The effects of religiosity on African-American depressive symptomology

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The effects of religiosity on African-American depressive symptomology

by

Debbie Ruth Martinez

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
MASTER OF SCIENCE

Major: Sociology

Program of Study Committee:
Dan Hoyt, Major Professor
Andy Hochstetler
Dan Russell

Iowa State University
Ames, Iowa
2002

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Graduate College
Iowa State University

This is to certify that the Master’s thesis of
Debbie Ruth Martinez
has met the thesis requirements of Iowa State University

Signatures have been redacted for privacy
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CHAPTER ONE

INTRODUCTION

Epidemiological survey estimates indicate that African-Americans have among the lowest levels of depression of any ethnic group (Dohrenwend and Dohrenwend, 1969; Williams et al. 1997, Williams and Harris-Reid, 1999). African Americans have been found to have lower amounts of current and lifetime major depression as well as lifetime prevalence of minor depression (Weissman and Myers, 1978). The low levels of depression among this population group seem counter-intuitive given the stressors that are associated with this disadvantaged economic status such as daily hassles, alienation and increased sense of powerlessness (Mirowski and Ross, 1989), along with the chronic strains of discrimination and poverty (Kessler, 1979).

The question of prevalence rates of depression by race is an issue that is not yet resolved. Though many epidemiological studies regard African American levels as surprisingly low, other studies on differences in depression levels between African Americans and White Americans have
yielded contradictory results (Comstock and Helsing, 1976). Vernon and Roberts’ (1982) study used the same methods as that of Weissman and Myer (1978) and found that Blacks had a higher prevalence of major and minor depression. Such findings bring into question the relationship between race and depression.

One potential explanation for possible lower levels of depression among African Americans is that there are unique culturally-tied buffers that somehow lessen the impact of the higher levels of economic stress and race-related stressors (e.g., discrimination). One factor that has been suggested as a potential buffer is the influence of religion, particularly in the African American community. It has been suggested that people with higher amounts of religion have lower amounts of depression (Ventis, 1995; Burgess and Wagner, 1971; Crawford, Hannal, and Weiner; 1989).

This research project will examine the potential direct and indirect effect of religious involvement on depression using a sample of adults from the Lower Mississippi Delta. Of particular interest are questions of what, if any, the relationship is between religion and depression. Does religion work directly to reduce depression? Does religion moderate the impacts of the types of stressors that typically
increase risk for depression? If any of these effects are observed, are they different for African Americans than for White Americans?

This research study is divided into four further sections. In Chapter 2, I will review literature pertaining to the thesis research. The review of literature will cover religiosity and the different ways of operationalizing the variable in research. Understanding the stress-distress model is imperative in any research that deals with depression and variables that may affect it. The literature on the stress-distress model, the typical outcome measure of depressive symptoms, and traditional buffers will be included. In Chapter 3, I will introduce the data and measures used in this research study and the analytic procedures that will be used. Chapter 4 will be a presentation of the data analysis and the research findings and finally, Chapter 5 presents discussion and findings.
CHAPTER TWO

LITERATURE REVIEW

Stress-Distress Model

Wheaton (1997) defines stress as generalized psychological alert in response to threatening agents. Stressors refer to conditions of threat, demands, or structural constraints that by their very occurrence or existence call into question the operating integrity of the organism. Stress is the action and distress is the reaction or response. However, generally people refer to stress as a response to a psychological problem or one's subjective emotional experience (Thoits, 1999). Researchers distinguish between these two phenomena by restricting the term stress or stressor to the causes of emotional problems and using the term distress to define the emotional consequence or stress reaction/response.

Figure 1

A  B
In the basic Stress-Distress model, stress or stressor (A) has a direct causal relationship to distress (B). This is referred to as a main effect: stress leads to distress. Stressors can include life-changing events (Holmes and Rahe, 1967), daily hassles (Kanner, Coyne, Schaefer and Lazarus, 1987), role strain (Pearlin, 1983), ongoing difficulties (Brown and Harris, 1978) and childhood and adult traumas (Garmezy, 1983; Langner and Michael, 1962). Distress is the generalized behavior response or outcome usually in the form of psychological problems or mental illness. Studies have shown that negative life events and chronic strains have been predictive of many types of psychological problems including schizophrenia and generalized distress (Avison and Turner, 1988, Pearlin, 1981).

Buffers:

Buffers alter the causal relationship dynamic between stress and distress. Buffers refer to aspects of an individual's social condition that effect the distress outcome in the stress-distress model. Generally, a buffering effect will refer to an ameliorating effect on distress
(Pearlin, 1981) however in some cases a buffer can also exacerbate the distress outcome (Wheaton, 1985). While there is a definite relationship between stress and distress, the correlation is generally weak with most studies reporting a 0.3 correlation (Thoits, 1999). This can be explained by several variables, which have an outcome or buffering effect on the stress-distress model. In this paper there are three primary stressors; one subjective measure and two objective measures. The subjective measures rely on the individual’s personal sense of the extent of stress they experience while the objective measures deal with actual events which should cause a distress reaction. This study uses felt economic strain, economic constraint and negative life-events respectively as its subjective and objective variables. The distress or stress response is depression.

Mediators and Moderators:

The stress process can be described as having three major components: the sources of stress, the mediators of the stress, and the outcome or manifestation of the stress. (Wheaton et al, 1981) The ways in which the mediators of the stress interact with the main effect vary. There are three possibilities in modeling the effect that a buffer might have
on the stress-distress model: additive, mediating/intervening, and moderating/interactive.

**Mediating Models:**

Mediators are constructs or barriers that control or govern the effects of stress on the stress outcome (Pearlin, 1989). A "mediating effect" connotes that the effect is one in which the stressor works through the mediator, in its ability to incite resources.

Two models of mediating or intervening effects are displayed below. Figures 2A and 2B illustrate the classic mediating model (Wheaton, 1985). Points A, B, and C represent the stressor, mediating variable, and outcome respectively. In order for a buffer to act as a mediator, there must be a pre-existing relationship between stressor and outcome, as denoted in both diagrams by the direct line between points A and C.

![Figure 2A](image-url)
Moderating Models

Resources that work to lessen distress by reducing the effects of stress are said to have a moderating effect. Moderating effects are those in which the outcome is affected by the presence of a buffer. In a moderating model, it is not necessary that the stressor and buffer be present at the same point. A moderating variable directly impacts the relationship between stress and distress. Furthermore, a moderating variable will effect the outcome at varying degrees. As a person experiences stress, the moderating variable, for example, social support is either already present or is introduced. This will affect the extent to which the person experiences distress. Figure 3 illustrates
the additive and interactive effect model. The model illustrates how the resource can work as a moderating variable.

Figure 3

The direct interaction between stress and distress, illustrated by the direct line between A and C, represents the interaction where the moderating buffer is completely absent. This is the basic model for the stress-distress relationship. This relationship is altered when a moderator is introduced to the original relationship. Path B represents the buffering effect and the reduction in the strength of the distress in relation to the addition of the moderator.

Depression

Depression is generally defined as sadness or grief in response to loss along with a disinterest in life activities
that once brought pleasure to the individual. The Diagnostics 
and Statistical Manual of Mental Disorders (DSM-IV) 
differentiates between general depression as a response to 
loss and clinical or Major Depressive Disorder. Major 
Depressive Disorder is diagnosed when an individual has 
experienced at least one depressive episode. The criteria for 
a major depressive episode are five or more symptoms in the 
same two-week period representing a change in previous 
functioning either depressed mood or lack of interest or 
pleasure. The symptoms used are as follows:
(1) depressed mood most of the day, nearly every day, as 
indicated by either subjective report or observation made by 
others (e.g., appears tearful), (2) markedly diminished 
interest or pleasure in all, or almost all, activities most of 
the day, nearly every day (indicated by either subjective 
account or observation by others), (3) significant weight loss 
when not dieting or weight gain (e.g., a change of more than 
5% of body weight in a month), or decrease or increase in 
appetite nearly every day. (4) Insomnia or Hypersomnia nearly 
every day (5) psychomotor agitation or retardation nearly 
every day (observable by others, not merely subjective 
feelings of restlessness or being slowed down), (6) fatigue or 
loss of energy nearly every day, (7) feelings of worthlessness
or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick),(8) diminished ability to think or concentrate, or indecisiveness, nearly every day),(9) recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide. The symptoms must also cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

**Differential Vulnerability**

Research on distress has shown that some individuals are more prone to depression than others depending not only on the person's financial resources (with determinates such as education level, occupation and income), but also on non-financial coping resources. The disparity in levels of distress between African Americans and White Americans can be couched as both a function of race and/or of socioeconomic status differences. Forms of institutional racism, as well as, informal, individual racism serve as an added effect on distress levels. (Tausig, Michello and Subedi; 1999)

This differential exposure to stressors, based on race, may explain the variations that continue even when controlling
for education, occupation, and income. It is not unlikely that members of racial minority groups experience more stressful events and strains, namely discrimination and bias, than their White counterparts. Thus, Black Americans are exposed to more undesirable life events and more chronic economic problems. This leads to additional consequences on the felt levels of distress. As these minority group members experience more distress, they differ in regards to vulnerability to stressors.

Ulbrich et al. (1989) found that lower socio-economic status (SES), African-Americans were more vulnerable to life events than both their white counterparts and high SES Black Americans. This gives credit to the differential vulnerability theory; lower class African Americans report greater levels of exposure and are affected by these stressors at greater degrees. This is referred to as differential vulnerability (Ulbrich et al., 1989; Kessler and McLeod, 1984). Financial resources, or more to the point, lack thereof, leaves the person susceptible to increased levels of stress from exposure to related negative life events. An increase in the risk of depression is the result of an inability to cope with undesirable financial events, such as losing a job or bankruptcy.
In a similar study, researchers found that there were differences in well-being between African American respondents and white respondents even after accounting for education level, income, and job characteristics, positing that "Race is still a significant determinant of psychological distress" (Thomas and Hughes, 1986). African Americans are subject to, what amounts to, a "racial tax" on their psychological health. The difference between the mental health of a white American versus a Black American of the same SES is the sum of this racial tax.

Buffers

One of the traditional buffers examined in the literature on depression is social support. The necessity of stable, supportive relationships to human well-being is considered a foundation of sociological theory and the study of mental health. Moreover, social institutions can be better understood through the scope of social support. The concept of social support deals not only with actual support, having someone or something on which one can rely, confide, and count on, but with one's perception of available support from other individuals and social groups. Social support implies more than just a cursory social association; a true sense of social
support entails “meaningful social contact” (Cassell, 1976). According to Turner (1999), social support involves the “presence or implication of stable human relationships”. There have been many studies done on the importance of social support to psychological well-being. Recently, social support has been tested for its buffering effects on stress. Primary Group Theory posits that psychological well-being is sustained by our affiliation with a primary social group. Without this primary group our psychological and physical health would diminish (Weiss, 1974). While preliminary research on social support was linked to physical health studies, such as heart disease (Lynch, 1977), sociologists deal with it as a moderator for life stress (Cobb, 1976, Cassell, 1976). Cobb’s research focuses on the buffering effects, rather than main effects of social support because social support “facilitates coping with crises” but is not significant outside of life stress. This theory lends itself to moderating models of buffering effects as it implies that the support that an individual has available to her/him before the onset of a stressor is inconsequential.

The African American perspective of social support may be quite different from the White American perspective. Two possible perspectives are collectivism and individualism.
Individualism refers to feelings of alienation. Unlike feelings of social cohesion, individualism deals with person's withdrawal or lack of connection to a larger social group. It is important to mention the concept when discussing African Americans and social support systems because of the disparity between the potential for support for Black Americans versus White Americans within the largely White society.

Collectivism is seen as a cultural frame of reference. Where individualism is outside of the social networks, collectivism is the roots of racial and ethnic relations. Social support on the basis of ethnicity is of key importance to collectivism. Racial and ethnic identity can function to buffer the effect of racism and motivate minority groups to obtain their goals (Oyserman and Harrison, 1998). Ethnic identity can be seen as a buffer to the negative effects of discrimination in a number of social institutions, such as the educational system. A study on African American high school students assessed the role of ethnic identity as a buffer to the negative effects of discrimination. The results of regression analysis showed a relationship between boys' ethnic identity and academic self-concept and their academic performance. The high school African American boys did better in academic work when they felt assured in their ethnic
identity. This is related to social support, which facilitates their healthy self-concept and the feelings of belonging.

Another commonly identified buffer is related to psychological resources. This refers to the availability of social and psychological tools that help individuals manage life events. An important psychosocial resource is sense of control. Sense of control refers to the extent to which a person feels that he/she has control over the events and happenings in their life, specifically stressful life events. It is informed by one’s ability to cope, past outcomes, and social class structure. The power to get things done and the power to control one’s own life are central to one’s sense of control.

Sense of control is divided up into two major paradigms; internal and external locus of control. Internal locus refers to the individual’s expectation or perception of his/her own ability to determine outcomes through behavior. A person with a strong sense of self-efficacy would feel that she/he has a great degree of personal agency. Individuals with an external locus of control, or low sense of control, feel that their own behaviors and actions do not dictate the outcomes to life events. This fatalistic view considers one’s life chances as
being determined outside of personal action and instead by external forces which cannot be controlled, such as fate or luck (Turner and Roszell, 1994).

A person’s sense of control may have an effect on psychological distress. Studies have found a correlation between a high sense of control and lowered amounts of distress. This correlation holds implications for the mental health differences found among social classes and ethnic groups. It is also salient in the study of religion because as Religion as a buffer for African Americans

Religion is an important aspect of every culture. In the context of African American community, it may serve much the same functions as the traditional buffers of social support and sense of control. It provides social support and is a means for attaining social control. As noted by Mirowski and Ross (1989), religion “offers the hope of an alternative source of strength. Religion’s impact depends on specifics. It can bolster individuals’ sense of control over their own lives by providing direction, purpose, and a network of like-minded people to call on.”

Religion and its formal organization through the churches have proven to be mediators and buffers against additional
stresses faced by African Americans. The role of the church and religion has been one of social support, social action and social control. For this reason it is important to consider religiosion as a buffer mechanism against depressive symptomology in this population.

Religious identity and religiosity are difficult constructs to conceptualize. Actions, beliefs, and attitudes that one individual or group considers as indications of religiousness may not be considered as such by another individual or group. When dealing with its link to depression, theories have used one's participation in organized religion as a possible means of buffering distress. Recent studies have looked at the church as a social institution that would have an ameliorating effect on stresses, particularly the Black church for the African American population. Researchers have also been careful to distinguish between religiosity and affiliation with a formal church.

The importance of religion to mental health outcomes becomes more apparent when research focuses on the intersection of physical, emotional, and spiritual wellness. However, there are particular limitations when operationalizing religiosity. Most studies have indexes that
focus on one or at most two dimensions of religiosity. Research on the influence of religion among African Americans suggests that the researcher must distinguish between non-organizational, organizational, and subjective religiosity (Levin, Taylor, and Chatters 1995).

The first distinction to be made is between organizational and non-organizational religion (Allport, 1958). Organizational religiosity refers to public, institutional forms of religious involvement (e.g. religious ceremony or service attendance). Non-organizational religiosity refers to participating in more private, informal types of involvement (e.g. prayer, watching religious programs). Subjective religiosity refers to the "ideational" religiosity of the individual and does not measure behavior but attitudes. This three-dimension measure Taps important elements of both the potential influences of the social contexts, particularly support, associated with formal involvement and of the psychological impacts on belief systems.

The Black Church as a buffer

The Black Church serves as more than an outlet for spiritual expression and affirmation of religious beliefs. For
many African Americans, the church is an institution where they are afforded self-expression and a haven from outside negative and racist attitudes which may be harmful to their mental health. It is important to recognize the other positive reinforcements found for both Black adults and youth in the organized church.

African American church groups serve as a means of healthy socialization for black adolescents by combating against subjective stigmatization (Brega and Coleman, 1999), racism (Oyserman and Harrison, 1999), and depressive symptomatology (Baker, Williams, Bailey, and Jackson, et al, 1992). Interview data from a recent study supported the hypothesis that strong church participation and attendance lowers the internalization of racial stereotypes and stigmatization (Brega and Coleman, 1999). The social support that an African American child needs may be unattainable in other social areas because of racism and stereotyping. The African American church serves as a haven for persons in need of support that they could not otherwise have access to. Religious affiliation and church activity influence the African Americans' perception of themselves and of the amount of support that they have. As a major social institution,
Religion involves many aspects of the African American ideology.

Religious organizations in the African American community represent much more than sermons on Sunday mornings. They hold the potential for broader social movements. These movements are instrumental in raising feelings of community, awareness and activity. They also decrease feelings of helplessness, alienation, and subjective stigmatization related to depression. Moreover, these religious social movements have been successful in creating viable communities. The National Baptist Convention protested segregated communities and supported the women’s movement for suffrage (Higginbotham, 1993). The National Council of Churches was supportive of race relations and campaigned for equal rights. This moved African Americans into another avenue toward attaining equality and self-efficacy. The perception that they were able to do something to better their present and future situations improves mental health by buffering work-related stress, anomie, and stigmatization. "To the extent that the person perceives limited opportunity, as well as, powerlessness to change this situation, it may be expected that psychological distress will result" (Vega and Rumbaut, 1991). The history of religion-based political movements is well-established in the
African American community and has resulted in tangible improvements in social and economic conditions.

Not surprisingly, many past civil rights leaders have come from within the African American church. Through religion, and religious groups, blacks were empowered to participate in the decision making (Findley, 1993). Afro-Baptist church sermons, songs and prayers mirror the ideals of the religious social movement and of community and of its rewards. The social institution of religion is not unique to the African American culture. However, the community gathers around the church as a true social organization and workable institution. Through the bond of religiosity, the African American community has a buffer for the additional stresses that they experience.

The most popular of cultural explanations for the low frequency of African American depression and suicides are the large amount of community and social support received from both extended family and the church (religiosity). Using data from the General Social Surveys form 1972-1994, the aspects of religiosity were tested for their effect on African American perceptions of suicide (Stack, 1998). Using a multiple regression analysis, church attendance was found to significantly lower suicide acceptability. This supports the
theory of church attendance and activity as a form of social support for African American individuals. A great amount of social meaning is derived from religious experience within African American culture.

The African American community has gained social support from the Black church since its formation. The part of the Black church as a social institution has through the history of the African American experience, from slavery to present social status, improved social conditions. The dexterity of the Black church has served the Black community as both religious and spiritual catharsis and as a key to mobility in the social system. Religion's role in the Black community may be both an opiate and a social tool. The duality of the church's functions serves the Black community as social support and also gives, through community action, a sense of control to its congregation. The Black Church Family Project with a sample of 634 churches, found results indicating that seven of ten churches provided at least one type of program focused on family support. It is for this reason that the Black church has been understood as a mediating structure (Moore, 1991).

The church mediates between the African American congregation, or individual, and the larger social structure.
Thus, organizational religiosity may be correlated with lower levels of distress, as the institution serves as a vehicle for attaining social support and sense of control. It is important to understand how the operationalization of religion might affect research findings. One’s own perception of himself or herself as religious without the active involvement in a formal church is also a valid measure. Many elderly persons are unable to make formal church gatherings and thus must find other ways of expressing their religiosity. One might consider these informal practices of religion. Some possible activities outside of attending a church service are praying, reading the Bible or other religious books, watching religious programming on television or listening to religious radio programming.

**Hypotheses and Conceptual Model:**

Based on the prior epidemiological research in the area of depression rates of African Americans, and given the findings of studies which consistently document a relationship between socioeconomic status and distress, support is given to the presence of a buffering effect present in the subsistence of the African American population ameliorating the effect of such stresses.
A diagram of the hypotheses of this study has been created in order to clearly illustrate the proposed hypotheses. There are three relationships that will be tested in this study. Arrow 1 represents the hypothesized relationship between stress and distress. The stress variables for the conceptual model are labeled Felt Economic Stress and Negative Life Events. The distress variable for this model is depression. The relationship between felt economic stress and negative life events and depression is illustrated in the direction of Arrow 1. Stressors serve as the action while depression serves as the reaction to negative life events and economic strain. Arrow 1 illustrates the basic hypothesis that economic strain and negative events will be positively associated with depression.

Arrow 2 illustrates an additive effect of religiosity on the outcome. This effect displays a separate relationship between religion and stressor, both acting as independent variables competing for influence over distress levels. The influence of one may offset the influence of the other. They each have their own separate relationship line to distress. Arrow 2 illustrates a second hypothesis that religiosity is negatively correlated to depression levels. As a person’s religiosity level goes up, depression levels will lower.
Arrow 3 illustrates a further hypothesis on the relationship of religiosity to distress levels. This direct relationship on the stress-distress relationship serves to buffer the effects of the stressers so that they impact distress levels to a lesser extent. Hypothesis 3 is illustrated by Arrow 3: religiosity has a moderating effect on the relationship between felt economic strain & negative life events and depression levels. The hypotheses of this study are listed below.

H1: There will be a positive correlation between the stress variables, negative life events and felt economic strain, and the distress variable: depressive symptoms.

\[
\text{Felt Strain/ Negative Events} \quad \rightarrow \quad \text{Depression} \\
(+)
\]

H2: There will be a direct effect between religiosity and depression. As levels of religiosity increase, levels of depression decrease.
H3: The direct effects of stressors and religion will be stronger for African Americans than White Americans.

H3a: The effect of religion on depression will be stronger for African Americans than for Whites.

H3b: The effect of stressors on depression will be stronger for African Americans than for Whites.

H4a: There will be a moderating effect of religiosity on the stress-distress relationship. Religiosity will lessen the effect of the negative life and felt economic stresses on depression.

H4b: The moderating effect of religiosity on the stress-distress relationship will be stronger for African Americans than for Whites.

The conceptual model is represented in Figure 3.
Figure 3:
The Conceptual Model
Sample

Data for this study were collected in conjunction with the Delta Project research study conducted at Iowa State University by the Institute for Social and Behavioral Research. In 1994, data was collected using telephone surveys of residents in lower Mississippi Delta regions of Mississippi, Arkansas, and Louisiana. This region was selected because of a high proportion of rural, poor, and minority families that had increased probability of exposure to long-term economic stressors.

The research instruments were pretested with a sample 200 Iowa residents. The second survey sample consisted of 800 Lower Mississippi Delta adult residents in the spring of 1995. Because some changes were made in the religion questions after the Iowa pretest, only the Lower Mississippi Delta sample will be included in this analysis. After deletion of missing cases, the sample for this study was 749 adults. The African American respondents numbered 168. Among this group, 71% were
female (N=119) and 29% were males (n=49). The purpose of the project was to examine the relation between stressors, religion, and depressive symptoms for these rural, poor, community members.

**Measurement**

The variables measured in this study are depressive symptoms, economic stressors, and religiosity/religious involvement.

**Measures of Depressive Symptoms**

This study measures depression using the twenty-item CES-D scale of depressive symptoms. The twenty items were summed in order to create an index for depression. The Center for Epidemiological Studies’ Depression Scale (CES-D) is an index created to measure distress. It uses psychological indicators of depression (e.g. mood) rather than physiological indicators (e.g. malaise). The CES-D is used in a multitude of studies including the National Center for Health Statistics’ Health and Nutrition Examination Survey (HANES) and has largely replaced the Langner index as the standard (Mirowski and Ross, 1989). The CES-D consists of twenty statements that are meant to assess the participant’s depressive symptomatology.
Respondents were asked to answer the following questions:

How many days in the past week, including today,

Have you felt sad?
Have you felt that people disliked you?
Have you had crying spells?
Have you felt lonely?
That your sleep was restless?
You felt people were unfriendly?
You felt happy?
You felt hopeful about the future?
You felt you were as good as other people?
You enjoyed life?
You thought your life had been a failure?
You felt like not eating, your appetite was poor?
You felt you could not get going?
You had trouble keeping your mind on what you were doing?
Felt you could not shake off the blues even with help from your friends and family?
You felt that everything you did was an effort
You felt fearful?
You talked less than usual?
You felt depressed?

The response categories for each answer were:

1 = 0 days
2 = 1-2 days
3 = 3-4 days
4 = 5-7 days
8 = DON'T KNOW
9 = REFUSED TO ANSWER

Measures of Religiosity

Religiosity is measured using the Multidimensional Measure of Religion Scale created by Levin, Taylor, and Chatters (1995). Before this scale, finding a uniform definition of religiosity was difficult to impossible in literature. As Levin explained, "the often used term of religiosity for example seems to cover considerable ground: behaviors, attitudes, values, beliefs, feelings, experiences..." (Levin, Taylor, Chatters, 1995). Traditional models of religiosity would focus on one or two factors at best.

The multidimensional measure (Levin, Taylor, Chatters, 1995) is unique in that it uses three dimensions: subjective, non-organizational, and organizational religiosity. The
The original 12-item scale consisted of five items measuring organizational religiosity, four items measuring non-organizational religiosity, and three items measuring subjective religiosity. The measures of overall fit for the multidimensional model showed it to have a more acceptable overall fit than the one and two-factor models. The GFI scores were .974 and .977 and the AGFI scores were .955 and .962. This study uses a five-item scale of religion that incorporates each of the three dimensions. Respondents were asked to specify their religious preference (Protestant, Catholic, Jewish, None, Other) and their specific denomination.

Respondents were asked to answer the following question for a measure of subjective religiosity:

In general, how important is your religion in your day-to-day life?

The response categories were as follows:

1= VERY IMPORTANT
2= FAIRLY IMPORTANT
3= NOT TOO IMPORTANT
4= NOT AT ALL IMPORTANT
8= DON'T KNOW
9= REFUSED TO ANSWER
Respondents were asked to answer the following question in order to measure organizational religiosity:

How often do you attend religious services?

Respondents were asked the following questions in order to measure non-organizational religiosity:

How often do you listen to religious programs on the radio or watch them on television?
How often do you read religious books?
How often do you pray?

The response categories for these questions were:

1 = Daily
2 = Two or more times a week
3 = Once a week
4 = Two to three times a month
5 = Once a month
6 = Less than once a month
7 = Never
8 = DON'T KNOW
9 = REFUSED TO ANSWER

The three items were summed in order to create an index for non-organizational religiosity. Then the responses from each of the questions on organizational and subjective
religiosity were summed along with the non-organizational index for the total religiosity index.

**Stressors**

This study measured stressors with two separate indexes measuring negative life events and felt economic stress. Respondents were asked if at any time in the past year they had had any of the following events occur:

- Had someone in your household get very ill or injured.
- Had a close friend or relative die.
- Had something stolen from you or your house.
- Broken up with your husband or wife.

Responses were coded for the average of "yes" responses in order to indicate the participants' negative life events. The participants' felt economic stress was measured using a similar two-part index. The first section asked participants to answer yes or no to whether or not they had experienced any of the following events in the past year:

- Take a cut in wage or salary.
- Suffer a financial loss.
- Get laid off or fired from a job.
- Start receiving government assistance.
The second set of items asked respondents to respond to questions involving their family economic situation. This index of felt economic strain consisted of six items. Respondents were asked to respond to questions such as:

- Our income never catches up with our expenses
- We have difficulty paying our bills.
- We have enough money for the medical care we should have.

The response categories for these six statements were as follows:

1= Strongly agree
2= Agree
3= Disagree
4= Strongly Disagree
8= DON'T KNOW
9= REFUSED TO ANSWER
CHAPTER FOUR

RESULTS

Descriptives:

CESD

Depression levels were ascertained by using scores from the CESD, Center for Epidemiological Study of Depression scale. The CESD items are listed in Chapter 3. Scores ranged from 0 to 56. The mean of the distribution was 8.78 with a standard deviation of 8.75. CESD scores above sixteen are standard cutoff and viewed as serious levels of depressive symptoms. The frequency of scores of 16 or higher for the CESD was 15.1% of the sample (N=735). The mean CESD scores and standard deviations by gender and race are illustrated below in Table 1.
TABLE 1:

Mean CESD By GENDER and RACE

<table>
<thead>
<tr>
<th>GENDER</th>
<th>MEN</th>
<th>WOMEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHITE</td>
<td>7.15 (7.53)</td>
<td>8.56 (8.59)</td>
</tr>
<tr>
<td>BLACK</td>
<td>10.25 (8.73)</td>
<td>11.65 (10.33)</td>
</tr>
</tbody>
</table>

The CESD mean scores by race were 8.07 for total White Americans (N = 570) and 11.24 for total African Americans (N=165). The difference is significant at .01 level. When CESD mean scores were calculated by gender only, the means were 7.76 and 9.29 for men and women respectively. This difference was significant at the .05 level. These mean differences indicate significant differences in levels of symptoms across race and gender. Although some past research has found African American levels of depression to be lower than those of White Americans, in our sample the mean CESD scores are higher for African Americans than White Americans. Furthermore, women's mean scores of depression are at higher levels than those of their male counterparts. This relationship is constant,
regardless of race; there is no interaction by race and gender. Thus, African American women have the highest mean CESD score of 11.65.

Religiosity Measure

There are three components to the measure of religiosity: formal or organizational, informal or non-organizational, and subjective religiosity. The questions asked to ascertain the respondents' level of religiosity are listed in Chapter 3 as they appeared in the questionnaire. Two measures of religiosity were developed to be used in different models.

Continuous Measure of Religiosity

The first measure consisted of the total of five questions on religiosity, three of which were measures of informal or non-organizational religious activity. A Two-step process was used for the continuous measure. The organizational, subjective and non-organizational religiosity components were standardized, and Z scores were established. Z scores are produced when standardized values are created for the variables. In the second step the Z scores of the three questions were summed together.
Discrete Measure of Religiosity

The distribution of the continuous measure was examined in order to determine if there was a logical or empirical break. The reason for considering a potential dichotomous scoring was for ease of interpretation of some of the higher order interaction models. Evidence of a natural break was found in a histogram of religiosity Z scores. The scores were dichotomized using "0" to represent Z scores of less than -1, and "1" to represent scores of -1 or higher. The dummy variables are coded "1"="religious" and "0"="non-religious".

Stress

The stress variables are represented as both objective and subjective. The variables used for the objective measure of stress on the respondents were questions regarding their "economic constraint/ difficulties" and "negative life events". The original questions are listed in the preceding Methods chapter. The respondents’ subjective stress was measured using a “felt constraint” variable. Originally the eight objective questions, four economic-constraint items and four negative events items, were dichotomized using "0" to represent a "NO" response and "1" to represent a "YES"
response. Thus, respondents' scores on negative events inventory varied from 0 to 4, as did the scores on objective economic constraint.

The objective and subjective measures for felt economic strain, negative life events, and economic constraint were standardized in the two step process of obtaining Z scores for each variable and using the sum of the three Z scores. The multivariate correlation matrix is shown on Table 2. Gender is dichotomized into male indicated by a score of "0" and female indicated by score of "1". Race is dichotomized as well with African American identified as "1" and White Americans identified with a score of "0". The variable categories and variable names are as follows: NEWGEN, NEWRACE, CATZREL, NEWREL, CESDNew, and Zstress. Zstress is the standardized stress variable, NEWREL is the continuous variable for religion, CESDNew is the depression variable and NEWRACE and NEWGEN are the variables for gender and race.
Multivariate:

**TABLE 2: Correlation Matrix**

<table>
<thead>
<tr>
<th></th>
<th>CESDNew</th>
<th>NEWRACE</th>
<th>NEWGEN</th>
<th>NEWREL</th>
<th>CATZREL</th>
<th>ZSTRESS</th>
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<td>.286**</td>
<td>.209*</td>
<td>.296**</td>
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</tr>
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<td>.000</td>
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<td>.209*</td>
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<td></td>
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</tbody>
</table>

+significant at the .10 level
*significant at the .05 level
**significant at the .01 level
The variable name for depression is CESDNew. Depression is shown to be positively correlated with both the race (.151**) at .01 level, and with the gender (.087*) variables at the .05 level. Although there were no hypotheses made on the impact of religion on depression by gender, the finding is in agreement with past research on depression and is noteworthy as women are significantly more depressed than men. The correlation of race and depression lends support to the hypothesis that African Americans have higher rates of depression that White Americans. A second hypothesis predicts a positive correlation between the depression variable and the stress variable. As stressers increase depression should increase as well. The stress variable is listed under the variable name Zstress. Depression is indeed positively correlated with Zstress (.426**) at the .01 level supporting the basic stress-distress model.

Both the continuous and categorical variables for religion are negatively correlated with the depression variable, -.048 and -.065 respectively, although neither correlation is statistically significant.

Continuous religion is correlated with race .286** and gender .111** at the .01 level. The correlation between
stress and both religion variables; Continuous religion is statistically significant, .110, at the .01 level and categorical religion is significant, .076, at the .05 level.

Table 3 includes the regression coefficients predicting the effects of race, gender, stress, and the continuous religion variable on depression. Column 2 of Table 2 includes the addition of the regression coefficients for stress by race and religion by race. Column 3 includes the additional coefficients for religion by stress.

Table 4 includes the regression coefficients predicting the effects of gender, race, stress, and the categorical variable for religion on depression.
### TABLE 3 Continuous Religion

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<th>b.</th>
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<th></th>
<th>b.</th>
<th>(se)</th>
<th>Beta</th>
<th></th>
<th>b.</th>
<th>(se)</th>
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<td>1.55**</td>
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+significant at .10
*significant at .05
**significant at .01
TABLE 4 Categorical Religion

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<th>Beta</th>
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<th>b. (se)</th>
<th>Beta</th>
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</tr>
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</table>

+significant at .10  
*significant at .05  
**significant at .01

Interaction Model

Stress

When using the categorical measure for religion, the low religiosity group served as our reference group and was specified as "0”. High religiosity was represented by "1". Using the interaction estimates, the slope for the stress variable (Zstress) were calculated. The reference group slope was 2.796. Meaning that for every one unit increase in our stress variable there is a 2.796 increase in our CESD
variable, or depression. This finding supports the hypothesis that there is a direct relationship between stress and distress and a further buffering effect of religion on distress outcomes.

*Categorical Religiosity*

Categorical religiosity was dummy coded as "high" or "low" religion. The high religiosity group, was represented by "1" and was found to be at 2.495 lower on CESD than the low religiosity group. Thus there is support for the hypothesis that religion serves to lower amounts of depression.

*Religion by Stress Interaction*

The interaction between stress and religion shows a slope of -.817. This indicates a difference of .817 between the levels of depression for the high religious group and the reference group. The slope of stress on depressive symptomology for religious = "1" or high religiosity is 1.979.
CHAPTER FIVE

DISCUSSION

This thesis has attempted to examine the effect of religion on the stress-distress model and on the levels of depressive outcomes for African Americans specifically. Past research studies have had mixed results as to whether or not African Americans had lower amounts of depression than the White American population. This study found that African Americans had substantially higher amounts of depression, contrary to other epidemiological research. Furthermore, there were no significant differences in the amounts of religiosity by race either. Therefore, African Americans seem no more likely to be resilient to the distress brought about by economic and social stresses, neither are they more likely to be more religious than White Americans. Although support was not found for differences in the affect of religion on depressive symptomology by race, the basic premise that religiosity lowers depressive outcomes was supported. Support was found for Hypothesis 1. There is a positive correlation between stress and distress variables in this study. This
finding is an addition to many past research studies on the stress-distress model (Pearlin, 1981; Wheaton 1997). Analysis of the data also showed support for Hypothesis 2. The religiosity and depression were negatively correlated. Therefore it can be stated that there is support for the ameliorating effect of religiosity on depression levels. Furthermore, religiosity acts as a moderator to the stress-distress model as well, as stated in Hypothesis 3. Therefore, there is support for all three hypotheses.

Limitations of the Study

Past research has focused on discrete segments of the Black population making it difficult to generalize to the underlying population. This study has the same limitation in that the communities studied are in a rural, poor, low SES community. Past research has also seen the Black population as a group that demonstrates little variation in religious involvement (Chatters, Taylor, Lincoln, 1999). Furthermore, the original multidimensional measure was composed of a twelve-item scale, and this data set uses only five items. This may limit the validity of the measure.
Perhaps most disappointing, is the inability to discuss the impact on different types of religious involvement. While, the analysis used both the categorical and continuous variables for religiosity, there were certain limitations in the questionnaire in regards to this variable. Perhaps further research will allow a more elaborate measure of religiosity in its three main forms.

Lastly, this thesis research did not include the analyses of the effects of the classic buffers, social support and sense of control, on depression levels. Therefore, no hypothesis can be proven on the affects that these variables might have on the stress-distress or religiosity-distress relationships. Further research will include these two important variables in the stress-distress model.

Conclusion

This study demonstrated that consideration of religiosity levels can contribute to an understanding of the stress-distress model and of depressive symptomology. However, there are several related research questions that have yet to be analyzed. Further research on the subject of religiosity's ameliorating effect on depression should focus on the roles of social support and sense of control on the religion-depression
relationship. Some questions new research should explore are the nature of the buffering effects of religion. Is it directly effecting depression? Do other buffers, such as social support and sense of control work through religion in order to lower depressive level? Furthermore, future research should include more objective factors such as marital status, unemployment, education, and age that may impact depression levels.
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