social network types for Chapter Four.

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