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Racial variations and social support and its impact on stress and depression

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RACIAL VARIATIONS AND SOCIAL SUPPORT AND ITS IMPACT ON STRESS AND DEPRESSION

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"Every good and perfect gift is from above..." (James 1:17).

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ABSTRACT

Evidence suggests that social support can mitigate some of the harmful effects of stress on health. Social support theorists argue that certain social groups have differential access to social support; therefore, certain social groups are at a higher risk of experiencing psychiatric symptoms. Although social networks are beyond the scope of these analyses, it is an important component to consider when examining the uneven distributions of social support between social groups. If racial differences exist in the networks in which individuals are embedded, then part of the differential access to social support could be explained by examining the various compositions of networks. This thesis examines racial differences in the social support process. Using data collected on recovery support during Hurricane Georges, I examine: (1) whether and how social support systems for blacks and whites differ in nonroutine situations and (2) whether the relationship among stress, support, and depression differ between blacks and whites. My results indicate that blacks are less likely than whites to receive instrumental support in the preparation phase of the storm and blacks who receive less instrumental support after the storm are more likely to suffer from depression. This suggests that future research should explore systematic differences in blacks' and whites' network characteristics, including the types of resources, and the variations in the network structure.

INTRODUCTION

Most individuals can recall an event or situation that caused them to experience stress. According to McFarlane, Norman, Streiner, and Roy (1983: 160), any "life-changing event, despite its quality, is inclined to be stressful because it disturbs life's patterns and requires that the [individual] change". More intense levels of stress can lead to such psychological outcomes as depression. Examples of such events include the loss of a job, a death in the family, or simply trying to become acclimated to a new job. Nevertheless, regardless of the event, individuals experiencing the same situation may perceive different levels of stress. Researchers have attempted to explain that variation (Thoits 1982, 1984; Bailey, Wolfe, and Wolfe 1996; Haines, Hurlbert, and Beggs 2005; LaRocco, House, and French 1980; Fenlason and Beehr 1994; Nelson and Quick 1991). The question that remains is why some individuals stand at a higher risk of experiencing depression from a stressful event than others. One way that social scientists have addressed this question is by examining the effects of social support on the relationship between stress and depression.

An abundance of evidence suggests that social support can mitigate some of the deleterious effects of stress on health (House 1987; LaRocco et al. 1980; Thoits 1984). It is reasonable to conclude that individuals with a strong support system "should be better able to cope with major life changes; those with little or no social support may be more vulnerable to life changes, particularly undesirable ones" (Thoits 1982: 145).

When the level of exposure to life's stressors is held constant, research indicates that individuals with little or no support system will experience higher levels of depression than those individuals with a strong support system. For example, Lin, Ensel, Simeone, and Kuo (1979) found those individuals with a strong social support system experience low-level psychiatric symptoms. With few exceptions (see Bailey et. al. 1996), the majority of research focused primarily on the white community, with little attention given to variation by race in the stress-support process. That variation by race in the stress support-process constitutes the focus of my thesis. The stressful context that I examine is a hurricane. Specifically, I ask (a) whether and how social support systems for blacks and whites differ and (b) whether the relationships among stress, support, and depression differ between blacks and whites.

REVIEW OF LITERATURE

Definition and Conceptualization of Social Support

Social support is defined as "support that is accessible through one's social ties" (Lin, Simeone, Ensel, and Kuo 1979: 109). Generally, measures of this multidimensional concept tap (1) perceived versus actual support, (2) the source of support, and (3) the type of support.

There has been much controversy among social support theorists over whether researchers should measure as perceived or received support. The main difference "focuses on the subjective versus the objective continuum of support" (Lin, Ensel, Simeone, and Kuo 1999: 346). Perceived support is one's perception of the accessibility of support, the evaluation of sufficiency of support, and the quality of the support in their time of need. In contrast, received support refers to specific support transactions (Lin et al. 1999).

Social support is also characterized by the source from which it is received. Typically, researchers examine formal support and informal support. Formal support comes from organizations, whether public or private. Providers of informal support include family, friends, and other individuals.

In addition to the varying sources of support, House (1981) derived four categories, which he argued are main types of social support. These categories are (1) emotional support, which includes empathy, trust, love, esteem, and concern for the recipient; (2) instrumental support, which involves tangible aid such as money, labor, or time for the recipient; (3) informational support, in which the recipient is provided with advice, suggestions, and guidance; and (4) appraisal support, which provides affirmation, feedback, social comparison, and

self-evaluation to the recipient (Cooke, Rossman, McCubbin, and Patterson 1988; Ducharme and Martin, 2000; Nelson and Quick 1991).

Although these categories exist, researchers have focused primarily on instrumental and emotional support (Bailey et al. 1996; Robicheaux 2003; Fenlason and Beehr 1994), which subsumes the other forms of support. Some researchers focused solely on emotional support, arguing that, when examining effects on depression, this is the most critical dimension (LaRocco et al. 1980). There is considerable debate on which type and source is an appropriate measure within a specific, situational context. "There are theoretical arguments about the importance of there being a match between the type of stress experience and the type and source of support" (McIntosh 1991: 202). Although many potential forms of social support exist, there is reason to believe that, the in the context on which I focus during stressful life events — hurricanes — instrumental support and emotional support constitute the most essential support dimensions. Therefore, I examine those two forms of support.

Social Support and Well-being

It is well documented that social support mitigates the effects of life's stressors on health. In particular, researchers have investigated the impact of social support and its ameliorating effects on individuals' psychological well-being. Two hypotheses were developed to explain the relationship between social support and stress: the main effects model and the buffer model. "The main effects model states that social support has a direct effect promoting positive indicators of well being and inhibiting negative indicators" (Bailey et al. 1996: 288). In other words, individuals who benefit from social support will benefit

regardless of the amount of stress they experience. In contrast, the buffer model suggests that individuals who are under extreme stress will experience low levels of distress if they receive high levels of support; however, those individuals with low levels of social support experience greater distress when faced with the same level of stress (Thoits 1982; Fenlason and Beehr 1994; Wethington and Kessler 1986; Nelson and Quick 1991; Fried and Tiegs 1993).

Social Support and Social Capital

Currently, there is a gap in the literature concerning how the stress-support process varies by race. However, there is an abundance of research examining how social capital varies between racial groups (Lin 2000; Paxton 1999). Social capital can be defined as the "investment and use of [social] resources in social relations with expected returns. . ." (Lin 19: 2000). These "resources" include forms of social support, such as instrumental and expressive support (Hurlbert, Haines, and Beggs 2000). Thus, understanding the dynamics of social capital should allow researchers to investigate the variations in resources (social support); including the types and sources individuals receive.

Resources are not always obtainable or possessed by the individual actor. Lin (2000: 786) suggest ". . . not all individuals or social groups uniformly acquire social capital". However, individual actors can access resources through their social networks. Portes (1998: 6) suggests that, although minor differences in the conceptualization of social capital exist, "the consensus is growing in the literature that social capital stands for the ability of actors to secure benefits by virtue of membership in social networks or other social structures". In other

words, these resources are "embedded in the [various] ties of one's [social] networks" (Lin 2000: 43).

Social Support as a Form of Social Capital

Social support is one of the many benefits one can reap from his/her social network. In other words, social support is a form of social capital that is accessible through an individual's social ties (Lin, Simeone, Ensel, and Kuo 1979). Researchers suggest that gender and race differences in the networks in which individuals are embedded cause uneven distributions of resources (Lin, 2000; Portes and Landoltz, 1996). Further, if gender and race differences exist in networks in which individuals are grounded, then part of the differential access to social support could be explained by examining the various characteristics of individuals' networks.

Characteristics of Network

Tie Strength. Much of the emphasis in the studies of networks and social capital deals with tie strength. Granovetter (1983: 1361) defined the strength of a tie as " . . . the combination of the amount of time, the emotional intensity, the intimacy, and the reciprocal services which characterize the tie". There is substantial research on how tie strength affects, such resources as job information and influences (Granovetter 1983; Moore 1990; Hurlbert et al. 2000). Lin, Ensel, Vaughn (1981: 394) summarizes Granovetter's work as suggesting that "weak ties [allow] a person to reach beyond his or her small well-defined circle in order to make connections with parts of the social structure not directly accessible to him or her". Researchers argue that the advantage of a weak tie is that new, or nonredundant, information can flow through it. The

weak tie is often referred to as the "bridge" that gives individuals access to scarce and valued resources that are embedded in different networks (Ibarra 1992). Network researchers have suggested that weak ties are more useful in accessing instrumental resources, particularly resources that promote job-finding and career advancement (Granovetter 1983; Moore 1990; Ibarra 1992,). Lin (1981) expanded on this approach, arguing that individuals who wish to gain resources that are unobtainable within their social circles will try to reach beyond their immediate social circles to contact individuals with higher status in the social structure (e.g., through weak ties) for their desired resource. Lin illustrates the social structure as having a pyramidal shape "in terms of accessibility and control of such honors and rewards" (Lin, Ensel, and Vaughn 1979: 395). Individuals at the top of the pyramid have greater access to social resources, whereas individuals who are located near the bottom of the pyramid must contact someone higher in the hierarchical structure (Lin, Ensel, and Vaughn 1979).

However, strong ties "tend to link people of similar backgrounds [and] people who generally move in the same social circles" (James 2000: 497). Strong ties generally require an investment of time and effort, are emotionally intense, and are reciprocal by nature (Granovetter 1983). Social support researchers have concluded that access to social support is typically associated with strong and/or homophilous ties, rather than weak and/or heterophilous ties (Hurlbert et al. 2000).

Studies have shown that women are likely to be involved more heavily than men in kin networks with strong and dense kin ties (Haines et al. 2005; Moore 1990; Lin 2000), providing them with more access to social support

(Haines et al. 2005; Paxton 1998). Based on other research, Lin (2000: 788) suggests that women's domestic and community affiliation is primarily explained by "society's definition of child rearing as a female activity [which] placed men and women in different structural positions with respect to flow of information and other resources in social networks". In other words, because women are generally involved in domestic and community activities that foster the development of strong and homophilous ties, their family and close community members are the main sources of their social resources, restricting the flow of new information in their social circle, such as career opportunities. In contrast, men are more likely to have more extensive, sparse, and weak ties. Compared to women's networks, men's networks contain fewer kin and more non-kin (Moore 1990), which is the reason that men generally enjoy greater access to such instrumental resources as job information.

Homophily. The strength of weak ties "has produced a hypothesis consistent with the well known homophily (or like me) principle" (Lin, Ensel, Vaughn 1981). Variation in network homophily, like variation in tie strength, can help to explain the variations in network access to resources including social support. Homophily can be defined as individual preference to interact or associate with similar others (Ibarra 1992; McPherson and Smith-Lovin 1987). As already indicated, resources are accessible through the social relationships or networks of the individual (Lin 2002). Network researchers have found evidence that those who are in disadvantaged groups or have limited access to resources "prefer interaction with higher status others in order to gain access to valued resources" (Ibarra 1992: 424). In contrast, if a group is rich in a valued resource,

then it is reasonable to conclude that that particular resource could be easily accessed; individuals who are in the groups that are rich in a resource are likely to prefer homophilous interaction. In terms of job information and influence, Lin (2000) suggests that groups that consist mostly of women are disadvantaged in social capital, or social resources. Women tend to participate in social groups that are "more likely to expose them to information about the domestic realm." Women are also likely to look to other women for expressive support. However, access to instrumental resources, such as employment, is likely to be contingent on heterophilous interaction and weak ties (Ibarra 1992).

In contrast, men are more likely to belong to male-dominant circles and less involved in their social relations. Lin (2000) argued that women had not integrated well into men's social circles. Therefore, it is likely that men will predominately receive their social resources from other men (Ibarra 1992). It is evident that men have access to various types and sources of social resources because of their affiliation with the advantaged groups (Lin 2000; Portes 1998).

Parallel variation in social resources is likely to exist between minority groups. Since minority groups tend have less access to social resources, the disadvantaged position of minority group members is likely to restrict the amount of instrumental support received (Portes, 1998, Lin 2000). Minorities are also likely to receive lower levels of such instrumental resources as job-finding. 1995: 678).

Race and Social Support

Although social networks are beyond the scope of this study, it is an important component to consider when attempting to understand the racial

variations in social support. House (1981) suggests that some of the variation that exists in the receipt of social support could be explained by the social networks to which individuals belong (Haines and Hurlbert 1982). Network theorists believe that the networks in which individuals belong allocate resources differently. In other words, certain network structures are more likely to provide individuals with particular resources (i.e., social support). Those individuals who are involved in networks that contain high proportions of strong and/or homophilous ties tend to have better access to social support (Haines, Hurlbert, Beggs, 1996).

Kin networks also play an important role in the receipt of social support. Researchers have concluded that kin represent a primary source of social support, for both blacks and whites. Gaudin and Davis (1985: 1015) suggest that "extended family networks are a critical source of tangible and psychological support for black families. . . " Individuals whose networks contain more kin are therefore, more likely to receive social support (Haines 2005; Moore 1991).

Although little research exists on the receipt of social support in the black community, there is evidence to suggest that blacks tend to rely heavily on kin and close friends (or pseudo-kin) for support in routine situations (Chatters, Taylor, and Neighbors 1989; Gaudin and Davis 1985; Hofferth 1984). Research suggests that there are two plausible explanations for the close kinship ties among the black community. The first is that is these networks have historically provided support that facilitated day-to-day survival- thus; blacks have "invested in" these kinds of networks (Gaudin and Davis 1985). The second explanation is that they owe to a cultural emphasis on kinship ties (Hofferth, 1984: 792).

Disrupted Networks

Disasters, such as hurricanes, affect large segments of communities (Hurlbert et al. 2000). Individuals who are embedded in networks that contain high proportions of strong and/or ties are likely to suffer greater disruption and less access to support. In such a situation, the individual "is stripped of [their] social resources and is thrown back on [their] own individual resources" (Form and Loomis 1956: 180). Given that blacks' social and economic resources are likely to be more limited than whites' in routine situations, that disruption, and the concomitant reduction in access to support, is likely to be greater among blacks than among whites.

RESEARCH METHODOLOGY

Hypotheses

The focus of this thesis my twofold: (1) to evaluate the degree to which social support systems differ between blacks and whites and (2) to examine the impact on the psychological well-being for these groups.

Beginning with the receipt of social support, studies suggest that if resources are depleted or scare within a network, then those who are embedded in that network will have a difficult time trying to access that resource. Given the evidence that blacks' networks are likely to offer less economic and social resources than whites' networks in routine situations (Chatters, Taylor and Neighbors, 1989; Gaudin and Davis, 1985; Hofferth, 1984), I derive, the following hypotheses:

> **H_1:** Blacks are less likely than whites to receive instrumental support in the preparation phase of the storm.
>
> **H_2:** Blacks are less likely than whites to receive emotional support in the preparation phase of the storm.
>
> **H_3:** Blacks are less likely than whites to receive instrumental support in the recovery phase of the storm.
>
> **H_4:** Blacks are less likely than whites to receive emotional support in the recovery phase of the storm.

My final predictions draw on one of the most consistent findings of social support research: Social support can alleviate the harmful effects of stress on health. Those who have a strong support system should be better able to adjust to nonroutine situations. Conversely, those who have a weak support system will be unable to adjust or cope with nonroutine situations, and therefore:

H_5: Instrumental support before and after the storm will have a positive, direct effect on depression (reduce depression), for both blacks and whites.

H_6: Emotional support before and after the storm will have a positive, direct effect on depression (reduce depression), for both blacks and whites.

H_7: Because blacks receive lower levels of support than whites, race will exert an indirect effect on depression, through social support.

Data

Hurricane Georges struck the Gulf coast of Mississippi on the morning of September 28th, 1998. With funding from the National Science Foundation, two Louisiana State University researchers and a colleague from the University of Calgary collected data from a random sample of residents of Jackson County, Mississippi--the Gulf Coast area in which the storm made landfall. That parish sustained extensive damage to houses, businesses, and property from the 90-knot sustained winds of the storm. Because there was very little disruption of telephone service, these researchers were able to use telephone interviews to collect data from the respondents. Those interviews provide detailed information on the experiences in the preparation and short-term recovery phases of the storm.

Measures

Received Support. Measures of instrumental and expressive support serve as dependent variables in the first stage of my analysis and endogenous variables in the second stage of my analysis. Four items in the survey measured instrumental and emotional social support before and after Hurricane Georges. The first item, which measured instrumental support in the preparation phase of

the storm, asked respondents, “Did anyone help you with preparations (such as boarding up the windows, filling or placing sandbags, getting tools, etc.) or make them for you?” Respondents who reported that someone helped them with preparations before the storm were coded as (1); those who reported that no one helped them before the storm were coded as (0).

The second item in the survey measured emotional support in the preparation phase of the storm. Respondents were asked, “When you think about the period before the storm hit, you may remember feeling worried about the hurricane. If you felt this way, did you ever talk to anyone about your concern?” Respondents who reported they did talk to someone about their worries before the storm were coded as (1); those who reported they did not experience those feelings, or had those feelings but did not talk to anyone, were coded as (0).

The third measure tapped instrumental support in the recovery phase of the storm. Respondents were asked, “Did anyone help you [take care of babies or children, get or prepare food, take care of animals, etc.] do these things or do them for you?” Respondents who reported that someone helped them after the storm were coded as (1); those who reported that no one helped them after the storm were coded as (0).

The fourth item in the survey measured emotional support in the recovery phase of the storm. Respondents were asked, “Did you talk to anyone about things that happened to you during the storm, or about your worries and concerns?” Respondents who reported they did talk to someone about things that happened to them during the storm were coded as (1); those who reported

they did not talk to someone about the things that happened to them during the storm were coded as (0).

Depression. The outcome measure is a 7-item scale. This scale correlates highly (approximately .93) with the Center for Epidemiological Studies Depression scale (CES-D) (Ross and Murkowsky's 1989). Respondents were asked, "How many days during the past week (0 to 7) have you: (1) felt you could not get going, (2) felt sad, (3) had trouble getting to sleep or staying asleep, (4) felt that everything was an effort, (5) felt lonely, (6) felt you could not shake the blues, (7) had trouble keeping your mind on what you were doing." The measure was constructed by summing the responses to these items and dividing seven.

Race. I will examine the possibility that he social support and depression process varies across social groups, using a measure of race that was coded as (1) for whites and (0) for blacks.[1]

Individual Characteristics. Gender, a dummy variable, is coded male (1) and female (0) (thus, female constitutes the reference category). Education is coded in years.[2] Marital status was coded as married (1) and not married (0). I measured age in years[3] and family income in thousands of dollars.[4] Respondents who reported that someone in their household regularly received assistance or food stamps were coded as (1); those who reported no one in their household that regularly received assistance or food stamps were coded as (0). To measure

[1] For the purpose of this study, only blacks and whites were included in my analysis.
[2] Respondents were asked to report the highest grade of school or college completed. Respondents who reported having 20 or more years of education were coded as 20 years.
[3] Age was measured by subtracting the year the respondent was born from 2005.
[4] To tap income, nine categories were created. Respondents were asked to report which category best described their household income. The midpoints were taken for each category and respondents who reported having an income above $100,000 were recoded to $125,000. A prediction equation was created for the 162 respondents who did not report their income. Details are available upon request.

whether respondents received help from formal organizations, such as Red Cross, Federal Emergency Management Association (FEMA), and churches, respondents were asked, “Did you receive assistance from organizations?” Respondents who reported they receive assistance were coded as (1), those who reported they did not receive assistance were coded as (0). To measure residential damage, respondents were asked, “How would you describe the physical damage to your home?” Reponses ranged from (1) virtually no damage to (4) severe damage. To measure respondents’ health, a four-point scale from excellent (coded 1) to poor (coded 0) was constructed. Individuals who reported experiencing a hurricane before Hurricane Georges were coded as (1) and those who reported never experiencing a hurricane before Hurricane Georges were coded as (0). To measure the respondents’ stress levels, a four-point scale was constructedto tap stressful life events. Respondents were asked, “In the last year have you (1) had a close friend or relative die, (2) had problems at work, (3) had problems with your family, (4) had financial problems. Factor analyses indicated that item 1 (had a close friend relative die) was not orthogonal to the other items. For that reason, the scale consists of the sum of the other three items.

ANALYSES AND RESULTS

Analyses Procedure

Lin, Ye, and Ensel (1999: 348) argued that certain social groups "tend to have higher levels of psychological well-being" than other groups. Evidence suggests that differences in psychological well-being are explained in part by differential access to social support. To investigate whether and how levels of support and depression, and the support depression relationship may differ between blacks and whites, I will first test the effects of race and control variables on the support-process in the preparation and recovery phase of the storm, using logistic regression. Next, I will evaluate whether the effects differ by race. Finally, using ordinary least squares, I will evaluate the effects of race, support, and individual characteristics on respondents' psychological well-being (depression). I will also examine whether the effects of support and individual characteristics on depression differ by race.

Results

Effects of Race and Control Variables on Received Support. Table 1 presents the effects of race and individual characteristics on instrumental and emotional support, in the preparation and recovery phases of the storm. Starting with instrumental support in the preparation phase of the storm, I did not find support for hypothesis H_1 (stating that blacks are less likely than whites to receive instrumental help before the storm); the effect of race is not significant.

However, Model 1 of Table 1 does show that gender, age, and previous hurricane experience exert significant effects on receive support. Being female increases the odds of receiving instrumental support in the preparation phase of

the storm by 81%. Each additional year of an individual's life decreases the odds of receiving instrumental support by 2%. In addition, experiencing a severe hurricane increases the odds of receiving instrumental support before the storm by 94%.

Turning to Model 2 of Table 1, the findings do not support my second hypothesis H_2 (stating that blacks are less likely than whites to receive emotional support in the preparation phase of the storm). Once again, the effect of race is not significant. However, in Model 2 of Table 1, two measures did have a significant effect on the receipt of emotional support before the storm. Being female increased the odds of receiving emotional support before the storm by 1% and each additional year of education increased the odds of receiving emotional support before the storm by 8%.

The next question I examine is whether blacks are less likely than whites to receive instrumental support in the recovery phase of the storm. The findings support hypothesis H_3 (stating that blacks are less likely than whites to receive instrumental support in the recovery phase of the storm). Being black decreased the odds of receiving instrumental support by 61%.

Model 4 of Table 1 examines the effects of race and individual characteristics on emotional support in the recovery phase of the storm. The findings do not support hypothesis H_4 (stating that blacks are less likely than whites to report emotional support); the effects of race is significant. However, being female increases the odds of receiving emotional support by 41%.

Determinants of Received Support, by Race. Tables 2 and 3 present the equation from Table 1, estimated separately by race. This allows me to ask

whether the effects of individual characteristics on received support differ between blacks and whites. Starting with black respondents, previous experience with a hurricane had significant effects on the receipt of instrumental support in the preparation phase of the storm. The odds of receiving instrumental support before the storm increased by 2% for blacks who had previously experienced a hurricane, holding all other variables constant.

Model 3 of Table 2 investigates what individual characteristics affect the receipt of instrumental support in the recovery phase of the storm, among blacks. Holding all other variables constant, two of the nine measures were significant. The odds of receiving instrumental support after the storm increased by 4% for blacks who report receiving financial assistance. Each additional year of education decreased the odds of blacks receiving instrumental support after the storm by 20%.

Model 4 of Table 2 evaluates what individual characteristics affect the receipt of emotional support in the recovery phase of the storm, for blacks. The odds of receiving emotional support after the storm deceased by 69% for blacks who are not married. Those who report higher levels of income are more likely to report higher levels of emotional support.

Turning to white respondents, Model 1 of Table 3 evaluates the effects of individual characteristics on the receipt of instrumental support in the preparation phase of the storm. Gender, age, and previous experience with a hurricane had statistical significance on instrumental support before the storm. Being a white female increases the odds of receiving instrumental support before the storm by 82%. Each additional year of a white individual's life decreased the

odds of receiving instrumental support in the preparation phase of the storm by 1%. The odds of receiving instrumental support before the storm increased by 70% for whites who had previous experience with a hurricane.

Model 2 of Table 3 investigates the effects of individual characteristics on the receipt of emotional support in the preparation phase of the storm for whites. Gender had significant effects on emotional support before the storm. Being a white female increased the odds of receiving emotional support before the storm by 1.13%.

Model 4 of Table 3 evaluates what individual characteristics affect white respondents' receipt of emotional support in the recovery phase of the storm. Gender and stressful life events had significant effects on the receipt of emotional support after the storm. Being a white female increased the odds receiving emotional support in the recovery phase of the storm by 50%. The odds of receiving emotional support decreased by 21% for whites who report life stress.

Effect of Race, Support, and Individual Characteristics on Depression. Now, I turn to the second dependent variable, depression (Table 4). Here I ask whether race, support, (instrumental and emotional) and individual characteristics affect depression. I did not find evidence to support hypotheses H_5 and H_6 (stating that instrumental and emotional support before and after the storm will exert a negative effect on depression). I also did not find evidence to support hypothesis H_7 (stating that blacks report less social support; therefore, they are more likely than whites to report low levels of psychological well-being).

However, several individual characteristics exerted significant effects on depression (table 4). Lower levels of education were associated with higher levels

Table 1. Logistic Regression Analysis of Effects of Race and Other Individual Characteristics on Receiving Support

	Social Support			
	Model 1	**Model 2**	**Model 3**	**Model 4**
	Instrumental Support Before the Storm	**Emotional Support Before the Storm**	**Instrumental Support After the Storm**	**Emotional Support After the Storm**
Individual Characteristics				
Race (Blacks)	.131 (.236)	.273 (.239)	.477† (.235)	.088 (.230)
Gender (Female)	-.596*** (.169)	-.761*** (.170)	-.298 (.167)	-.347*(.167)
Education	-.014 (.037)	.080* (.037)	-.023 (.036)	.048 (.037)
Family Assistance (yes)	.177 (.437)	-.390 (.450)	.793 (.440)	.014 (.435)
Family Income	.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)
Age	-.015* (.006)	.000 (.006)	-.004 (.006)	-.001 (.006)
Marital Status (Married)	.158 (.188)	.284 (.188)	.012 (.186)	.306 (.185)
Health	.045 (.116)	-.025 (.116)	.153 (.116)	.105 (.115)
Experienced Hurricane (yes)	.667*** (227)	-.099 (.221)		
Life Stress (yes)	.046 (.089)	.037 (.090)	-.151 (.090)	-.173 (.090)
Residential Damage (yes)			.131 (.088)	.057 (.088)
Intercept	-.188 (.687)	1.296 (.694)	-.652 (.705)	-1.027 (.706)
R^2	.061	.065	.036	.033
N	677	674	678	675

Unstandardized coefficients. Standard errors in parenthesis.
*p<.05 ,**p<.01 ,***p<.001 (two-tailed); †p<.05, ††p<.01, †††p<.001 (one-tailed)

Table 2. Logistic Regression Analysis of Effects of Individual Characteristics on Received Support among Blacks

	Blacks			
	Model 1	**Model 2**	**Model 3**	**Model**
	Instrumental Support Before the Storm	**Emotional Support Before the Storm**	**Instrumental Support After the Storm**	**Emotional Support After the Storm**
Individual Characteristics				
Gender (Female)	-.651 (.520)	-.881 (.520)	-.173 (.497)	.113 (.500)
Education	.042 (.098)	.144 (.107)	-.227* (.112)	-.158 (.108)
Family Assistance (yes)	.270 (.790)	.092 (.776)	1.658* (.824)	-1.089 (.827)
Family Income	.000 (.000)	.000 (.000)	.000 (.000)	.000* (.000)
Age	-.014 (.020)	.010 (.019)	-.020 (.019)	.023 (.020)
(Marital Status) Married	.251 (.496)	-.589 (.496)	-.445 (.513)	1.185***** (.524)
Health	.241 (.333)	.255 (.320)	.132 (.340)	.393 (.327)
Experience Hurricane (yes)	1.164* (.494)	.024 (.461)		
Life Stress (yes)	.359 (.220)	-.169 (.216)	-.140 (.226)	.022 (.216)
Residential Damage (yes)			-.204 (.230)	.232 (.229)
Intercept	-2.68 (2.126)	-3.008 (2.158)	3.317 (2.306)	-4.356 (2.333)
R^2	.168	.108	.149	.163
N	105	104	107	105

Unstandardized coefficients. Standard errors in parenthesis.

*p<.05, **p<.01, ***p<.001 (two-tailed); †p<.05, ††p<.01 †††,p<.001 (one-tailed)

Table 3. Logistic Regression Analysis Effects of Individual Characteristics on Received Support among Whites

	Whites			
	Model 1	**Model 2**	**Model 3**	**Model 4**
	Instrumental Support Before the Storm	**Emotional Support Before the Storm**	**Instrumental Support After the Storm**	**Emotional Support After the Storm**
Individual Characteristics				
Gender (Female)	-.604**(.181)	-.756***(.182)	-.317 (.180)	-.409* (.180)
Education	-.023 (.040)	.071 (.040)	.008 (.040)	.036 (.040)
Family assistance (yes)	.215 (.539)	-.763 (.577)	.505 (.536)	.380 (.536)
Family Income	.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)
Age	-.015* (.006)	.000 (.006)	-.002 (.006)	-.004 (.006)
Marital Status (Married)	.095 (.205)	.246 (.206)	.113 (.204)	.156 (.204)
Health	.034 (.126)	-.061 (.126)	.132 (.125)	.085 (.126)
Experience Hurricane (yes)	.533 * (.262)	-.174 (.257)		
Life Stress (yes)	-.018 (.100)	.091 (.101)	-.143 (.101)	-.243* (.102)
Residential Damage (yes)			.186 (.097)	.023 (.097)
Intercept	.383 (.748)	-.764 (.752)	-.732 (.753)	-.485 (.754)
R^2	.052	.063	.027	.036
N	572	570	571	570

Unstandardized coefficients. Standard errors in parenthesis.
*p<.05, **p<.01, ***p<.001 (two-tailed); †p<.05, ††p<.01, †††p<.001 (one-tailed)

of depression. Individuals who report greater residential damage were more likely to report depression. Lower levels of stress were associated with higher levels of depression. Individuals who previously experienced a hurricane reported greater depression. Higher levels of stressful life events were associated with higher levels of depression. Surprisingly, those who are not married report lower levels of depression than those who are married. Individuals who reported receiving help from organizations were less likely to report depression.

Effects of Social Support and Individual Characteristics on Depression, by Race. Table 5 evaluates whether the effects of social support and individual characteristics on depression differ by race. Starting with blacks, Model 1 examines how social support and individual characteristics affect the psychological well-being of blacks. Consistent with the literature, blacks who reported receiving instrumental help in the recovery phase of the storm were less likely to be depressed. Education, residential damage, and pervious hurricane experience exerted significant effects on psychological well-being of blacks. Blacks who reported less education were more likely to report greater depression. Blacks who report experience with a hurricane before Hurricane Georges and residential damage were also more likely to report greater depression.

Table 5 of Model 2 examines what individual characteristics affect psychological well-being of whites. Several individual characteristics exert significant effects on depression. Whites who reported formal assistance were likely to report lower levels of depression. Whites who reported residential damage were more likely to report lower levels of depression. Lower levels of income and health were associated with high levels of depression among whites.

Also, whites who experiencing stressful life events were more likely to higher levels of report depression.

Table 4. Ordinary Least Squares of Depression on Support Variables and Individual Characteristics

Independent Variables	Dependent Variable: Depression
Support Variables	
Instrumental Help (before the Storm)	.257 (.109)
Instrumental Help (after the Storm)	-.062 (.113)
Emotional Help (before the Storm)	.009 (.114)
Emotional Help (after the Storm)	.283 (.114)
Formal Support	-.375* (.134)
Individual Characteristics	
Race (Blacks)	-.140 (.152)
Gender (Female)	-.030 (.108)
Education	-.082*** (.023)
Family Income	-.000 (.000)
Age	-.002 (.004)
Marital Status (Married)	-.224 (.119)
Family Assistance (yes)	.310 (.294)
Residential Damage (yes)	.272 ***(.058)
Health (yes)	-.510***(.074)
Experience Hurricane (yes)	.347* (.141)
Life Stress (yes)	.397*** (.059)
Intercept	3.118 (.458)
R^2	.305
N	646

Unstandardized coefficients. Standard errors in parenthesis.
*p<.05, ***p<.001 (two-tailed)

Table 5. Ordinary Least Squares of Depression on Support Variables and Individual Characteristics

	Model 1	Model 2
Independent Variables	**Blacks Dependent Variable: Depression**	**Whites Dependent Variable Depression:**
Support Variables		
Instrumental Help (before the Storm)	.529 (.306)	.209 (.114)
Instrumental Help (after the Storm)	-1.135† (.362)	.018 (.117)
Emotional Help (before the Storm)	-.030 (.353)	-.033 (.117)
Emotional Help (after the Storm)	.367 (.359)	.260 (.118)
Formal Support	.110 (.359)	-.308* (.143)
Individual Characteristics		
Gender (Female)	-.001 (.332)	-.126 (.112)
Education	-.243** (.070)	-.067 (.024)
Family Income	.000(.000)	.000*** (.000)
Age	-.017 (.013)	.001 (.004)
Marital Status (Married)	-.416 (.335)	-.200 (.125)
Family Assistance (yes)	.383 (.585)	.305 (.344)
Residential Damage (yes)	.504* (.154)	.201* (.062)
Health	-.221 (.215)	-.589*** (.077)
Experience Hurricane (yes)	1.598*** (.349)	.110 (.157)
Life Stress (yes)	-.053 (.148)	.492*** (.063)
Intercept	3.844	3.110
R^2	.422	.332
N	95	542

Unstandardized coefficients. Standard errors in parenthesis.
*p<.05, **p<.01, ***p<.001 (two-tailed); p<.05†

DISCUSSION AND CONCLUSION

Sociologists have attempted to explain the variations of psychological well-being by examining the stress-support process. There is reason to believe that certain social groups will have differential access to support, therefore causing varying levels of psychological well-being. However, researchers have not examined racial differences in the stress-support process. This thesis attempts to investigate those issues by first focusing on whether and how the support processes differ by race, and then asking whether the relationship among stress, support, and depression differ between blacks and whites, in a nonroutine situation — Hurricane Georges.

Drawing on social capital and social network theory, I argued that certain resources are not always obtainable or possessed by the individual actor. Often, individuals must rely on their social circles to access a particular resource. However, Lin (2000) argues resources are unevenly distributed across social circles and, to obtain a particular resource one must look beyond their social circle. Evidence suggest that social and economic resources are limited within blacks' networks (Hofferth, 1984; Gaudin and Davis, 1985); therefore, during a nonroutine situation in which all networks are strained, blacks may have less access to network resources (social support) than whites do. My analysis supports that prediction: Blacks are more likely to receive lower levels of instrumental support in the recovery phase of the storm than whites.

Conclusion

These analyses are consistent with the argument that networks, and social resources embedded within these networks, are important components to

consider when investigating social support. Examining the uneven distribution of resources between social groups and the types of networks in which individuals are embedded allows researchers to begin to understand how levels of resources differ between blacks and whites, and what effects those differences exert. Two findings deserve further discussion. First, emotional and instrumental support in the preparation phase of the storm did not exert significant effects, for blacks or whites. However, blacks who report lower levels of instrumental support were more likely to report depression. Future research should examine whether support (instrumental or emotional) before a nonroutine situation affects an individual's psychological well-being, during and after the storm. Second, because there are racial differences in the social resources that blacks and whites can access, it is important to examine what support transactions are significant in reducing psychological symptoms for blacks. Because nonroutine situations - such as hurricanes- have such devastating effects at the individual and community level, pursuing these issues allows researchers to understand the survival techniques that are activated within the networks in which blacks and whites are embedded.

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APPENDIX: MEANS AND STANDARD DEVIATIONS

	Blacks		Whites	
	Means	**Std**	**Means**	**Std**
Support Variables				
Instrumental Help (before the storm)	.431	.497	.463	.499
Instrumental Help (after the Storm)	.357	.481	.472	.499
Emotional Help (before the Storm)	.410	.499	.472	.499
Emotional Help (after the Storm)	.442	.467	.474	.499
Formal Support	.315	.467	.204	.403
Individual Characteristics				
Gender (Female)	.294	.458	.389	.488
Education	13	2	13	2
Family Income	39.169	23.704	51.373	25.034
Age	44	11	51	14.
Marital Status (Married)	.378	.487	.717	.450
Family Assistance (yes)	.073	.262	.025	.158
Residential Damage (yes)	2.22	.958	2.116	.905
Health	2.88	.741	3.13	.739
Experience Hurricane (yes)	.6421	.481	.867	.339
Life Stress (yes)	1.178	1.061	.684	.915
Depression	1.535	1.604	.980	1.463

VITA

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