FINANCIAL DISTRESS AND DEPRESSIVE SYMPTOMS AMONG AFRICAN AMERICAN WOMEN: EXPLORING THE ROLE OF RELIGIOUS COPING AND SOCIAL SUPPORT

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Angelica JoNel Starkey, DrPH

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Objective: Previous research demonstrated that financial distress is associated with depressive symptoms, and that religiosity/spirituality buffer the effects. Yet, research on the interaction between these factors or what factors may contribute to financial distress is limited. The purpose of this study was: 1) to examine the relationship between perceived financial distress and depressive symptoms; 2) to identify financial priorities and needs that may contribute to financial distress; and 3) to explore if religious coping and/or social support act as moderators in the relationship between financial distress and depressive symptoms.

Methods: Surveys from 111 African American women, ages 18-44, who reside in Allegheny County, PA were used to gather demographic information and measures of depressive symptoms, financial distress, social support, and religious coping. Correlation and regression were used to examine relationships. Two open-ended questions were analyzed to assess priorities and needs.

Results: Perceived financial distress was significantly associated with levels of depressive symptoms. Priorities identified by the participants were paying bills and debt, saving, purchasing a home or making home repairs, and/or helping others. Needs identified by the participants were tangible assistance and/or financial education. Religious coping (total,

internal, and external) and total social support were not moderators between perceived financial distress and depressive symptoms. However, tangible social support was found to be a moderator, in that higher levels resulted in lower levels of depressive symptoms for individuals with high and average levels of financial distress.

Conclusion: Ways to manage and alleviate financial distress as well as identifying organizations, programs, services, and or individuals that can provide tangible social support should be considered when addressing the mental health of African American women.

Public Health Significance: Perceived financial distress is significantly associated with levels of depressive symptoms and this can be used to create new and/or enhance existing programs, services, and/or interventions that not only focus on and treat women at risk for depression but that also address personal finances and tangible support. This finding also draws attention to the need for collaborative efforts among professionals in different disciplines.

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PREFACE

"It feels so good to make it this far
And I didn't think I could take it so long
There were days I wanted to quit
I said surely this is it
But I held on…"

Dear God lyrics ~Smokie Norful

"I've been up
And I've been down
Had my life turn, turn, turn
Completely around
But in spite of everything I've been through
I still... I gotta say thank you"

Still Say, Thank You ~Smokie Norful

Getting an education was always in my plans but I had no clue as to what I was setting myself up for. All of the trials and tribulations I would endure along the way. Or the fact that life would not work around my "school schedule." I found myself doubting my intelligence and capabilities. I felt defeated, overwhelmed, and at times out of place as if I didn't belong in a doctoral program. Lucky for me, God knew the plan that He had for me and surrounded me by supportive and loving people. So I give praise and thanks to God for all that He has done for me.

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1.0 BACKGROUND AND INTRODUCTION

We as public health professionals must diligently work towards achieving the vision of *Healthy People 2020,* which is "a society in which all people live long, healthy lives."[1] More specifically, one of the major overarching goals is to "achieve health equity, eliminate disparities, and improve the health of all groups."[1] In order to do this we must recognize the illnesses for which disparities exist; the magnitude of the disparities; their effect on the quality and years of life of the afflicted individual; risk factors of the illnesses; and factors that protect people from the negative effects of illnesses and disease.

The health focus of this paper is mental illness, specifically depression and depressive symptoms. This paper seeks to 1) discuss depression/depressive symptoms, and the magnitude of the disparity/problem; 2) describe the barriers that hinder recognition, diagnosis, and treatment for depression/depressive symptoms; 3) explore a risk factor (financial distress) and protective factors (social support and religious coping) for depression/depressive symptoms; and 4) provide suggestions for current and future work that will aid in achieving objectives MHMD-4.2 and MHMD-4.1 of *Healthy People 2020* that relate to mental illness.

1.1 THE SIGNIFICANCE OF MENTAL ILLNESS

Mental illnesses rank first among illnesses that cause disability in the United States, Canada, and Western Europe.[2, 3] In the United States, approximately 22% of the U.S. adult population has one or more diagnosable mental disorders in a given year.[2] Of all mental illnesses, major depressive disorder (MDD) is the most commonly occurring affective or mood disorder,[3-10] afflicting over 19 million US adults,[11] and is expected to become the second greatest cause of disability worldwide over the next decade.[9-11]

1.1.1 Depression

In this paper the terms depression, clinical depression, and MDD will be used interchangeably. According to the diagnostic criteria of the DSM-IV MDD is a mood disorder characterized by at least one major depressive episode (MDE), no history of manic, mixed, or hypomanic episodes, and the symptoms displayed cannot be due to another disorder.[10, 12]

A major depressive episode is characterized by a depressed mood or a loss of interest or pleasure in daily activities consistently for at least a two week period, and this must represent a change from the person's normal mood.[10, 13] Social, occupational, educational or other important functioning must also be negatively impaired by the change in mood.[13] A major depressive episode consists of the presence of at least five of these symptoms:[10, 13] depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful); markedly diminished interest or pleasure in all, or almost all activities most of the

day, nearly every day; 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; insomnia or hypersomnia nearly every day; psychomotor agitation or retardation nearly every day; fatigue or loss of energy nearly every day; feelings of worthlessness or excessive or inappropriate guilt nearly every day; diminished ability to think or concentrate, or indecisiveness, nearly every day; or 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.

Depression not only impacts the quality of life and physical health of the afflicted individual via disability and increased morbidity and mortality from other medical conditions but it also has an indirect effect on other members of the society as well as society as a whole due to lost productivity and increased health care utilization.[8, 9, 14] To illustrate the burden of the disease, depression is the leading cause of disease burden for women aged 15 to 44.[15] A person with a depressive disorder is often unable to fulfill her daily responsibilities (e.g., self-care, normal social roles of parent, worker, spouse, or friend) and may even be incapacitated for weeks or months if her depression goes untreated.[4, 10] Maternal depression can have profoundly negative effects on child development, increasing the risk for serious health and behavioral problems in young children.[16-18] In regards to societal costs, it is estimated that half of the loss of work productivity in the United States, at an approximate cost of $44 billion year, is attributable to the disabling effects of depression.[10, 12]

In terms of who is affected, statistics and research have shown that women are more likely than men to become depressed,[4, 19-22] and approximately seven million women in the

United States between the ages of 25 and 40 are diagnosed with depression annually.[19] Women specifically at risk are those who have young children, are poor, on welfare, less educated, and/or unemployed.[4, 16, 23] Research has also shown that in the United States, African Americans are disproportionately more likely to suffer from the aforementioned circumstances (generally poorer, have less education, and are employed in lower status occupations than are whites).[24, 25]

It is also important to note that studies have differed in reported prevalence rates of MDD among women. Some studies note that the rates of MDD among African American women are similar to or lower than rates for white women,[10] whereas other studies have estimated the rates of depression to be 50% higher for African American woman when compared to white women.[26] This discrepancy is to be expected given that African American women are less likely to receive diagnosis and treatment for their mental illnesses than Caucasian Americans,[7, 24] and they are less likely to participate in mental health research studies.

1.1.2 Depressive Symptoms

In lieu of a focus on diagnosable MDD, numerous mental health research studies on African American women tend to focus on psychological distress,[10] as it is a key indicator of emotional problems.[27] African American women are exposed to high levels of stressful life events and chronic strains that make them vulnerable to psychological distress and certain psychiatric disorders.[28] Younger African American women between the ages of 18-44 years of age have been noted to have higher levels of depressive symptoms.[10]

Psychological distress refers to subjective general distress describing human psychological responses in adapting to the environment.[27] Even though symptoms of psychological distress may range in severity from low to high, they may still have insufficient intensity or duration for a diagnosis of mental disorder according to the DSM criteria.[10] Depressive symptoms can occur as part of the psychological stress response, and the presence of depressive symptoms is the most commonly used indicator of psychological distress.[10] Depressive symptoms include:[29] persistent sad, anxious or "empty" feelings; feelings of hopelessness and/or pessimism; feelings of guilt, worthlessness and/or helplessness; irritability and restlessness; loss of interest in activities or hobbies once pleasurable, including sex; fatigue and decreased energy; difficulty concentrating, remembering details and making decisions; insomnia, early–morning wakefulness, or excessive sleeping; overeating, or appetite loss; thoughts of suicide, suicide attempts; and persistent aches or pains, headaches, cramps or digestive problems that do not ease even with treatment.

Studies indicate that African American women experience the highest levels of psychological distress, and their reported distress tends to be higher than that of white women, AA men, and white men.[10] Brown[10] notes that at any given time 16-28% of African American women have psychological distress that is indicative of clinical depression. Even with different measures and different methods, the empirical research generally points out that African American women are more likely than African American men and whites to have levels of depressive symptoms sufficiently high for a clinical diagnosis of depression.[10] It has also been noted that African American women of the lowest incomes report the highest levels of depressive symptoms.[10] A study noted by Coiro[18] that surveyed 225 single

mothers whose incomes were at or below 185 percent of the poverty level found that 60 percent of the sample reported levels of depressive symptoms indicative of clinical depression.

Psychological distress, similar to MDD, has a negative impact on a person's working capacity, family, life, and welfare activities.[27] High scores on depressive symptom screening scales are also associated with significant social and functional disability.[28] In fact, disability rates associated with subclinical depression or depressive symptoms may equal or exceed those associated with DSM-defined depressive disorders.[28] A study of a nationally representative sample of U.S. mothers found that those with elevated depressive symptoms were significantly more likely than those without such symptoms to report child behavior problems, including frequent temper tantrums, difficulty getting along with other children, and difficulty in managing the child.[16] They were also more likely to report that the child was unhappy or fearful.[16] This illustrates the vulnerability of children being raised by mothers with elevated depressive symptoms,[18] similar to what was noted for children of depressed mothers. Thus, consequences of high levels of subclinical depression among AA women may be just as debilitating as those of MDD.[10]

The above information highlights a substantial need for mental health services for African American women as they disproportionately suffer ill health from depression and/or depressive symptoms. The next section outlines barriers that hinder recognition, diagnosis, and treatment of depression and depressive symptoms.

1.2 BARRIERS TO SEEKING TREATMENT

We know that depression is treatable,[4, 14] and treatments for depression can be very effective.[30] Medications and psychological treatments, alone or in combination, can help 80% of those with depression.[4, 31] We also know that people of color are less likely to receive mental health services, they receive poorer quality of care, and they are underrepresented in mental health research.[15] In the United States, African Americans, specifically African American women, are less likely to receive diagnosis and treatment for their mental illnesses than Caucasian Americans.[7, 24]

Given this, a disparity will continually persist if African American women are not being diagnosed and/or receiving/seeking treatment for depression. So, what should be done? It is important to determine why African American women are not seeking and/or receiving treatment.

Two major factors appear to contribute: 1) African Americans often seek treatment in the primary care sector, and their symptoms and expressions of depression are different from what physicians are used to seeing, which in turn leads to missed diagnosis,[32, 33] and 2) the culture and cultural identity of African American women shape their symptom formation, the expression of depression,[20] and their attitudes and beliefs about depression and treatment. The connection between culture and the expression of depression and treatment seeking is discussed in a later section.

1.2.1 The role of the primary care physician

Depression is the most common serious mental health problem among primary care patients.[9, 22, 34] Even though depression is the second most common condition in adults (following hypertension) seen in primary care,[15] and previous research has shown that 40-60% of individuals with depression are treated by primary care professionals[35] about 50% of depression cases are missed in primary care settings as they are not accurately identified or treated;[15, 22] especially among African Americans.[22, 34, 36-40] Furthermore, identifying depression in African Americans within the primary care setting can prove to be difficult because this group usually presents with somatic symptoms.[6, 15, 22, 36, 41]

Somatization is a term that describes the expression of psychological or mental difficulties through physical symptoms,[42, 43] which leads to treatment seeking within primary care settings instead of mental health settings. Examples of somatic complaints include problems with appetite, weight gain/loss, muscle tension, palpitations, pounding/accelerated heart rate, sweating, trembling/shaking, shortness of breath/smothering sensations, choking sensation, chest pain/discomfort, nausea/abdominal distress, dizziness/unsteadiness/lightheadedness/faintness, numbness/tingling sensations, and chills/hot flashes.[44] Somatic presentation has been shown to be associated with missed diagnosis.[6, 32, 44, 45] Numerous explanations exist to account for this.

First, usually depressed patients report psychological distress and impaired function, but this is not the case with the target population.[43] Also, clinicians may lack understanding about somatization and, as medical doctors, they focus solely on physical complaints,

resulting in an inaccurate assessment since they do not suspect depression as the underlying cause of the physical symptoms.[8, 19, 38, 45] In addition, physicians may have received little training in treating psychiatric morbidity in primary care and so may frequently feel uncomfortable in addressing and/or treating these conditions.[22, 46] So unless they are interested in psychiatry, screening for depression becomes a low priority of primary care physicians.[46]

Second, physicians usually have time and fiscal constraints [22, 45] causing some PCPs to complain that they are too busy to inquire about psychosocial factors, depression, anxiety and other life problems.[46] Also, clinician bias and stereotyping, conscious or unconscious, contribute to the poor quality of mental health care received by racial/ethnic minorities.[16] Additionally, physicians may also share some of the stigmatized views about depression.[46]

Finally, unless patients are comfortable with the physician and staff they may be reluctant to talk about their feelings.[22, 30, 47] Some patients find self-disclosure extremely difficult.[15] For many low-income minority women lack of health insurance or a regular source of health care also contribute to missed diagnosis.[16]

All of the above reasons contribute to depression remaining undetected, untreated, inadequately treated, missed diagnosed and under-diagnosed among African American women.

1.2.2 The role of culture

A woman's experience with depression will be significantly affected by her cultural identity, endorsed expressions of distress, and perceptions of depression.[20] Culture can be defined as

the learned, shared, and transmitted values, beliefs, norms, and life ways carried by a group of people that guide their decisions, thinking, and actions in patterned ways.[20] In other words, the culture of African American women affects how they think about, talk about, and recognize depression and depressive symptoms.[15] In turn, this translates into and is manifested in their help seeking behaviors and adherence to treatment regimens. The remainder of this section explores some of these cultural effects.

1.2.2.1 Recognizing depression

The lives of African American women are complex, especially those with low income. They are exposed to chronic stressors: poverty, physical hardships, blocked opportunities, discrimination, scarce resources with which to resolve problems, inadequate resources, unsafe neighborhoods, violence, childhood trauma, lack of support, and single parenthood, all of which leave them vulnerable to depression.[6, 43, 48, 49] In addition to chronic stressors, women are generally socialized to put the needs of others before their own and typically devote their financial resources and emotional energy to their families.[16, 19] Consequently, they may feel guilty when they engage in activities to promote self-development or to attend to their own mental health needs.[16, 19] Due to the complexity of their everyday lives many women believe that the depressive symptoms they experience are expected reactions to the daily stress they encounter, so they brush these symptoms off as "just the blues."[26, 43, 50]

Even still, many times African American women are unfamiliar with the signs and symptoms of depression. They may have depressive symptoms yet not identify themselves as being depressed.[22] Waite reported that one African American woman in a study stated

that she felt stressed but did not realize that she was depressed.[20] Similarly, Hines-Martin found that participants were unaware that the problems (physical and emotional) they were experiencing were "mental health" problems, and many verbalized that they did not think that they were "crazy" and therefore did not need mental health services.[50] Moreover, African American women may not always report the typical feelings indicative of depression: sad, blue, down, hopeless, or helpless.[20, 32] Instead, they may use a variety of words to express and describe their feelings in addition to the traditional words: crazy, down in the dumps, hopeless, being in a black hole, the devil, grief, rejection, sad, upset, fatigued, tired, irritable, losing control, pain, lonely, anger, exhaustion, stressed, out of balance, drowning, and sick.[20] They may also present as being angry, irritable, or hostile.[15, 32, 33] In addition to the difficulties in recognizing and treating somatic symptoms, physicians may not be aware of the way African American women conceptualize their feelings.

Furthermore, African American women may view depression as a personal weakness.[45] Many women have reported that they want to manage depressive symptoms on their own, and overcoming symptoms was viewed as merely a matter of willpower that did not require treatment.[46] Having some sense of control over their lives also seemed to be an important deterrent to seeking services.[50] It is also not uncommon to strive for the image of being a "strong black woman," someone who is able to "handle just about anything,"[20] so efforts to be "strong" and minimize the experienced problems also delayed help-seeking.[50] This usually continues until the problem becomes untenable, affecting individual and family functioning, and then help is usually sought.[50]

Lack of knowledge that they are suffering from depression coupled with trying to live up to the image of a strong black woman contributes to African American women not

seeking treatment for depression. If these women do not understand what signs and symptoms constitute depression, they are unable to relate their emotions and whatever they are feeling to being depressed. Therefore, they may feel that there is no need to seek treatment for a problem that they do not have.

1.2.2.2 Alternative ways of coping

When confronted with a "case of the blues," African American women have alternative ways of coping that cause delays in or conflicts with seeking care from a professional. They usually confront their problems, turn to religious leaders, their spirituality and/or prayer, or seek help from within their own social milieu (significant others, family, friends, neighbors).[19, 36, 41, 43, 51, 52]

In terms of religion and/or spirituality, there is often a strong link between spirituality and psychological well-being in many African American women, and prayer is a common coping response for African American women in distress.[20, 41, 43] Almost 85% of African Americans have described themselves as "fairly religious" or "very religious"[19, 41] and 78% of African Americans reported that they prayed every day.[19, 41 45] Quite a few African Americans believe prayer and faith alone will successfully treat depression "almost all of the time" or "some of the time."[31] Consequently, they turn to religious leaders, their spirituality and/or prayer when facing stress and depression.[19, 41, 36, 43, 51] Some individuals follow religious advice, seek pastoral counseling, and avoid mental health services.[50] This is an important cultural factor because even if the individual has the knowledge to recognize depressive symptoms and accepts and realizes that she is or may be depressed, she may still reject formal professional treatment because of her religious beliefs/attitudes.

Research has found that the personal views of "trusted others," (i.e. family, friends, and neighbors) can be very influential in motivating or deterring a woman from seeking treatment.[47, 53] These individuals can impede and/or facilitate a woman's decision to seek mental health services as a solution to experienced problems.[54] People in these networks can work to get women to seek treatment if they are supportive of treatment by motivating, propelling or directing the woman toward problem recognition and problem solving through mental health service use.[54] When family members or friends identified mental health services as a resource, over the course of time those services were sought out by the individual in need.[50] However, there is a limited number of incidences in which family members, significant others, and influential community members identified mental health services as a possible resource early in the help-seeking process.[50] Alternatively, if there is no support or positive views of formal treatment for depression or of depression in general, the individual may be hesitant to seek treatment or not know about it.

Stigma was also frequently cited as a barrier to treatment seeking for depression among African American women.[47, 55] Stigma concerns have been shown to impede treatment seeking and treatment adherence[47] because many patients fear being labeled as having a mental illness.[46] Stigma refers to a collection of negative attitudes, beliefs, thoughts, and behaviors that influence the individual, or the general public, to fear, reject, avoid, be prejudiced and discriminate.[56] For the purposes of this paper, stigma will refer to negative attitudes, beliefs, thoughts, and behaviors as it relates specifically to mental health issues. Stigma relates to not only the attitudes of the individual but it reflects subjective norms as well. In considering the importance of trusted others, if a woman feels that acknowledging she is depressed and seeking treatment is unacceptable and her friends feel

it is unacceptable, then she will more than likely not admit to being depressed let alone seek treatment because of this attitude and belief about depression.

In the event that a woman manages to overcome the above barriers- she realizes and accepts that she is depressed, understands that aside from her spiritual and religious beliefs there is a need for treatment, has support from those individuals within her social milieu, and looks beyond stigma- she is now faced with a decision about treatment. What are her treatment options and preference: medication, therapy, or a combination of both?

1.2.2.3 Medication, therapy, or a combination of both

When African Americans seek treatment they usually prefer counseling (Cognitive Behavioral Therapy-CBT or Interpersonal Psychotherapy – IPT) over medication.[5, 7, 36, 53] However, it has been noted that even though African Americans say they prefer counseling, few actually desire referrals to mental health specialists.[55] They also usually find antidepressant medications unacceptable,[7, 15, 36, 38] as they believe they are addictive and ineffective in treating depression.[7] In studies by Brown[43] and Ward,[21] they found that ethnic minority women expressed concerns about side effects and possible addictive and toxic effects of medications for psychological problems.

When they were prescribed medications, African Americans had lower adherence rates than whites.[5, 9] Premature termination of medication usage may not be unwarranted though, as African Americans are more likely to experience side effects.[36, 38] Evidence exists to suggest that African Americans metabolize antidepressants differently and may require lower doses than those conventionally used for the management of depressive symptoms.[21, 36, 38, 41, 43]

In terms of counseling, traditional counseling methods have been shown to be effective in managing depressive disorders among African Americans, and it is suggested that therapeutic interventions be culturally adapted to encompass the cultural differences that African American women display. Some therapies have been culturally adapted and shown to be successful when implemented in the population for which it was designed.[21] However, Falconnier[57] notes that although both CBT and IPT have demonstrated effectiveness in treating patients with major depression, very little evidence exists for the effectiveness of these treatments for low-SES individuals. The reason proposed was that both approaches usually neglect to address the economic stressors associated with depression, which many individuals in lower SES experience.[57] In the study conducted by Falconnier[57] a majority of the patients (86%) participating in therapy identified problems of finances, work or unemployment (economic stress), and commonly, therapists avoided this topic by changing the subject when it arose. When therapists did pay more attention to economic stress, improved outcomes were noted.[57] In a study by Harris-Robinson[58] that explored the use of spiritual-focused coping as a way of managing stress among 119 working-class black women, the findings showed that 32.8% of the women listed financial problems as their stressor. These findings hint that financial distress may be important for understanding depression among low-income individuals and the concept should be explored.

There are numerous roadblocks to seeking and receiving treatment among African American women, and although some women overcome barriers and make it to the point of seeking treatment, a substantial number of women still do not seek diagnosis or do not seek or adhere to treatment. Others do not meet the criteria for formal diagnosis of MDD

according to the DSM-IV but still experience high levels of depressive symptoms. So, how do we reach those women? We could explore risk factors in an attempt to determine what makes African American women most vulnerable to the effects of depression/depressive symptoms and use this knowledge to intervene or intercede to decrease risk where we can.

1.3 RISK FACTORS FOR DEPRESSION AND DEPRESSIVE SYMPTOMS

Many different factors contribute to depression.[59-61] While risk factors do not necessarily represent causes of mental disorder, they provide an understanding of who is most likely to experience a mental disorder and who is not.[10]

1.3.1 General

Some of the more common risk factors are: 1) family history (e.g., predisposition, genetics); 2) trauma and stress (e.g., major life changes, financial problems, the breakup of a relationship, or the death of a loved one); 3) a pessimistic personality (e.g., low self-esteem, negative outlook); 4) medical conditions (e.g., heart disease, cancer, HIV) or the medications used to treat medical conditions; and 5) other psychological disorders (e.g., anxiety disorders, eating disorders, schizophrenia, substance abuse).[59-61]

In the United States, when compared to whites, people from racial and ethnic minority groups (e.g., black, Hispanic, and American Indian) tend to face a range of negative experiences (e.g., decreased opportunities for employment and education, higher rates of poverty, increased risk of physical ailments such as hypertension, as well as

prejudice and discrimination) that are stressful and associated with psychological distress, in turn influencing the prevalence of major depression.[62]

Socio-demographic risk factors associated with indicators of poorer mental health and depression include having young children, residence in inner-city less advantaged neighborhoods (variously defined as higher concentrations of poverty, proportions of mother-only families, male unemployment rates, and more families receiving public assistance),[63] low education, unemployment, large family size, low income, and persistent poverty.[16, 18]

Even though there are many different causes and factors for depression, the major factor accounting for poorer health and shorter life expectancy among blacks, in general, is socioeconomic disadvantage.[25, 64-66] Measures of socioeconomic disadvantage consistently predict depression,[23] and individuals lower in SES, many of whom are black or members of ethnic minorities, experience higher rates of depression because they are often exposed to an accumulation of stressors, chronic problems, and everyday hardships related to their low socio-economic status, such as low education, inadequate housing, dangerous neighborhoods and financial strain.[64, 67-69]

Regarding financial strain, studies have shown that depression and depressive symptoms have been strongly associated with financial adversity or strain.[11, 17, 23, 70] Researchers have found that the effects of stress caused by financial events have been detrimental to individuals' mental and physical health, and numerous studies set up to unravel the causes of depression have concluded that financial hardship is the most important underlying factor.[23, 70] In a study by Schulz, Parker, Israel, and Fisher,[71] financial stress showed the strongest association with symptoms of depression over other stress

indicators: family, work, safety, police, physical environment, and unfair treatment. Another study by Schulz, Israel, Zenk, et al.[63] also found that financial stress was the strongest direct predictor of symptoms of depression. In fact, McLoyd and Wilson called depression a "normative and situational response to economic hardship."[18] Using data from the Stress and Families Project, Makosky found that of several types of life difficulties, financial stressors were most closely associated with depression among poor women. Dressler[18] also drew a similar conclusion using data from an economically heterogeneous sample of African American families. Brown and Keith[10] note that economic strain, as a chronic stressor, is a significant risk factor for depressive symptoms, and African American women experiencing the highest level of economic strain report the most depressive symptoms. These findings add to significance of the findings by Falconnier mentioned earlier.

Since we know that African American women disproportionately suffer from higher levels of depressive symptoms, levels that are indicative of major depression, and financial distress appears to be an important underlying factor for symptoms of depression, exploring the concept of financial distress might prove beneficial to professionals seeking to address and improve the mental health of African American women. The following paragraphs will define financial distress, discuss socio-demographics, and explore the mental and physical effects of financial distress.

1.3.2 Financial distress/strain defined

In this paper the terms "financial distress", "financial strain", "financial stress", "economic stress" and "economic strain" will be used interchangeably. According to Merriam-Webster's Online Dictionary,[72] "stress" is defined as a constraining force or influence as a

physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation; “distress” is defined as pain or suffering affecting the body, a bodily part, or the mind; “strain” is defined as an act of straining or the condition of being strained as a: excessive physical or mental tension; also : a force, influence, or factor causing such tension; and “hardship” is defined as something that causes or entails suffering or privation.

Financial strain is composed of the cognitive, emotional, and behavioral response to the experience of financial hardship that occurs when real expenses exceed income and one is unable to meet his/her financial responsibilities.[73] Thus, it is not solely dependent upon income, Similarly, financial distress has been defined as a reaction (mental or physical discomfort) to stress about one’s state of general financial well-being, including perceptions about one’s capacity to manage economic resources (such as income and savings), pay bills, repay debts, and provide for the needs and wants of life.[74] Financial distress can last a short time, or it can become a persistent state for families at all income levels.[74]

Financial strain/stress/distress are subjective reactions. Measuring these reactions can help researchers understand individuals’ perceptions about and reactions to their financial condition.[74] Although objective measures of an individual’s financial state such as household income and/or debt-to-income ratio provide evidence of where one stands financially, two individuals with the same levels of income and economic resources may have different levels of perceived financial distress and financial well-being.[74] Thus, using the subjective measures of financial strain, financial stress, or financial distress will provide invaluable insight above and beyond objective measures alone because a person’s perception in turn becomes his or her reality.

The occurrence of different stressors can affect the level of financial distress that an individual feels. One major stressor that contributes to the level of financial distress/strain that an individual feels is living at or below poverty. There are many different definitions of poverty, and people tend to measure poverty in many different ways. For that reason and for the purposes of this paper, the Wikipedia[75] definition of poverty will be used: "Poverty may be understood as a condition in which a person or community is lacking in the basic needs for a minimum standard of well-being and life, particularly as a result of a persistent lack of income."

According to the conservation of resources theory, chronic stressors such as poverty can have an impact on people's well-being through two different routes.[62] First, having a chronic resource deficit can have a direct negative impact on people's psychological well-being. Second, chronic resource deficits can lead to further resource losses such as daily resource deprivation (e.g., problems getting food or clothing).[62] Often with families experiencing financial distress, the cumulative aspect of stressor events is similar to a pileup, such that, before one event can be handled, the impact of another is already being felt.[74]

Other stressors include negative financial events such as receiving overdue notices from creditors and collection agencies, issuing checks with funds insufficient to cover them, getting behind on bill payments, family squabbling over money, and not being financially prepared for emergencies or major life events.[74, 76] The frequency of these negative stressor events adds to the level of financial distress a person feels. For example, events that occur on a regular basis or very often increase distress.

Given this, although incidental, one-time, or sporadic occurrences of stressor events may lead to an increase in the level of financial distress an individual experiences, cumulative events may prove to be more detrimental over time.

1.3.2.1 The socio-demographics of financial distress

In terms of how many people experience financial distress, a national team of experts took data from a variety of secondary and primary sources and used deductive logic to conservatively estimate that thirty million workers, about a quarter of working adults, are experiencing serious financial distress.[74] Some national surveys have found higher percentages, which may occur in part because, when working adults are financially distressed, it likely affects spouses, partners, and other adults and children living at home.[74] The reality may be even higher because there is a substantial number of households that do not have any adults in the home who are working.

In terms of "who the financially strained are," a Gallup survey conducted in 2002 found that although Americans in all age groups polled tended to worry about meeting their basic financial obligations, the proportions were larger among minority Americans (50% compared to 24%) and those with lower incomes (61% for those making less than $20,000 annually compared to 41% for those making $20k-$29,999; 23% for those making $30k-$49,999; 23% for those making $50k-$74,999; and 10% for those making $75k or more).[77] Given the date of the study, those numbers may be substantially higher now.

Financially strained households are more likely to report lower levels of income, assets, and net worth; they are more likely to be younger, to be female, to be black, to be divorced/separated or single, to have more children living in the household, and to be

receiving public assistance.[78] Research has also shown that poor and near-poor, single-parent, black families may be more vulnerable to the effects of financial strain than other families.[17]

Brown[79] further notes that a substantial proportion of African American women must struggle continually to make ends meet because they are generally poorer with fewer economic resources than their white counterparts, and thus their ability to achieve economic security and to cope with life's crises and adversities is limited.

1.3.2.2 Mental and physical effects of financial distress

Studies have found that psychosocial stress brought about by financial strain is associated with physical and mental illness including diseases, depression, and even suicide.[78] In fact, as financial distress increases, individuals may experience a myriad of stress-related mental and physical symptoms and illnesses.[78, 80] In a study noted by O'Neill[80], respondents reported exactly how their health was affected by their financial distress; four in ten respondents (n=1,323/3,121) answered yes to the question, "Do you feel your health has been affected by your financial problems? If yes, please explain." Some self-reported health effects of financial problems included worrying, anxiety, and tension; insomnia and sleep disorders; headaches and migraines; high blood pressure/hypertension; stomach, abdominal, and digestive problems; depression; aches and pains (e.g., back, chest); ulcers or possible ulcers; appetite disorders and weight gain or loss; fatigue and feeling tired/weak; drug, alcohol, or cigarette use; and an inability to afford or access recommended health maintenance practices and health care services.[78, 80]

Having problems meeting basic needs (e.g., food, clothing, and transportation) on a daily basis can be extremely stressful, may be particularly problematic for people's psychological well-being and may have negative implications on their quality of life in general.[18, 62] Stress resulting from problems meeting basic needs has been found to be a stronger predictor of depressive mood than income level.[62] This makes sense, as poverty contributes to financial strain/distress, which is not income dependent; in turn, financial strain/distress contributes to increased depressive symptoms and depression.

A study by Cricco-Lizza[81] looked at the everyday lives of 130 black, low-income, urban mothers and found that having a limited amount of financial resources was a continuous issue for the women in the study. The women mentioned high levels of stress and the daily struggles they experienced related to a lack of material and human resources.[81] Many of the women in the study talked about children going without food and about the fight to make ends meet while they lived from "paycheck to paycheck."[81] It has been noted that people who are financially distressed often live paycheck to paycheck,[74] including persons who are not by definition living in poverty.

Tucker[82] noted that women who are unable to feed, clothe, and tend to the medical needs of their families are psychologically stressed. Household food insufficiency has adverse effects on mental health, more than doubling the odds of depression.[16]

Analysis of a study by Plants and Sachs-Ericsson[62] examined depressive symptoms and prevalence of major depression among members of ethnic and racial minorities and white people from a large random sample. The results of the analysis suggested that the minority group members' marginally higher prevalence of depression compared to white participants was accounted for by greater problems meeting basic needs and that minority

group members' higher levels of depressive symptoms as compared with white participants were partially accounted for by their problems meeting their basic needs.[62]

Similar to effects on the family that depression has, it appears that the effects of financial strain can spread to all those in the household who are dependent upon the income providers.[73] Economic hardship has been shown to influence adolescent outcomes through its effect on parental emotional health/depressive symptoms and parenting behavior,[17] and it has been shown to increase the likelihood of depression in the children of those families.[73] Financial strain can also cause marital stress, and many family and marriage counselors have identified financial difficulties as one of the most common causes of marital difficulties.[73]

Keith [28] found that financial satisfaction plays the most influential role in determining global life satisfaction among black women. In support of this notion, a study by O'Neill, Prawitz, Sorhaindo, et al.[76] noted that individuals reporting lower financial distress/higher financial well-being reported better health, and they enjoyed better health than did individuals experiencing more financial distress/less financial well-being. Thus, logically, it appears that the more financially satisfied an individual is, the better her mental and physical health will be and vice versa.

In contrast, some researchers argue that it may be the onset or worsening of a health condition that exacerbates already existing financial problems.[78] A study by Lyons and Yilmazer[78] found poor health significantly increased the probability of financial strain but found little evidence that financial strain contributed to poor health. Though this appears to refute the above findings, one must note that there are various limitations to the study by Lyons and Yilmazer, such as the use of cross sectional data, which makes it difficult to

establish causality. Also, the instruments used to collect their data may not be the most appropriate tools to collect the data they needed. This is not to deny the fact that in some cases poor health does worsen financial situations, it is to say that numerous research findings have confirmed the opposite as well, that financial strain indeed affects mental and physical health.

Considering the above information, it appears that financial strain or financial distress may contribute to making African American women most vulnerable to depression and depressive symptoms. So, what then would safeguard African American women from the deleterious effects of depression and depressive symptoms? The next section will explore protective factors that help to buffer the effects of depression and depressive symptoms among African American women.

1.4 PROTECTIVE FACTORS AGAINST DEPRESSION AND DEPRESSIVE SYMPTOMS

Research suggests that cultural factors such as perceived social support, deep religiosity and spirituality, extended families, personal relationships that are configured in culturally determined ways, and other coping strategies serve to soften the assaults on the mental well-being of African American women.[10] The focus of this section will be social support, spirituality, and religion.

1.4.1 Social support, depression, and financial distress

Social support is the physical and emotional comfort given to us by our family, friends, co-workers and others.[75, 83] It is associated with how networking helps people cope with stressful events. Many studies have demonstrated that social support acts as a moderating "protective" factor in the development of psychological and/or physical disease (such as clinical depression or hypertension).[75, 83]

There are four different categories of social support: [75, 83] 1) Emotional support involves the provision of empathy, love, trust and caring; 2) Instrumental support involves the provision of tangible aid and services that directly assist a person in need; 3) Informational support involves the provision of advice, suggestions, and information that a person can use to address problems; and 4) Appraisal support involves the provision of information that is useful for self-evaluation purposes.

In terms of depression, strong social support networks may mitigate the effect of stress and protect minority group members from depression.[62] Greater satisfaction with perceived social support from relatives and friends has been shown to be important in reducing levels of depressive symptoms.[10] In fact, mothers who perceived more support to be available to them reported fewer symptoms of depression, regardless of the number of stressful events they experienced.[18] Additionally, it has been found that black women who had acute economic problems reported lower levels of depressive symptoms if they had strong social support systems compared to those who did not have such strong support.[62]

In terms of financial strain, less available instrumental support is positively correlated with financial strain.[17] A study by Jackson, Brooks-Gunn, Huang, and Glassman[17]

looked at how maternal education, economic conditions (earnings and financial strain), and the availability of instrumental support influenced maternal psychological functioning, parenting, and child development among 93 single black mothers. The authors found that mothers who were able to turn to friends and family for financial help when they needed to were less likely to experience financial strain than those who were not. Another study by Siefert, Finlayson, Williams, et al.[16] examined modifiable risk and protective factors for probable depression in 824 African American mothers living in the 39 poorest census tracts in Detroit. This study also found that instrumental support was strongly related to reduced risk of depression and that mothers who reported the availability of someone who could loan them money in a crisis and the availability of help with childcare were much less likely to be depressed.[16] Thus, if financial strain can be relieved, depressive symptoms will be eased.

Considering these study findings, in terms of coping with depression and/or depressive symptoms in general, it appears that emotional support may prove very beneficial, whereas, when dealing with the effects of financial strain it appears the availability of instrumental support serves as a good buffer. So when addressing the mental health of African American women, establishing social support networks that not only provide emotional but instrumental support as well will be very critical.

1.4.2 Spirituality and religion defined

Prior to discussing the use of spirituality and religion as a coping mechanism, it is important to provide a definition for the two terms because they are often used interchangeably. Though the two concepts are closely related, empirical evidence exists that implies

important distinctions between these two constructs.[84] In the remainder of this section both terms will be referenced but for clarification purposes it is important to note their distinct differences.

Spirituality often refers to believing and having faith in, as well as having a personal relationship with God or a Higher Power; it can also include one's unique sense of connectedness to the self, others, and nature.[84-88] Spirituality involves the internalization and consistent expression of and commitment to key beliefs and values, such as the quest for goodness and the personal search for meaning, purpose, and destiny.[84-86, 88, 89] In their study, Lewis, Hankin, Reynolds, and Ogedegbe[90] explored three core categories of spirituality: love in action, relationships and connections, and unconditional love.[90] Love in action suggested that spiritual people did not just verbalize their love for other human beings but actually implemented love through various acts of kindness.[90] Connections to other people, to an entity or entities higher than a human being, and to self were important components of relationships.[90] Finally, unconditional love meant that one helps a fellow human being regardless of race, ethnicity, sexual orientation, religious background, or health status.[90] Guidance, coping, and peace are culturally prominent characteristics of African American spirituality that have also been identified.[87, 91]

Spirituality is perceived more as a universal phenomenon and is a broader term than religion.[86, 87] Spirituality is not exclusively related to religion,[91] and those who consider themselves to be spiritual may or may not participate in formal religious practice, or identify with a religious group.[87] In fact, many people profess spirituality without religious affiliation, and in some self-report studies individuals indicate that they are more spiritual than religious.[84, 92] In a pilot study conducted by Lewis, Hankin, Reynolds, and Ogedegbe[90] to

explore African American definitions of practicing spirituality and to describe the process of spirituality and its relationship to health promotion, the participants felt strongly that although practicing spirituality required a belief in God or a higher being, this belief was not connected to religious beliefs, and that one needed to ultimately understand the belief in God on their own.[90]

Some spiritual practices include attending church, meditating, singing, fellowship and witnessing, praying, reading the Bible and other religious materials, watching or listening to religious programming, fasting, and listening to gospel music/radio.[93, 94]

While spirituality is a personal concept, religion is viewed as being a set of beliefs and practices that are associated with a doctrine and rituals and is often shared with groups of people.[85-87, 91] Religiosity is therefore defined as one's adherence to prescribed beliefs (about God or a set of gods) and practices or rituals of an organized religion.[84, 89, 92] Examples of major (organized) religions are Christianity, Islam, Judaism, Buddhism, Hinduism, Confucianism, and Taoism, to name a few.[95]

Many religious people consider themselves to be spiritual; religion and church life can provide an entrée into the experience and expression of spirituality.[84, 85, 87] However, religious people do not necessarily have to have a relationship or connection to God, other human beings, or self.[90] This can occur because persons practicing religion can be performing obligatory or dutiful activities, as prescribed by religious teachings.[90] Their actions may not have significant meaning for them, they may not understand the reasons for doing them, or they may not have an underlying connection to God, other human beings, or oneself.[90]

1.4.2.1 Spirituality, religion, and African American culture

Spirituality has been shown to be central to the identity and functioning of African Americans and is a prominent component of African American culture.[85, 91] Spirituality significantly influences what people think and believe, and spirituality, or the religious practice in which it is expressed, has been shown to influence distinctly African American health beliefs, practices, and outcomes.[88, 91, 92]

Spirituality and religion have shaped African American people's notions of civic responsibility, influenced their political beliefs and patterns of political participation, and played central roles in structuring interpersonal relationships, including ideas about social obligations, choice of romantic partners, and definitions of community.[84] Spirituality and religion have also been important in influencing African Americans' understandings of forgiveness, liberation, hope, justice, salvation, the meaning and purpose of life, and responses to oppression.[84] Throughout the history of African American people there has been no stronger resource for overcoming adversity than the black church.[86] In the African American community the church has been a source of physical, emotional, and financial support, has served as an extension of the family, and has provided role models for youth.[85]

In general, blacks tend to engage in spiritual practices with greater frequency than their white counterparts.[91] Women tend to engage in private acts of devotion more frequently than men, and they are more subjectively religious and spiritual than men.[87, 89] African American women tend to exhibit a greater overt focus on spirituality and religiosity than African American men, White men or White women.[84, 87, 89] Dessio, Wade, Chao, Kronenberg, et al.[87] noted that African American women are more likely to utilize religion/spirituality than women of other race/ethnicities, such as Mexican Americans,

Chinese Americans, and non-Hispanic Whites. One of the most consistent findings on black religious involvement is that African American women are more likely than black men to pray, attend church, participate in institutional religious activities, endorse religious attitudes and beliefs at a higher level, and see religion as a salient and important part of their identity.[84, 92, 96]

Having such a significant role in the life of African Americans, it is no surprise that religion and spirituality are often associated with the ability to cope with adverse health experiences and have been shown to affect the physical and psychological well-being of African Americans.[84, 92]

1.4.2.2 Psychological and health advantages of spirituality and religion

In terms of health outcomes, spirituality and religiosity have been associated with lower blood pressure, better immune function, and decreased depression.[92] A study by Dessio, Wade, Chao, Kronenberg, et al.[87] looked at the prevalence and patterns of use of religion and spirituality for health reasons among African American women. The use of religion/spirituality was particularly common among those with depression (42%), heart disease (41%), and cancer (41%).[87] Depression has been noted as a condition for which women often reported turning to religion/spirituality since many women believe that mental health conditions can be treated by engaging in spiritual and religious practices.[87]

Looking specifically at religion, blacks, as opposed to whites, are more likely to turn to religion as a coping resource when faced with health challenges.[91] They are also especially likely to turn to religion when experiencing high levels of stress.[87, 89, 96] This is not surprising as religious forms of coping are especially helpful to people who are confronted

with uncontrollable, unmanageable, or otherwise difficult situations.[96] Both subjective and organized religious involvement have been found to exert a protective effect on health and mental health and positively influence long-term well-being and life satisfaction.[16, 91, 92, 96, 97] Olphen, Schulz, Israel, et al.[97] agree that membership and participation (frequency of service attendance) in a religious organization and more private forms of religious devotion (e.g. faith and prayer) are important for health.

When considering mental health, religious involvement appears to be particularly important for reducing the level of psychological distress among African American women when they are faced with various life events.[10] A study of African American women in Missouri found that those with low levels of religious involvement reported significantly more psychological symptoms than women with high levels.[96] Also, people who were church members were significantly less likely to report depressive symptoms and better general health than those who were not.[97]

Spirituality has been cited as a constitutive element of optimal health for women, as it facilitates mental well-being, contributes to life satisfaction, and is associated with other positive health outcomes.[85, 88, 90, 92] Increased spirituality among African Americans is also directly related to higher self-esteem, more personal happiness, higher sense of control, and personal control over health.[90]

Studies also link lower rates of depressive symptoms to greater spirituality.[98] In a study by Cooper, Brown, Vu, Ford, et al.[55] African Americans were more likely than whites to rate spirituality as an extremely important aspect of care for depression. Perdue, Johnson, Singley, and Jackson[94] noted that many African American mental health clients in

their study were highly influenced by their sense of the spiritual when coping with mental illness.

Even with the differences between spirituality and religion, a commonality of the two in terms of health is prayer. Banks and Parks[88] noted that in their study a significant number of the women depended on prayers to guide them and their families in making the best health related choices. A study by Figueroa, Davis, Baker, and Bunch[86] showed that prayer was viewed as imperative to health. Scholars have suggested that prayer may allow people to actively express religious beliefs that help to alleviate anxiety.[97] Regardless of a person's level of involvement in organized religious life, prayer was the primary and most important means of coping with hardship, societal pressures, illness, et al.[54, 87, 89, 90, 92] In a study by Olphen, Schulz, Israel, et al.[97] prayer actually had a greater effect on mental health (reports of fewer depressive symptoms) than on physical health indicators (self-reported general health and chronic conditions). Lastly, Keith[28] noted that black women who pray and read religious material have a psychological advantage over those who do not.

On a cautionary note, however, though spirituality is a source of coping when women become burdened or stressed, the work of Thomas[85] revealed that some of the cultural spiritual sayings that African Americans use may contribute to depressive symptoms. The most common sayings in African American spirituality[i] are "It's God's will," "The Lord will make a way somehow," and "He won't give you more than you can bear."[85] The proverb "The Lord will make a way somehow" is often said to encourage individuals through issues.[85] The proverb "It's God's will" is often used to provide comfort during

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i The author recognizes that these sayings are not exclusive to African American women.

turbulent times, including loss and grief, as it promotes acceptance of difficulties and trials.[85] Yet, phrases such as "The Lord will make a way" or "He won't give me more than I can bear" may suggest to women that they should be able to handle their struggles, often without help from others.[85] As a result, it is important to be cognizant of such proverbs when dealing with or attempting to address the mental well-being of African American women who are spiritual.

Despite this, spirituality and/or religion, and particularly the use of prayer, are indeed protective factors against the ill effects of depression and depressive symptoms and have been used as coping resources for quite some time by African American women.[85]

1.4.2.3 The mechanism: spirituality and religion's protective effects

Though the mechanisms by which spirituality and religion safeguard mental and physical health are unknown, researchers hypothesized likely mechanisms.

Spirituality may be an important source of optimism because it offers people a sense of direction, purpose, and certainty.[98] Research findings suggest that having a sense of meaning in life is associated with positive mental health outcomes, whereas a lack of meaning is associated with negative outcomes, and persons who are religiously committed are more likely to reframe negative events as challenges and opportunities for growth compared to those with lower levels of religious commitment.[96]

Studies also indicate that spirituality and religion may maintain or enhance a positive sense of self, self-esteem, personal responsibility and feelings of personal control while influencing a sense of belonging, sustaining valued health behavior.[92, 94, 96] Banerjee and Pyles[93] noted in their study that women reported that their spirituality helps them to

manage difficult situations by reassuring them that a higher power is looking after them and their children. It helps by directing them to the right paths, easing the impact of problems on them and bringing about peace to their otherwise difficult lives.[93] Additionally, it helps them build their self-esteem, nurtures hope and motivates them to keep going, despite barriers.[93]

Banks and Parks[88] found that spirituality provided a foundation for moving through and beyond oppressive situations for their participants and that women's spirituality prompted them to look within themselves, towards God, and to loved ones for wisdom, nurturing, and other resources to carry them through life's journey.

Spirituality can serve as a source of comfort, inspiration, courage, hope, strength, liberation, guidance, and healing, coping, peace, a sense of calm, security, protection, and even happiness when confronted with life's challenges or struggles.[58, 91, 94] In a study by Cricco-Lizza,[81] many of the women derived hope and comfort from the "trusting in God" coping strategy, in which the women were able to look beyond their daily battles and create visions of a just future. Establishing faith in God also helped participants to remain calm during adverse times.[90] Spirituality provides these individuals with an unfaltering faith, a sense of awareness, and a power and purpose that is greater than themselves that helps them believe that conditions will improve.[58]

Harris-Robinson[58] found that spiritual-focused coping was an important tool for managing the high levels of stress that working-class black women encounter.[58] Spiritual-focused coping is defined as the use of spirituality (faith and the belief in a higher power) to provide a source of personal strength and sustenance to individuals during times of stress.[58] Nearly 53% of the respondents in the study found spiritual-focused coping to be most

helpful in managing stress, as compared with cognitive-focused coping (32.8%), which takes a problem solving approach, and emotion-focused coping (14.3%), which uses an avoidance pattern.[58]

Non-organizational religious involvement (e.g. prayer or Bible reading) may also positively influence mental health through encouraging emotions such as hope and forgiveness, and physical health through potential effects on physiologic processes.[97]

Spirituality was also found to be inextricably connected to health and well-being through its impact on women's relationships with other people.[88] Spiritual factors reduced loneliness, creating a sense of safety and comfort from a personal relationship with God and the notion that God can be called on to intervene in difficult moments may point to God's role as a source of social support.[98] Religion can also generate relatively high levels of social resources (e.g., social support from clergy and fellow church members) that act to buffer the impact of stressful events.[96]

Even though the exact route is unknown, all of the above mechanisms negatively relate to depressive symptoms and depression both directly and indirectly.

1.5 FOCUS OF THIS STUDY: WORKING TOWARDS ACHIEVING OBJECTIVES MHMD-4.2 AND MHMD-9.2 OF *HEALTHY PEOPLE 2020*

Objectives MHMD-4.2 and MHMD-9.2, of *Healthy People 2020,* are, respectively, to reduce the proportions of adults aged 18 years and older who experience major depressive episodes (MDE) and to increase the proportion of adults aged 18 years and older with major depressive episodes who receive treatment.[99] Given the information presented, a disparity

clearly exists for African American women, but it may prove difficult in some situations to reach those women most at risk for depression as indicated by high levels of depressive symptoms. Thus, alternative approaches, outside of typical counseling and medication, are needed.

One such approach is to create and/or modify programs, services, existing interventions, and policies in order to address and reduce the known risk factor(s) and/or strengthen identified protective factor(s) for depression. However, prior to creating new interventions or modifying existing ones it is important to: 1) examine the relationship between perceived financial distress (risk factor) and depressive symptoms[ii]; 2) identify financial priorities and needs that may contribute to financial distress; and 3) explore if religious coping and/or social support (protective factors) act as moderators in the relationship between perceived financial distress and depressive symptoms.

1.5.1 Research questions and hypotheses

This dissertation is comprised of three articles. The focus of the first article (chapter 3) is on financial distress. The aim was to examine the association of perceived financial distress and depressive symptoms among African American women as well as to identify their financial priorities and needs by answering the following research questions:

Q1: What is the association between perceived financial distress and depressive symptoms?

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ii Depressive symptoms are being studied because looking at depression requires a formal diagnosis and, as stated, African American women are less likely to receive diagnosis for mental illnesses.

Hypothesis: There will be a positive relationship between perceived financial distress and depressive symptoms, in that, higher levels of perceived financial distress will be indicative of higher levels of depressive symptoms.

Q2: What do the women identify as their main financial priorities?

Q3: What programs, assistance, or other help would be beneficial for women during times of financial difficulties?

The focus of the second article (chapter 4) is on religion/spirituality as measured by religious coping. The aim of the study was to determine if religious coping was in fact a moderator (buffer) between perceived financial distress and depressive symptoms and to explore how financial distress and religious coping interacted to affect levels of depressive symptoms. The following research question was answered:

Q4: What is the effect of religious coping on the association between perceived financial distress and depressive symptoms?

Hypothesis 1: Given, higher levels of perceived financial distress, higher levels of religious coping will result in lower levels of depressive symptoms.

Hypothesis 2: External religious coping will not have a significant on the relationship between perceived financial distress and depressive symptoms.

Hypothesis 3: Given, higher levels of perceived financial distress, higher levels of internal religious coping will result in lower levels of depressive symptoms.

The focus of the third article (chapter 5) is on social support. The aim of the study was to determine if social support was in fact a moderator (buffer) between perceived financial distress and depressive symptoms and to explore how financial distress and social support

interacted to affect levels of depressive symptoms. The following research questions were answered:

Q5: What is the effect of social support on the association between perceived financial distress and depressive symptoms?

Hypothesis 1: Social support in general will not have a significant effect on the relationship between perceived financial distress and depressive symptoms.

Hypothesis 2: Higher levels of tangible social support will result in lower levels of perceived financial distress and lower levels of depressive symptoms.

This knowledge will prove beneficial to professionals seeking to address and improve the mental health of African American women by adding new information to the literature in turn, providing a conceptual framework on which to base new and existing programs, services, and/or interventions that address depression, as well as, programs geared towards personal finances and wealth building.

It will also draw attention to the need for 1) improved policies that promote the finances of the poor; 2) improved policies that promote mental health; and 3) collaborative efforts between physicians, mental health professionals, social service workers, community organizations, financial planners, financial advisors, debt counselors, and employment counselors to fulfill unmet needs and for planning appropriate interventions.

2.0 METHODOLOGY

2.1 RESEARCH DESIGN AND RECRUITMENT

A non-probability, cross-sectional descriptive study design was employed for this dissertation study. It is an effective design for investigating prevalence and association, and it is the preferred design for looking at the population at a single point in time.[100] Although a main disadvantage is that it is difficult to make causal inferences,[100] causal inference was not the purpose of this study.

The sampling techniques employed were convenience and snowball (purposive) since: 1) women were recruited from facilities that they often frequented (health centers) and 2) participants referred other individuals from within their social networks who met eligibility criteria, and those individuals in turn referred others.[101, 102] The major weakness in employing these strategies is that the findings are not generalizable; however, given the exploratory nature of the research questions, this strategy was appropriate.

Participants were recruited over a period of four months, July-October 2010. The main recruitment tool was a flyer (Appendix A) that was posted at various health care centers and distributed via email. The flyer provided information about the focus of the study, eligibility requirements, compensation, how to obtain a packet, and contact

information for the researcher. Participants were self-selecting and requested packets if they were interested. Upon request, survey packets were distributed via mail or in person.

Each survey packet contained an informational script, the survey (Appendix B), a self-addressed stamped envelope to return the completed survey, a postcard for entry into the drawing, and numerous informational resources on mental health and personal finances.

Due to funding constraints monetary compensation was not provided to every participant. However, there were ten drawings held for $25 visa gift cards. The number of gift cards awarded was determined by the number of returned postcards (there was one drawing per every ten postcards received).

Prior to the start of this project approval was obtained from the University of Pittsburgh Institutional Review Board.

2.2 PARTICIPANTS

Of the 239 surveys that were requested, 113 (47%) surveys were returned. One survey was excluded because the participant was older than 44, and another was excluded because the participant's age was unknown. As a result, 111 (46%) African American women between the ages of 18 and 44 who resided in Allegheny County were included in the study.[iii] Table 2.1 presents the socio-demographic characteristics of the study participants.

iii Women aged 18 to 44 were chosen because, as mentioned earlier, women in this age group have been noted to have higher levels of depressive symptoms.

Table 2.1. Participants' Socio-Demographic Characteristics

Characteristic	**Total**	**Percent**
How did you hear about this survey (n=109)		
Health Center	14	12.8
Received an email	23	21.1
Other (i.e. Researcher, friend, co-worker, relative, Facebook)	72	66.1
Age, years (n=111)*		
18-26	28	25.2
27-35	51	45.9
36-44	32	28.8
Average age	31.57	
Religious affiliation (n=104)		
Catholic	6	5.8
Muslim	1	1.0
No religious affiliation	12	11.5
Other (i.e. Confused, Christian, Lutheran, Methodist, Non-Denominational)	27	26
Prefer not to say	8	7.7
Protestant (i.e. Baptist, COGIC, Methodist, Seven-day Adventist, Jehovah's Witness, Pentecostal)	50	48.1
Total number of children 17 and under (n=111)		
0	34	30.6
1	29	26.1
2	29	26.1
3	9	8.1
4	4	3.6
5	4	3.6
7	2	1.8
Total number of children older than 17 (n=111)		
0	95	85.6
1	9	8.1
2	2	1.8
3	4	3.6
6	1	.9
Marital/Relationship status (n=111)		
Single, Never Married	69	62.2
Married	24	21.6
Divorced	7	6.3
Living with a significant other/domestic partner	11	9.9

Table 2.1. Continued

Characteristic	Total	Percent
Employment (n=111)		
Employed (Full-Time)	69	62.2
Employed (Part-Time)	7	6.3
Self-employed	8	7.2
Homemaker	4	3.6
Student	9	8.1
Retired	1	.9
Unemployed	13	11.7
Education (n=110)		
Grades 9-11	4	3.6
Grade 12 or GED	16	14.5
Some college, but did not finish	22	20
Technical or Associate degree	25	22.7
Bachelor's degree	22	20
Some graduate work	9	8.2
Master's degree	10	9.1
Professional degree	1	.9
Doctorate degree	1	.9
Annual income (n=109)		
Less than $10,000	29	26.6
$10,000 - $24,999	25	22.9
$25,000 - $39,999	31	28.4
$40,000 - $54,999	14	12.8
$55,000 - $69,999	6	5.5
$70,000 - $84,999	2	1.8
$85,000 - $100,000	0	0
Over $100,000	2	1.8
Number of medical conditions (n=111)		
0	96	86.5
1	11	9.9
2	3	2.7
4	1	.9
How often medical conditions interfere with daily activities (n=111)		
Never	3	2.7
Rarely	2	1.8
Sometimes	10	9
Not applicable	96	86.5

Table 2.1. Continued

Characteristic	Total	Percent
Number of major life events (past 6 months) (n=109)		
0	58	53.2
1	30	27.5
2	14	12.8
3	4	3.7
4	1	.9
5	2	1.8
How often major life events interfere with daily activities (n=111)		
Never	8	7.2
Rarely	15	13.5
Sometimes	21	18.9
All the Time	9	8.1
Not applicable	58	52.3
Diagnosis of depression or mental illness (n=111)		
Yes	29	26.1
No	82	73.9
Currently receiving mental health treatment (n=111)#		
Yes	15	13.5
No	96	86.5

* = No participants were 20 or 39 years of age
# = 14 out of 15 of the participants who were receiving mental health treatment had a formal diagnosis of depression or mental illness.

2.3 DATA COLLECTION

Participants returned completed surveys by mail, using self-addressed stamped envelopes that were provided. The surveys were used to collect the following data:

2.3.1 Socio-Demographics

Section I of the survey consisted of questions regarding how the participant heard about the study, the participants' age, religious affiliation, number of children, marital status, employment status, highest level of education completed, income, and their overall religious coping. Additionally, questions inquired about the presence of any other chronic health conditions, recent major life events, a previous diagnosis of a mental illness, and current mental health treatment, since these can contribute to perceived financial distress as well as high or low levels of depressive symptoms.

Overall religious coping was measured by an item taken from the Multidimensional Measurement of Religiousness/Spirituality for Use in Health Research booklet.[103] The overall religious/spiritual coping item has been associated with specific methods of religious/spiritual coping and with the outcomes of major life stressors, though the association is less strong than with measures of specific religious coping methods.[104] However, in large surveys with limited space, the overall religious/spiritual coping item does provide a summary evaluation of the degree to which the individual involves religion/spirituality in coping.[104] Permission was not needed to use this question.

2.3.2 Dependent variable: depressive symptoms

The Quick Inventory of Depressive Symptomatology – Self Report 16 (QIDS-SR_{16}) – was used to measure depressive symptoms (Section II of the survey). It is a 16-item scale designed to assess the severity of depressive symptoms and includes all criterion symptom domains for the diagnosis of a major depressive episode as defined in the Diagnostic and

Statistical Manual of Mental Disorders 4th edition (DSM-IV).[105] Strengths of the QIDS include well established validity, good internal consistency, and generalizability to a variety of patient populations (e.g., non-psychotic and psychotic major depressive disorder, postpartum depression, dysthymic disorder, bipolar disorder) and settings (e.g., inpatient and outpatient psychiatry clinics, primary care, clinical trials).[105] The questionnaire takes approximately five to seven minutes to complete.[105] Permission was not needed to use this scale.

A total score was calculated for each participant by adding the scores for each of the nine symptom domains of the DSM-IV MDD criteria.[105] Sixteen items were used to rate the nine criterion domains of major depression: four items were used to rate sleep disturbance (early, middle, and late insomnia plus hypersomnia); two items were used to rate psychomotor disturbance (agitation and retardation); four items were used to rate appetite/weight disturbance (appetite increase or decrease and weight increase or decrease).[105] Only one item was used to rate the remaining six domains (depressed mood, decreased interest, decreased energy, worthlessness/guilt, concentration/decision making, and suicidal ideation).[105] Each item was scored 0-3 and for symptom domains that required more than one item, the highest score of the item relevant for each domain was taken.[105] The total score ranges from 0 to 27.[105] Higher scores were indicative of higher levels of depressive symptoms. This measure was treated as continuous.

2.3.3 Independent variables

2.3.3.1 Financial distress

The Personal Financial Wellness Scale (PFW), a self-report, eight-item instrument, was used to measure perceived financial distress/financial well-being (Section IV of the survey).[70] The PFW Scale was developed by a team of national scholars over a period of several years and has been shown to provide a high level of confidence for researchers and practitioners using the scores.[70] The InCharge Education Foundation in association with the InCharge Institute of America has conducted national norming studies of PFW scores using nationally representative samples of adults in the United States.[70] As a result, validity and reliability have been established for all eight items used together.[70] Permission to use the scale was obtained from the Personal Finance Employee Education Foundation.

A total score was calculated for each participant by summing the number of points for responses to each of the eight items and then dividing the total by eight.[70] The total score ranges from 1 to 10 and scores are not be rounded.[70] Lower scores were indicative of greater levels of financial distress and higher scores were indicative of greater financial well-being, lower financial distress. This measure was treated as continuous.

2.3.3.2 Religious coping

The Ways of Religious Coping Scale (WORCS) is a 40-item, self-report instrument that was used for assessing religious coping strategies (Section V of the survey).[106] It is used for assessing the degree and kind of cognitions and behaviors people use to cope with stress.[106]

This scale has been tested for validity and reliability and has been shown to be psychometrically sound.[106] Permission to use the scale was obtained directly from Dr. Edwin D. Boudreaux.

To calculate the Total WORCS score for each participant, items 6, 19, 23, and 39 were reverse-scored, therefore I recoded those items by reversing the scores, and then all items were summed together.[106] To calculate the External/Social scale score for all participants, items 7, 8, 17, 20, 25, 26, 29, 30, 36, and 40 were summed.[106] To calculate the Internal/Private scale score for all participants, items 1, 5, 12, 14, 15, 16, 24, 28, 31, 32, 33, 34, 35, 37, and 38 were summed.[106] Higher scores were indicative of greater religious coping. These measures were treated as continuous.

2.3.3.3 Social Support

The Inventory of Socially Supportive Behaviors (ISSB), a 40-item, self-report scale was used to measure social support overall as well as to assess tangible support (Section III of the survey). The ISSB assesses six categories of social support:[105] 1) material aid (tangible in the form of money or other physical objects); 2) behavioral assistance (sharing of tasks through physical labor); 3) intimate interaction (listening, expressing esteem, caring, and understanding); 4) guidance (offering advice, information, or instruction); 5) feedback (providing individuals with feedback about their behavior, thoughts, or feelings); and 6) positive social interaction (engaging in social interactions for fun and relaxation).[107] This scale has been shown to be appropriate for use in community-based surveys and has also been shown to be valid and reliable among blacks.[107] Permission was not needed to use this scale.

A total score for social support was calculated for each participant by summing all of the responses.[105] To obtain a score for tangible social support items 1, 3, 4, 17, 20, 22, 25, 34, 38, 39, and 40 were summed, as they all related to receipt of concrete aide. For both scales, the higher the score, the greater the social support. These measures were treated as continuous.

2.3.4 Open-ended questions: financial priorities and financial needs

Section VI of the survey consisted of two open ended questions. The question "Imagine you won a $10,000 prize in a local lottery. What would you do with this money?" was used to assess the financial priorities of the participants by exploring what they would determine as important financial obligations if given a lump sum of money. The second question "What kinds of programs or other help would be beneficial to you during times of financial difficulties?" was used to assess what the participants identified as needed support when experiencing financial hardship.

2.4 DATA ANALYSIS

2.4.1 Quantitative

SPSS was used for data management, descriptive summaries, and to make inferences. All analyses conducted were two-tailed.

2.4.1.1 Univariate

Frequencies were used to assess the responses to the socio-demographic questions and to describe the study population. Frequency distributions and summary statistics (means, score ranges, and standard deviations) were also examined for the dependent and independent variables. Since the statistical tests used in this dissertation study are based on numerous assumptions the dependent and independent variables were checked for normality, and where applicable and appropriate, corrective measures were performed to ensure that major assumptions were not violated.[108, 109] Normality was assessed by using the Lilliefors corrected Kolmogorov-Smirnov (K-S) test. K-S was used because although the Shapiro-Wilk W (S-W) test has more power to detect differences from normality it does not work well when several values are the same in the data set.[110, 111] Yet, both values were reported.

2.4.1.2 Bivariate

Simple linear regression was conducted to determine how well levels of perceived financial distress predicted levels of depressive symptoms.

To investigate relationships between religious coping, social support, perceived financial distress and depressive symptoms, Pearson's and Spearman correlations were used. Cronbach's Alphas were also computed for each scale (WORCS, ISSB, PFW, and QIDS-SR_{16}) and subscale (Tangible ISSB, internal and external WORCS) to measure the internal consistency (reliability) of the scores for the participants in this study.[112] As a general rule, if alpha is greater than or equal to .8 the items may be combined in an index or scale.[113]

Chi-square, independent-samples t-tests, and Mann Whitney U tests were performed to examine differences and to make comparisons among levels of perceived financial distress, religious coping, and social support, with relation to severity of depression. Participants' scores from the QIDS-SR_{16} were categorized by severity of depression, scores are noted in parentheses: none (0-5), mild (6-10), moderate (11-15), severe (16-20), very severe (16-20).[105] Participants' scores from the PFW were categorized as either having overwhelming to high (1-4.4) or average to no (4.5.-10) financial distress.[70]

To investigate whether overall religious coping had a significant effect on perceived financial distress a one-way independent, ANOVA was performed.

Correlations, one-way independent ANOVAs, and t-tests were also used to determine which of the socio-demographic variables would be controlled for in the regression models. Variables that were significantly associated with depressive symptoms were included.

2.4.1.3 Multivariate

Mediators and moderators are variables that affect the association between an independent variable and an outcome (dependent) variable.[114] A *mediator* is the mechanism through which a predictor (independent variable) influences an outcome variable and provides additional information about how or why two variables are strongly associated.[114, 115] On the other hand, a *moderator* is a variable that affects the strength and/or direction of the association between a predictor and an outcome, in which the association between the two variables "depends on" the value (or level) of the moderator variable.[114-116] Figure 2.1. shows the conceptual and statistical models of a moderator effect.[114-116]

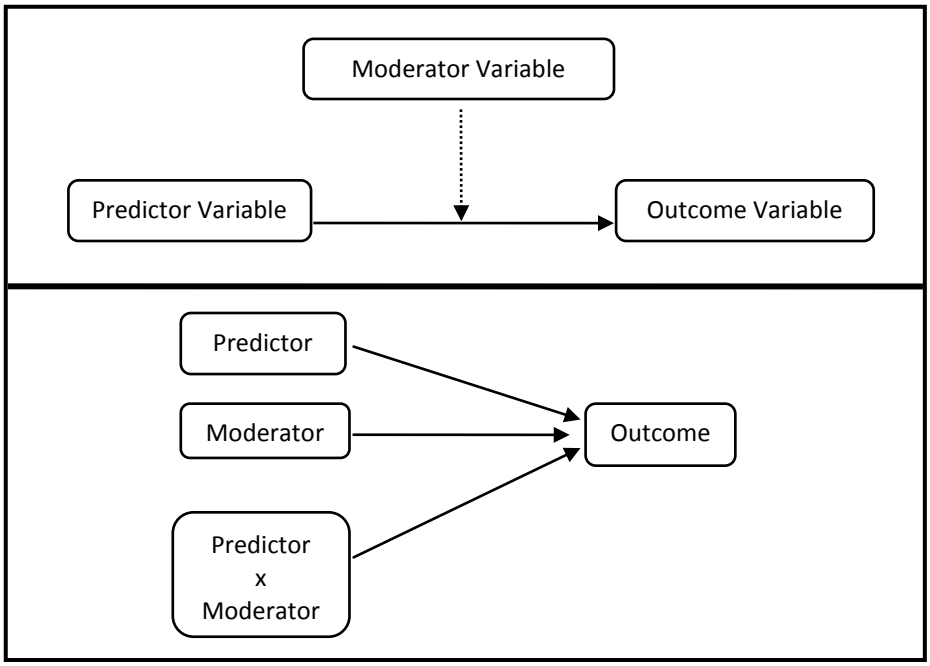

Figure 2.1. Conceptual (top) and statistical (bottom) models of a moderator effect

To investigate whether religious coping (total, external, and internal) and/or social support (total and tangible) were moderators in the relationship between financial distress and depressive symptoms, hierarchical regression, the general strategy to test for an interaction,[114] was used. Five separate regressions were performed, one for each moderator variable.

Prior to data analysis the predictor (financial distress) and moderator (total, external, and internal religious coping and total and tangible social support) variables were centered to reduce problems associated with multicollinearity among the variables in the regression equation.[115] Product terms were formed by multiplying the centered predictor variable and each of the centered moderator variables.[115] The variables were then entered into the equation as follows: any identified covariates were entered first, the predictor variable was entered second, the moderator variable was entered third, and the interaction term was entered in the last step.

2.4.1.4 Regression diagnostics

All of the regression models were checked to ensure that the major assumptions of linear regression were not violated. The following assumptions were checked:

1. The **number of cases**-to-independent variables (IVs) ratio should ideally be 20 cases for every IV in the model (20:1) and the lowest it should be is 5 cases for every IV in the model (5:1).[117]
2. **Normality** of the regression was assessed by looking at a plot of the residuals (the difference between obtained and predicted DV scores), as non-normally distributed variables can distort relationships and significance tests.[117, 118] The Lilliefors corrected K-S test was also used.
3. **Linearity** was examined by looking at residual plots fitted with a Loess line.[113, 118] If the relationship between IVs and the DV is not linear, the results of the regression analysis will under-estimate the true relationship, even still, the failure of linearity in regression will not invalidate the analysis so much as weaken it[117, 118]
4. The assumption of **homoscedasticity** is that the variability in scores for the IVs is the same at all values of the DV.[117, 118] Levene's test of homogeneity of variance was used to test this assumption. [113] If the Levene statistic was significant at the .05 level or better, the assumption was violated.[113] Violations of the assumption of homoscedasticity does not invalidate your regression but may weaken it.[117, 118]
5. **Multicollinearity** implies that your IVs are redundant with one another.[117] Tolerance and the Variance Inflation Factor (VIF) values were used to check

multicolinearity. A tolerance value of less than .20 or a VIF greater than 4.0 is indicative of a problem with multicollinearity.[113]

6. **Independence of errors** is tested by the Durbin-Watson coefficient.[113] The Durbin-Watson statistic should be between 1.5 and 2.5 for independent observations.
7. **Outliers and influential data points** can alter the outcome of analysis and are also violations of normality.[113] However, usually 5% (outliers) is expected. Potential outliers were defined as having a leverage value greater than .5.[113] Potential influential data points were cases with a Cook's Distance greater than 1.[113]

2.4.1.5 Effect size

Effect sizes estimate the magnitude of effect or association between two or more variables and are resistant to sample size influence, as a result they provide a truer measure of the magnitude of effect between variables.[119] For this reason effect sizes have been computed for all statistical tests in this study.

For t-tests the magnitude of differences between two groups is noted by Cohen's *d.* Interpretation of the effect sizes are as follows: recommended minimal = .41, moderate = 1.15, and strong = 2.70.[119]

For chi-squared, correlations, and Mann-Whitney U tests the magnitude of shared variance is noted by Cramer's V (chi-squared) and Pearson's r or Spearman's r_s (correlations and Mann-Whitney U). Interpretation of the effect sizes are as follows: recommended minimal = .2, moderate = .5, and strong = .8.[119]

For regression and ANOVA the measures as they correct for sampling error are Adjusted R^2 and Eta Squared (η^2), respectively. Interpretation of the effect sizes are as follows: recommended minimal = .04, moderate = .25, strong = .64.[119]

2.4.2 Qualitative Analysis

Responses to the two open-ended questions were entered into a spreadsheet, read thoroughly, coded for common themes and subthemes, and then analyzed (summarized) in order to answer the research questions proposed.

Mind-mapping was used to organize the themes and subthemes that emerged. A mind map is often created around a single word or text, placed in the center, to which associated ideas, words and concepts are added.[120] They also generally take a hierarchical or tree branch format, with ideas branching into their subsections.[120] Mind maps for the two open ended questions can be found in Appendix C.

3.0 FINANCIAL DISTRESS AND DEPRESSIVE SYMPTOMS AMONG AFRICAN AMERICAN WOMEN: IDENTIFYING FINANCIAL PRIORITIES AND NEEDS AND WHY IT MATTERS FOR MENTAL HEALTH

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3.1 ABSTRACT

Objective: Prior research found that financial hardship or distress is one of the most important underlying factors for depression/depressive symptoms, yet factors that contribute to financial distress remain unexplored or unaddressed. Given this, the goals of the present study were: 1) to examine the relationship between perceived financial distress and depressive symptoms; and 2) to identify financial priorities and needs that may contribute to financial distress.

Methods: Surveys from 111 African American women, ages 18-44, who reside in Allegheny County were used to gather demographic information and measures of depressive symptoms and financial distress/financial well-being. Correlation and regression were used to examine the association between the two measures. To assess financial priorities and needs responses to two open-ended questions were analyzed and coded for common themes: "Imagine you won a $10,000 prize in a local lottery. What would you do with this money?" and "What kinds of programs or other help would be beneficial to you during times of financial difficulties?"

Results: Perceived financial distress was significantly associated with levels of depressive symptoms. The highest five priorities identified by the participants were paying bills and debt, saving, purchasing a home or making home repairs, and/or helping others. The participant's perceived needs during times of financial difficulty included tangible assistance and/or financial education.

Conclusion: Ways to manage and alleviate financial distress should be considered and discussed when addressing the mental health of African American women.

Public Health Significance: Perceived financial distress is significant significantly associated with levels of depressive symptoms and this can be used to create new and/or enhance existing programs, services, and/or interventions that focus on the identified financial priorities and needs of African-American women. This finding also draws attention to the need for collaborative efforts among professionals in different disciplines.

3.2 INTRODUCTION

Of all mental illnesses, major depressive disorder (MDD), referred to in this article as depression, is the most commonly occurring affective or mood disorder.[1-8]

Research clearly shows that women are more likely than men to become depressed.[2, 9-12] What is not as clear is the prevalence rate of depression among women. Some studies note that the rates among African American women are similar or lower than rates for white women, yet other studies estimate the rates of depression to be 50% higher for African American woman.[8, 13] Numerous explanations exist that illuminate the difficulty in accurately assessing the true prevalence of depression.

Depression among African American women remains under detected, under treated, inadequately treated, missed diagnosed and under-diagnosed.[2, 4, 12, 14-25] A lack of knowledge and disbelief that they are or could be suffering from depression coupled with trying to live up to the image of being a “strong black woman” contributes to their not seeking treatment for depression.[10, 12, 13, 25-27] They also have alternative ways of coping that cause delays or conflicts with seeking care from a professional.[9, 18, 26, 28-30] Furthermore, they are less likely to participate in mental health research studies.[15]

3.2.1 Health focus: depressive symptoms

Even with different measures and different methods, research generally points out that younger African American women, ages 18-44, have higher levels of depressive symptoms than white women, African American men, and white men.[8] At any given time 16 to 28% of African American women have psychological distress that is indicative of clinical depression; consequences of high levels of depressive symptoms may be just as debilitating as those of depression.[2, 8, 9, 12, 13, 31] So in lieu of a focus on depression, which requires a formal diagnosis, numerous mental health research studies have focused on psychological distress.[8]

Depressive symptoms can occur as part of the psychological stress response, and the presence of depressive symptoms is the most commonly used indicator of psychological distress.[8]

3.2.2 Risk factor: financial distress

In this article the terms “financial distress,” “financial strain,” “financial stress,” “economic stress,” and “economic hardship” will be used interchangeably.

Financial strain is composed of cognitive, emotional, and behavioral responses to the experience of financial (economic) hardship that occurs when real expenses exceed income and one is unable to meet his/her financial responsibilities.[33] Thus, it is not solely dependent upon income, Similarly, financial distress has been defined as a reaction (mental or physical discomfort) to stress about one’s state of general financial well-being, including

perceptions about one's capacity to manage economic resources (such as income and savings), pay bills, repay debts, and provide for the needs and wants of life.[34] Financial distress can last a short time, or it can become a persistent state for individuals or families at all income levels.[34]

Financial strain/stress/distress are subjective reactions. Measuring these reactions can help researchers understand individuals' perceptions about and reactions to their financial condition.[34] Although objective measures of an individual's financial state (household income and/or debt-to-income ratio) provide evidence of where one stands financially, two individuals with the same levels of income and economic resources may have different levels of perceived financial distress and financial well-being.[34] For example, people who are financially distressed, including persons who are not by definition living in poverty, often live paycheck to paycheck.[34] Thus, using subjective measures such as financial distress will provide invaluable insight above and beyond objective measures alone.

Depression and depressive symptoms have been strongly associated with financial adversity or strain.[35-40] Schulz, Israel, Zenk, et al.[41] found that financial stress was the strongest direct predictor of symptoms of depression. In fact, McLoyd and Wilson called depression a "normative and situational response to economic hardship."[40] It appears that as financial distress increases, individuals may experience a myriad of stress-related mental and physical symptoms and illnesses.[35, 36, 42, 43] Some self-reported health effects of financial problems included worrying, anxiety, and tension; insomnia and sleep disorders; headaches and migraines; high blood pressure/hypertension; stomach, abdominal, and digestive problems; depression; aches and pains (e.g., back, chest); ulcers or possible ulcers; appetite

disorders and weight gain or loss; fatigue and feeling tired/weak; drug, alcohol, or cigarette use; and an inability to afford or access recommended health maintenance practices and health care services.[42, 43] As expected, individuals reporting lower financial distress/higher financial well-being reported better health.[44] In fact, it was found that financial satisfaction plays the most influential role in determining global life satisfaction among black women.[31]

The occurrence of different stressors affects the level of financial distress that an individual feels. One major stressor is living at or below poverty. There are many different definitions of poverty and people tend to measure poverty in many different ways. For that reason and for the purposes of this article, the Wikipedia[45] definition of poverty will be used: "Poverty may be understood as a condition in which a person or community is lacking in the basic needs for a minimum standard of well-being and life, particularly as a result of a persistent lack of income." Other stressors include negative financial events such as receiving overdue notices from creditors and collection agencies, issuing checks with funds insufficient to cover them, getting behind on bill payments, family money squabbles, and not being financially prepared for emergencies or major life events.[34, 44] The frequency of these negative stressor events adds to the level of financial distress a person feels. For example, events that occur on a regular basis or very often increase distress. Given this, although incidental, one-time, or sporadic occurrences of stressor events may lead to an increase in the level of financial distress an individual experiences, cumulative events may prove to be more detrimental over time.

The effects of financial strain can also spread to all those in the household who are dependent upon the income providers.[33] Economic hardship has been shown to influence adolescent outcomes through its effect on parental emotional health/depressive symptoms

and parenting behavior, and it has been shown to increase the likelihood of depression in the children of those families.[33, 38] Financial strain can also cause marital stress; in fact, many family and marriage counselors have identified financial difficulties as one of the most common causes of marital difficulties.[33]

On a note of caution, some researchers argue that it may be the onset or worsening of a health condition that exacerbates already existing financial problems.[42] A study by Lyons and Yilmazer [42] found poor health significantly increased the probability of financial strain, but found little evidence that financial strain contributed to poor health. Though this appears to refute the above findings, one must note that the use of cross sectional data makes it difficult to establish causality. This is not to deny the fact that in some cases poor health does worsen financial situations; it is to say that numerous research findings have confirmed the opposite as well, that financial strain indeed affects mental and physical health.

3.2.3 Study focus: financial priorities and needs

The purposes of this study were 1) to examine the association of financial distress and depressive symptoms among African American women: It was anticipated that there would be a positive relationship between perceived financial distress and depressive symptoms, in that higher levels of perceived financial distress will be indicative of higher levels of depressive symptoms; and 2) to identify their financial priorities and needs: knowing what the identified financial priorities and needs are of the women in this study may prove beneficial to professionals seeking to address and improve the mental health of African American women.

3.3 METHODS

3.3.1 Recruitment

A survey was administered to a cross-sectional sample of African American women, ages 18-44, who resided in Allegheny County, PA. Participants were recruited over a period of four months via flyers that were posted at various health care centers and distributed via email. Participants also referred other individuals from within their social networks who met eligibility criteria. Women requested packets if they were interested and returned the completed surveys by mail.

3.3.2 Measures

Socio-demographic data were collected through questions regarding how the participant heard about the study, the participants' age, religious affiliation, number of children, marital status, employment status, highest level of education, income, and overall religious coping. Additionally, questions inquired about the presence of other chronic health conditions, recent major life events, a previous diagnosis of a mental illness, and current mental health treatment.

The Quick Inventory of Depressive Symptomatology – Self Report 16 (QIDS-SR_{16}) [46] – was used to measure depressive symptoms. The total score ranges from 0 to 27 with higher scores indicating higher levels of depressive symptoms.[46] This measure was treated as continuous.

The Personal Financial Wellness Scale (PFW), a self-report, eight-item instrument, was used to measure perceived financial distress/financial well-being.[35] A total score was calculated for each participant by summing the number of points for responses to each of the eight items and then dividing the total by eight.[35] For individuals with fewer than eight responses the total number of points for responses was divided by the total number of items answered. The total score ranges from 1 to 10 with lower scores indicating higher levels of financial distress/lower levels of financial well-being.[35] This measure was treated as continuous.

Two open-ended questions were analyzed by coding for common themes to assess priorities and needs. The question "What kinds of programs or other help would be beneficial to you during times of financial difficulties?" was used to assess what the participants identified as needed support when experiencing financial hardship. The second question "Imagine you won a $10,000 prize in a local lottery. What would you do with this money?" was used to assess financial priorities of the participants by exploring what they would determine as important obligations if given a lump sum of money.

3.3.3 Statistical analyses

SPSS was used for data management, descriptive summaries, and to make inferences; All analyses conducted were two-tailed. Frequencies were used to assess the responses to the socio-demographic questions and to describe the study population. Frequency distributions and summary statistics (means, score ranges, and standard deviations) were also examined for depressive symptoms and financial distress.

The dependent (depressive symptoms) and independent (financial distress) variables were checked for normality using the Lilliefors corrected Kolmogorov-Smirnov (K-S) test. K-S was used because although the Shapiro-Wilks W (S-W) test has more power to detect differences from normality, it does not work well when several values are the same in the data set.[47, 48] Both values were still reported.

To investigate relationships between perceived financial distress and depressive symptoms, Pearson's correlations and simple linear regression were used. Chi-square and independent-samples t-tests were conducted to examine differences and to make comparisons among levels of perceived financial distress and severity of depression. Participants' scores from the QIDS-SR_{16} were categorized in terms of severity of depression, scores are noted in parentheses: none (0-5), mild (6-10), moderate (11-15), severe (16-20), very severe (21-27).[46] Participants' scores from the PFW were categorized as either having overwhelming to high (1-4.4) or average to no (4.5.-10) financial distress.[35]

Effect size estimates (Cohen's *d,* Cramer's V, *r*, and Adjusted R^2) were also reported to estimate the magnitude of associations as they are resistant to sample size influence, thus providing a truer measure of the magnitude of effect between variables.[49] For Cohen's *d,* interpretation of the effect sizes are as follows: recommended minimal = .41, moderate = 1.15, and strong = 2.70.[49] For Cramer's V and Pearson's *r* interpretation of the effect sizes are as follows: recommended minimal =.2, moderate =.5, and strong =.8.[49] For adjusted R^2 interpretation of the effect sizes are as follows: recommended minimal = .04, moderate = .25, strong = .64).[49]

3.3.4 Qualitative analysis

The responses to the two open-ended questions were entered into a spreadsheet, read thoroughly, coded for common themes and subthemes, and then analyzed (summarized) in order to answer the research questions proposed.

3.4 RESULTS

3.4.1 Participants

Of the 239 packets requested, 113 (47%) were returned. Two surveys were excluded because of age ineligibility; one participant was older than 44 and another participant's age was unknown. Table 3.1 presents the socio-demographic characteristics of the remaining 111 (46%) eligible participants.

Table 3.1. Socio-Demographic Characteristics

Characteristic	Number	Percent
How did you hear about this survey (n=109)		
Health Center	14	12.8
Received an email	23	21.1
Other (i.e. Researcher, friend, co-worker, relative, Facebook)	72	66.1
Age, years (n=111)*		
18-26	28	25.2
27-35	51	45.9
36-44	32	28.8
Average age	31.57	

Table 3.1. Continued

Characteristic	Number	Percent
Religious affiliation (n=104)		
Catholic	6	5.8
Muslim	1	1.0
No religious affiliation	12	11.5
Other (i.e. Confused, Christian, Lutheran, Methodist, Non-Denominational)	27	26
Prefer not to say	8	7.7
Protestant (i.e. Baptist, COGIC, Methodist, Seven-day Adventist, Jehovah's Witness, Pentecostal)	50	48.1
Total number of children 17 and under (n=111)		
0	34	30.6
1	29	26.1
2	29	26.1
3	9	8.1
4	4	3.6
5	4	3.6
7	2	1.8
Total number of children older than 17 (n=111)		
0	95	85.6
1	9	8.1
2	2	1.8
3	4	3.6
6	1	.9
Marital/Relationship status (n=111)		
Single, Never Married	69	62.2
Married	24	21.6
Divorced	7	6.3
Living with a significant other/domestic partner	11	9.9
Employment (n=111)		
Employed (Full-Time)	69	62.2
Employed (Part-Time)	7	6.3
Self-employed	8	7.2
Homemaker	4	3.6
Student	9	8.1
Retired	1	.9
Unemployed	13	11.7

Table 3.1. Continued

Characteristic	Number	Percent
Education (n=110)		
Grades 9-11	4	3.6
Grade 12 or GED	16	14.5
Some college, but did not finish	22	20
Technical or Associate degree	25	22.7
Bachelor's degree	22	20
Some graduate work	9	8.2
Master's degree	10	9.1
Professional degree	1	.9
Doctorate degree	1	.9
Annual income (n=109)		
Less than $10,000	29	26.6
$10,000 - $24,999	25	22.9
$25,000 - $39,999	31	28.4
$40,000 - $54,999	14	12.8
$55,000 - $69,999	6	5.5
$70,000 - $84,999	2	1.8
$85,000 - $100,000	0	0
Over $100,000	2	1.8
Number of medical conditions (n=111)		
0	96	86.5
1	11	9.9
2	3	2.7
4	1	.9
How often medical conditions interfere with daily activities (n=111)		
Never	3	2.7
Rarely	2	1.8
Sometimes	10	9
Not applicable	96	86.5
Number of major life events (past 6 months) (n=109)		
0	58	53.2
1	30	27.5
2	14	12.8
3	4	3.7
4	1	.9
5	2	1.8

Table 3.1. Continued

Characteristic	Number	Percent
How often major life events interfere with daily activities (n=111)		
Never	8	7.2
Rarely	15	13.5
Sometimes	21	18.9
All the Time	9	8.1
Not applicable	58	52.3
Diagnosis of depression or mental illness (n=111)		
Yes	29	26.1
No	82	73.9
Currently receiving mental health treatment (n=111)		
Yes	15	13.5
No	96	86.5

*= no participants were 20 or 39 years of age

The average age of the participants was 31, and a majority of the women heard about the study from someone they knew (66.1%). Other major characteristics of the women were that they were Protestant (48.1%); had no (30.6%), one (26.1%), or two (26.1%) children under 18, and a majority had no children over 17 (85.6%); they were mostly single/never married (62.2%) and employed full-time (62.2%); some women had attended some college (20%), had a technical or Associate degree (22.7%), or held a Bachelor's degree (20%); they had incomes of less than $10,000 (26.6%), between $10,000 and $24,999 (22.9%), or between $25,000 and $39,999 (28.4%); a majority had no chronic medical conditions (86.5%) and had no (53.2%) or one (27.5%) major life event take place within the past six months. A total of 29 (26.1%) women had been formally diagnosed with depression or a mental illness, and 15 (13.5%) women were currently receiving mental health treatment. Fourteen (93%) of the 15 women who were currently receiving mental health treatment also had a formal diagnosis of depression or another mental illness.

3.4.2 Depressive symptoms and perceived financial distress

3.4.2.1 Normality of the variables

Depressive symptom scores ranged from 0-21 and followed a non-normal distribution, D(109) = .123, p < .001, W(109) = .932, p < .001, whereas perceived financial distress/financial well-being scores ranged from 1-9.9 and followed an approximately normal distribution according to the K-S test, D(111) = .078, p = .096, but not the S-W test W(111) = .932, p = .001. Transformations were performed and the square root transformations were used for both variables as it made both distributions closer to normal; D(109) = .080, p = .083, W(109) = .976, p = .044, and, D(111) = .061, p = .200, W(111) = .977, p = .057, respectively.

3.4.2.2 Relationships

Perceived financial distress/financial well-being (M = 4.031; SD = 2.134) was significantly associated with levels of depressive symptoms (M = 7.39; SD = 4.393), r = -.397, p < .001, n = 109. The relationship was negative, meaning, higher levels of personal financial well-being/lower levels of financial distress were indicative of lower levels of depressive symptoms. Thus, lower levels of financial well-being indicate higher levels of financial distress and higher levels of depressive symptoms.

The results of the simple linear regression were also statistically significant F(1,107) = 20.075, p < .001, with and adjusted R^2 of .150, meaning 15% of the variability for depressive symptoms was explained by levels of perceived financial distress/financial well-being. Figure 3.1 below illustrates the relationship.

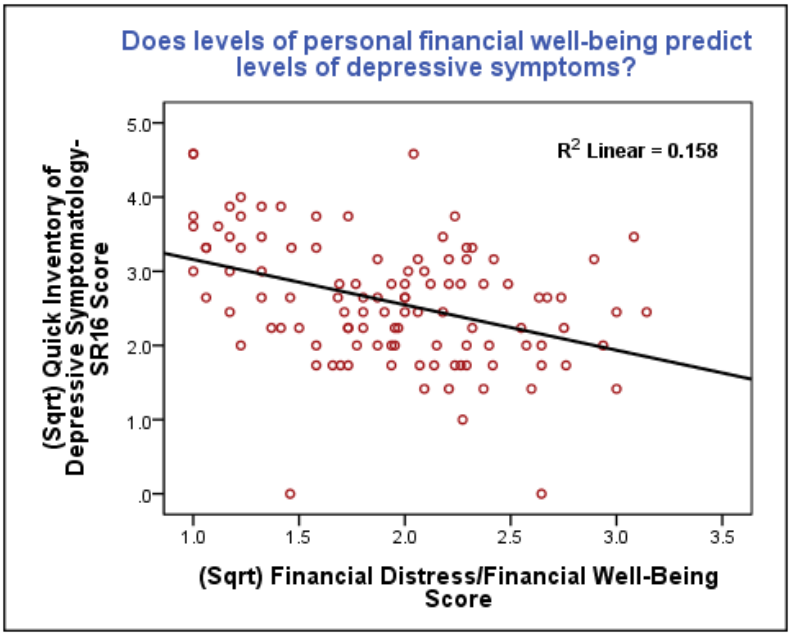

Figure 3.1. Scatterplot Showing the Relationship between Perceived Financial Distress/Financial Well-Being and Levels of Depressive Symptoms

3.4.2.3 Differences and comparisons

When looking at participants' scores for depressive symptoms (n = 109), according to the categories for severity of depression (Figure 3.2), 44 women had scores indicative of no depression, 40 had scores indicative of mild depression, 21 had scores indicative of moderate depression, 1 had a score indicative of severe depression, and 3 had scores indicative of very severe depression.

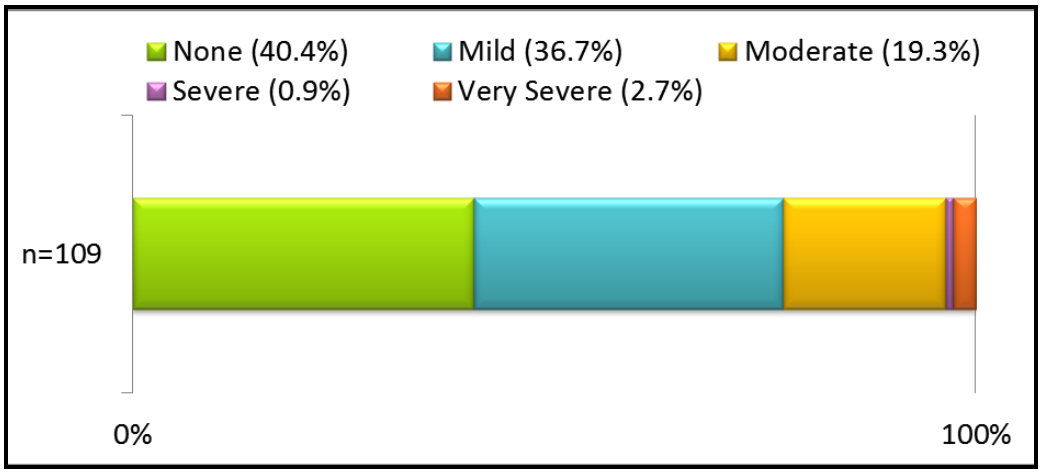

Figure 3.2. Severity of Depression among Participants

According to the Pearson's chi-square test there was a significant association between perceived financial distress and severity of depression, X^2 (2, n = 109) = 6.086, p = .048, V = .236.

When considering only the individuals who had overwhelming to average financial distress (61%), individuals who had moderate to very severe levels of depressive symptoms had lower personal financial well-being scores than individuals who had no depressive symptoms, $t(40) = 5.553$, $p < .001$, $d = 1.696$ and individuals who had mild depressive symptoms, $t(43) = 4.463$, $p < .001$, $d = 1.34$. Both differences were significant, indicating that individuals with moderate to very severe levels of depressive symptoms had higher perceived financial distress than the other two groups. Individuals who had no depressive symptoms had almost equal personal financial well-being scores as those who had mild levels of depressive symptoms, indicating similar levels of financial distress between the two groups; $t(45) = .200$, $p = .843$, $d = .068$.

When considering only the individuals who had average to no financial distress (39%), individuals in all three categories had almost equal PFW scores, indicating similar

levels of perceived financial distress for all three groups of individuals. No significant differences were found for individuals with no and mild levels of depressive symptoms, $t(35) = -.353$, $p = .727$, $d = .104$; for individuals with no and moderate to very severe levels of depressive symptoms, $t(25) = .400$, $p = .693$, $d = .189$; or for individuals with mild and moderate to very severe levels of depressive symptoms, $t(18) = .505$, $p = .619$, $d = .258$.

Table 3.2 presents the means and standard deviations for perceived financial distress scores according to severity of depression and level of perceived financial distress.

Table 3.2. Average Financial Distress Scores by Severity of Depression

	Perceived Financial Distress					
	Overwhelming to high (1-4.4)			Average to none (4.5-10)		
Severity of Depression	*n*	*M*	SD	*n*	*M*	SD
None (0-5)	22	3.042	.8009	22	6.188	1.269
Mild (6-10)	25	3.043	1.0884	15	6.392	1.683
Moderate-Very Severe (11-27)	20	1.728	.8106	5	5.975	1.985

3.4.3 Financial needs

One hundred one participants provided responses to the question "What kinds of programs or other help would be beneficial to you during times of financial difficulties?" Half (50.5%) of the women said tangible assistance, followed by a need for financial education (44.6%).

Table 3.3 and Figure 3.3 present the types and numbers of beneficial programs and/or help identified.

Table 3.3. Participants' Indicated Financial Needs (n = 101)

Beneficial Programs or Help*		Total Count	Percent
1. Tangible Assistance			
1a. Housing	8		
1b. Food	9		
1c. Medical Insurance	2		
1d. Utility Assistance	4		
1e. Money	18		
1f. For children (i.e. childcare, pampers, formula)	2		
1g. Loan Forgiveness /debt relief	5		
1h. Education assistance	2		
1i. Transportation assistance	1	51	50.5
2. Financial Education			
2a. Money Management	32		
2b. Advisor/Counselor/Trainer	10		
2c. Empowerment/Literacy/Entrepreneurship	3	45	44.6
3. Employment	7	7	6.9
4. Talking to Someone	10	10	9.9
5. Programs...			
5a. Church Programs	2		
5b. For mothers, single parents	4		
5c. For Kids	3		
5d. That give according to need	6	17	16.8
6. Education	2	2	2.0
7. Loans	5	5	5.0
8. Change Guidelines/policies			
8a. Lower Utility Costs	1		
8b. Qualifications for programs	8		
8c. Enforce help from non-custodial parent	2	11	10.9
9. Resources	4	4	4.0
10. Spirituality	3	3	3.0

Table 3.3. Continued

Beneficial Programs or Help*		Total Count	Percent
11. Other	2	2	2.0
12. I do not have any financial difficulties	3	3	3.0
13. None/Unsure	4	4	4.0

***** Participants may have identified more than one beneficial program or service

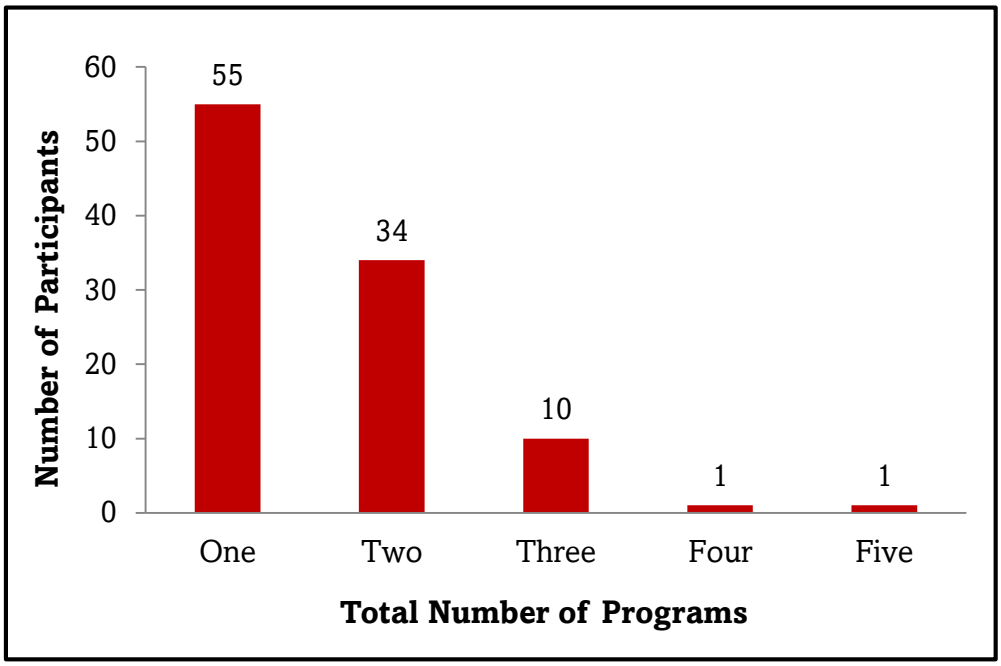

Figure 3.3. Total Number of Beneficial Programs or Help Identified by Participants (n =101)

3.4.4 Financial Priorities

One hundred ten participants responded to the question "Imagine you won a $10,000 prize in a local lottery. What would you do with this money?" The top responses provided were that participants would pay bills (49.1%), pay debt (41.8%), save (38.2%); use it towards purchasing a home or making home repairs (21.8%) and/or they would give it to others (21.8%). Table 3.4 and Figure 3.4 present how and the numbers of ways participants' would spend the lottery prize.

Table 3.4. Participants' Indicated Financial Priorities (n=110)

Lottery Prize*		Total Count	Percent
1. Pay Bills (not specified)	30		
1a. Car (Insurance, Note)	2		
1b. Tuition/School	5		
1c. Mortgage	1		
1d. In advance	5		
1e. Past due bills	11	54	49.1
2. Pay Debt (not specified)	21		
2a. Medical bills	3		
2b. Credit (Credit Cards, Credit Repair)	9		
2c. Loans (Student, People Owed)	12		
2d. Fines	1	46	41.8
3. Save ($1,000 - $5,000; Money Market Account; Emergency or "Rainy Day")	42	42	38.2
4. House			
4a. Down payment/Purchase	18		
4b. Repairs/Improvements	6	24	21.8
5. Kids (not specified)	1		
5a. Clothes/Shoes/School supplies	4		
5b. Education	5		
5c. Save	4	14	12.7
6. Purchases/Spend it (not specified)	3		
6a. Household (Items, Furniture, Groceries/Food)	6		
6b. "Things I need"	5		
6c. "Things I want" (Have fun, Shop, Wedding)	5	19	17.3
7. Vehicle	10	10	9.1
8. Give to/Spend on Others (not specified)	5		
8a. Family	15		
8b. Donate/Charity	4	24	21.8
9. Church (includes tithes)	16	16	14.5
10. Trip/Travel/Vacation	8	8	7.3
11. Towards a Business	5	5	4.5
12. Invest	3	3	2.7

***** Participants may have identified more than one way in which they would spend the lottery prize

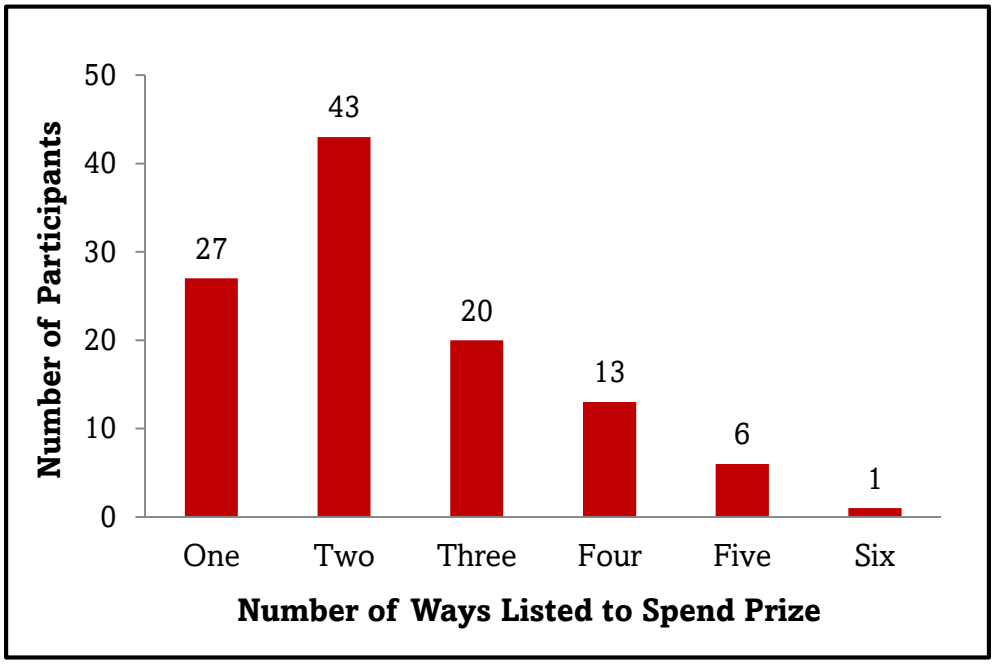

Figure 3.4. Total Number of Ways to Spend $10,000 Lottery Prize (n = 110)

3.5 DISCUSSION

As previously stated, depression and depressive symptoms have been strongly associated with financial adversity or strain.[35-40] In line with previous research findings, this study hypothesized and found a positive relationship between perceived financial distress and depressive symptoms and a negative relationship between perceived financial well-being and depressive symptoms; lower perceived financial distress means higher perceived financial well-being. Perceived financial distress was also found to significantly predict levels of depressive symptoms.

Over half (61%) of the women in this study were experiencing overwhelming to high levels of financial distress. When comparing individuals experiencing overwhelming to high

financial distress to those with average to no financial distress, of the women with no depressive symptoms, 50% had overwhelming to high financial distress and 50% had average to no financial distress. For women with mild depressive symptoms, 62.5% had overwhelming to high financial distress and 37.5% had average to no financial distress. For women with moderate to very severe depressive symptoms, 80% had overwhelming to high financial distress and 20% had average to no financial distress.

Among individuals who were experiencing overwhelming to average financial distress, those with moderate to very severe levels of depressive symptoms, had higher perceived financial distress than individuals with no or mild depressive symptoms. Individuals who had no or mild depressive symptoms had similar levels of perceived financial distress. Additionally, when there was average to no financial distress, financial distress was the same regardless of severity of depression.

The above findings illuminate the fact that financial distress is a significant factor that should be addressed when working with potentially depressed African American women. It also supports and adds to what was found in an earlier study by Falconnier,[50] which found that a majority of the patients (86%) participating in therapy identified problems of finances, work or unemployment (economic stress).[50] The study noted that therapists commonly avoided the topic of economic stress by changing the subject, but when they did pay more attention to the matter, improved outcomes were noted.[50]

When looking at responses to the open ended questions, 50.5% of the responses listed tangible assistance as being beneficial when experiencing financial difficulties. Tangible assistance included housing, food, medical insurance, utility assistance, money, childcare, disposable diapers, formula, loan forgiveness/debt relief, education assistance,

and transportation assistance. 44.6% of the responses stated that financial education would be beneficial. Financial education included money management, a financial advisor, counselor, or trainer, financial literacy, and information on entrepreneurship. A majority of the responses (71%) in this category were related to money management.

As a majority of the women were found to be experiencing overwhelming to high financial distress, it was of interest to assess how they would spend a lump sum of money if given the opportunity. The assumption was that they would spend according to whatever they felt were priorities or the most pressing financial concerns. The top two responses involved paying bills (49.1%) and paying debt (41.8%), followed by saving (38.2%). Bills included car insurance and payments, school tuition, mortgages, past due bills, and paying bills in advance. Debts included medical bills, credit cards, loans, and fines.

So how do we use this knowledge? The identified priorities and needs found in this study can provide insight and a starting point for professionals seeking to improve the mental health of African American women. Since we know that financial distress is an important risk factor for depressive symptoms, decreasing financial distress will mitigate depressive symptoms, and the mental health of African American women should improve. The key is to design interventions and/or programs that address financial distress and ensure they are adapted and targeted specifically for African American women. For example:

- Employ treatment options and counseling strategies that are based on an assessment of an individual's current stage of financial distress;[33] health and social service managers and policy makers could then encourage links between professionals who

have contact with families (e.g. social workers, mental health counselors) and debt counseling and advice services.[36]

- Integrate educational programs and research about the health and financial areas.[44] Increasing an individual's awareness about finances, financial distress and depression/depressive symptoms, and how the three interact can lead to improvements in psychological well-being via financial planning, savings, and seeking help for depression.
- Develop and implement programs and policies that promote financial growth and savings. *Money 2000*, developed by the Rutgers Cooperative Extension in 1995, had the goal of improving financial well-being for participants through increased savings and/or debt reduction via educational services (classes, newsletters, conferences, computer analyses, home study courses, and web sites).[51] The program was shown to be successful in achieving its goals.
- Since policies relevant to fundamental causes of disease form a major part of the national agenda, we (public health professionals) should broaden the concept of health policy to include areas not normally considered when thinking about health, such as education, taxes, recreation, transportation, employment, welfare, bankruptcy, housing, and criminal justice,[52-54] all of which are related to how individuals perceive financial hardship (distress). Public health professionals can then describe the impact on health by evaluating whether a proposed policy will improve or worsen specific health problems.[52]
- Conduct research to find appropriate measures to assess perceived financial distress so that practitioners can provide effective education and counseling interventions

and measure whether people's lives are changed for the better as a result.[34] If an individual's or population's perceived financial distress/financial well-being is known, programs can be designed and delivered to help reduce individual and family distress about personal finances and help improve financial well-being.[34]

The interventions/solutions suggested here are merely ideas and are not exhaustive. It may be necessary to think outside the box, rewrite policies, step into other arenas, and collaborate with professionals and experts of other fields in order to address this issue. After all, as public health professionals our top priority is to promote and enhance the health of the *entire* population.

3.6 LIMITATIONS

Major limitations of this study are due to the study design, the sampling strategy, and the targeted population. The study results are not generalizable and are not appropriate for making inferences about the entire population within Allegheny County, the surrounding area, or other areas in the United States. Nonetheless, given the exploratory nature of the study the results may serve as a basis for similar or future research in other comparable areas with a similar population. Since this was not a random sample, self-selection bias has the potential to be present; people had a choice of whether to complete the surveys or not and those who did may actually be different from those who chose not to. Additionally, participants recommended people within their social networks and thus the sample may not be reflective of the general population in the area.

3.7 NOTES

(a) This study was approved by the University of Pittsburgh Institutional Review Board (Appendix D).

(b) Appreciation is expressed to the Personal Finance Employee Education Foundation @ http://www.personalfinancefoundation.org/scale/well-being.html for permission to use the PFW scale.

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4.0 FINANCIAL DISTRESS AND DEPRESSIVE SYMPTOMS AMONG AFRICAN AMERICAN WOMEN: THE MODERATING ROLE OF RELIGIOUS COPING

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4.1 ABSTRACT

Objective: Prior research links spirituality and religiosity to decreased depression and lower rates of depressive symptoms, while financial distress has been associated with higher levels of depressive symptoms. Previous studies also show that blacks are more likely to turn to religion as a coping resource when faced with health challenges and when experiencing high levels of stress. Thus, the current study sought to examine if and how financial distress and religious coping interact to affect levels of depressive symptoms.

Methods: Surveys from 111 African American women, ages 18-44, who reside in Allegheny County, PA were used to gather demographic information and measures of depressive symptoms, financial distress/financial well-being, and religious coping. Hierarchical regression was used to determine the moderating effect of total, external, and internal religious coping.

Results: A majority of the women stated that their religion was either very involved (40.9%) or somewhat involved (30.9%) in understanding or dealing with stressful situations, but none of the measures of religious coping was significantly associated with perceived financial distress or depressive symptoms. Perceived financial distress was significantly associated with levels of depressive symptoms but none of the measures of religious coping were found to be moderators.

Conclusion: Though religious coping had no effect on the relationship between depressive symptoms and perceived financial distress, financial distress was still a significant factor and should be considered when addressing the mental health of African American women.

Public Health Significance: Though these findings may appear to negate the hypothesis contention that religion and spirituality are protective factors for depression/depressive symptoms, religious coping only measures the use of religion/spirituality to deal with stressful situations. The role of spirituality and religion remains significant in the culture of African American women and research is needed to explore the ways by which religion and spirituality affect their mental health.

4.2 INTRODUCTION

Of all mental illnesses, major depressive disorder (MDD), referred to in this article as depression, is the most commonly occurring affective or mood disorder.[1-8]

Research clearly shows that women are more likely than men to become depressed.[2, 9-12] What is not as clear is the prevalence rate of depression among women. Some studies note that the rates among African American women are similar or lower than rates for white women, yet other studies estimate the rates of depression to be 50% higher for African American woman.[8, 13] Numerous explanations exist that illuminate the difficulty in accurately assessing the true prevalence of depression.

Depression among African American women remains undetected, untreated, inadequately treated, missed diagnosed and under-diagnosed.[2, 4, 12, 14-25] A lack of knowledge and disbelief that they are or could be suffering from depression coupled with trying to live up to the image of being a “strong black woman” contributes to their not seeking treatment for depression.[10, 12, 13, 25-27] They also have alternative ways of coping that cause delays or conflicts with seeking care from a professional.[9, 18, 26, 28-30] They usually confront their

problems, turn to religious leaders, their spirituality and/or prayer, or seek help from within their own social milieu (significant others, family, friends, neighbors).[9, 18, 26, 28-30] In addition, they are less likely to participate in mental health research studies.[15]

4.2.1 Health focus: depressive symptoms

Even with different measures and different methods, research generally points out that younger African American women between the ages of 18-44 years of age have higher levels of depressive symptoms than white women, African American men, and white men.[8] At any given time 16 to 28% of African American women have psychological distress that is indicative of clinical depression; consequences of high levels of depressive symptoms may be just as debilitating as those of depression.[2, 8, 9, 12, 13, 31] So in lieu of a focus on depression, which requires a formal diagnosis, numerous mental health research studies have focused on psychological distress.[8]

Depressive symptoms can occur as part of the psychological stress response, and the presence of depressive symptoms is the most commonly used indicator of psychological distress.[8]

4.2.2 Risk factor: financial distress

In this article the terms “financial distress,” “financial strain," “financial stress,” and “economic hardship” will be used interchangeably.

Financial strain is composed of cognitive, emotional, and behavioral responses to the experience of financial hardship that occurs when real expenses exceed income and one

is unable to meet his/her financial responsibilities.[33] Thus, it is not solely dependent upon income, Similarly, financial distress has been defined as a reaction (mental or physical discomfort) to stress about one's state of general financial well-being, including perceptions about one's capacity to manage economic resources (such as income and savings), pay bills, repay debts, and provide for the needs and wants of life.[34] Financial distress can last a short time, or it can become a persistent state for individuals or families at all income levels.[34]

Financial strain/stress/distress are subjective reactions. Measuring these reactions can help researchers understand individuals' perceptions about and reactions to their financial condition.[34] Although objective measures of an individual's financial state (household income and/or debt-to-income ratio) provide evidence of where one stands financially, two individuals with the same income and economic resources may have different levels of perceived financial distress and financial well-being.[34] Thus, using subjective measures such as financial distress will provide invaluable insight above and beyond objective measures alone.

Depression and depressive symptoms have been strongly associated with financial adversity or strain.[35-40] Schulz, Israel, Zenk, et al.[41] found that financial stress was the strongest direct predictor of symptoms of depression. In fact, McLoyd and Wilson called depression a "normative and situational response to economic hardship."[40] It appears that as financial distress increases, individuals may experience a myriad of stress-related mental and physical symptoms and illnesses that can be detrimental to their health.[35, 36 42, 43] Likewise, individuals reporting lower financial distress/higher financial well-being reported

better health.[44] In fact, it was found that financial satisfaction plays the most influential role in determining global life satisfaction among black women.[31]

It then appears that financial distress may contribute to making African American women most vulnerable to the effects of depression/depressive symptoms.

4.2.3 Protective factor: religious coping

Research suggests that cultural factors such as perceived social support, deep religiosity and spirituality, extended families, personal relationships that are configured in culturally determined ways, and other coping strategies serve to soften the assaults on the mental well-being of African American women.[8] The focus of this article is religion/spirituality.

Spirituality, a personal concept, is a broader term than religion.[45, 46] It is not exclusively related to religion, and those who consider themselves to be spiritual may or may not participate in formal religious practice or identify with a religious group.[45, 47-49] Religion, on the other hand, is viewed as being a set of beliefs and practices that is associated with a doctrine and rituals and is often shared with groups of people.[45-47, 50] Religiosity is defined as one's adherence to prescribed beliefs (about God or a set of gods) and practices or rituals of an organized religion.[48, 49, 51]

Though the direct route by which spirituality and religion safeguard mental and physical health are unknown, studies link lower rates of depressive symptoms to greater spirituality.[10, 26, 30, 52] Spirituality and religiosity have also been associated with lower blood pressure, better immune function, and decreased depression.[48] Religion and spirituality are also often associated with the ability to cope with adverse health experiences and blacks, as opposed to whites, are more likely to turn to religion as a coping resource when faced with

health challenges and when experiencing high levels of stress.[45, 47-49, 51, 53] In fact, studies have shown that African American women tend to exhibit a greater overt focus on spirituality and religiosity than African American men, white men or white women.[45, 49, 51]

On a cautionary note, some spiritual sayings, such as "It's God's will," "The Lord will make a way somehow," and "He won't give you more than you can bear," may contribute to depressive symptoms by suggesting to women that they should be able to handle their struggles, often without help from others.[50] Despite this, spirituality and/or religion may prove, more often than not, to be protective factors against the ill effects of depression and depressive symptoms.

4.2.4 Study focus: the moderating role of religious coping

Mediators and moderators are variables that affect the association between an independent variable and an outcome variable.[54] A *mediator* is the mechanism through which a predictor influences an outcome variable and provides additional information about how or why two variables are strongly associated.[54, 55] On the other hand, a *moderator* is a variable that affects the strength and/or direction of the association between a predictor and an outcome, in which the association between the two variables "depends on" the value (or level) of the moderator variable.[54-56] Figure 4.1. shows the conceptual and statistical models of a moderator effect on the relationship.[54-56]

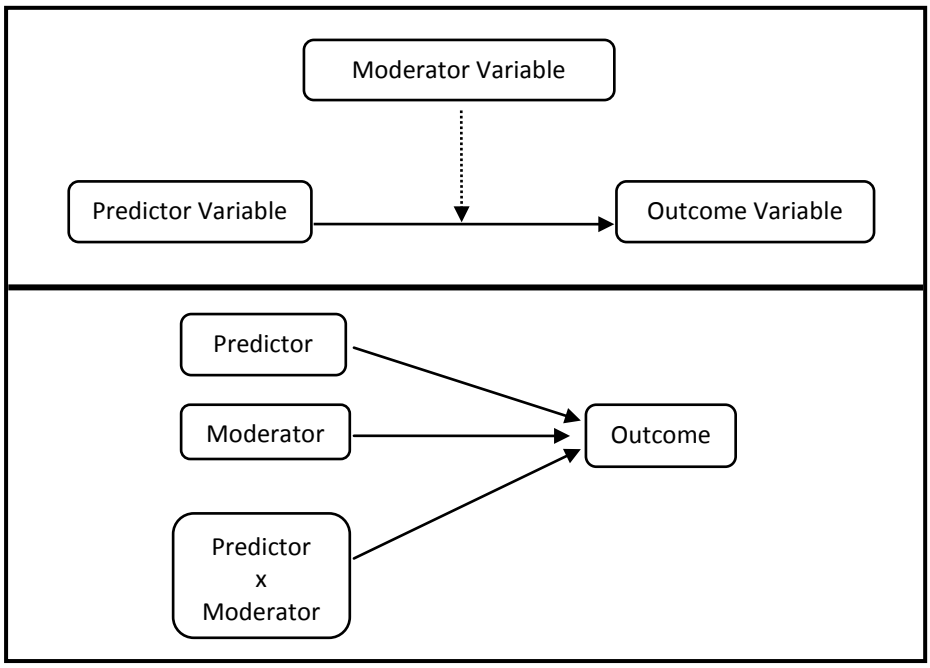

Figure 4.1. Conceptual (top) and statistical (bottom) models of a moderator

As a protective factor, religious coping, defined as a means of dealing with stress that is religious (including prayer, congregational support, pastoral care, and or religious faith),[57] may be a potential moderator for the relationship between financial distress and depressive symptoms.

The purpose of this study was to determine if religious coping was a moderator in the relationship between financial distress and depressive symptoms. It was anticipated that given higher levels of perceived financial distress, higher levels of total religious coping or higher levels of internal religious coping would result in lower levels of depressive symptoms. External religious coping, however, was not anticipated to have any effect.

4.3 METHODS

4.3.1 Recruitment

A survey was administered to a cross-sectional sample of African American women, ages 18-44, who resided in Allegheny County, PA. Participants were recruited over a period of four months via flyers that were posted at various health care centers and distributed via email. Participants also referred other individuals from within their social networks who met eligibility criteria. Women requested packets if they were interested and returned the completed surveys by mail.

4.3.2 Measures

Socio-demographic data were collected through questions regarding how the participant heard about the study, the participants' age, religious affiliation, number of children, marital status, employment status, highest level of education, income, and overall religious coping. Additionally, questions inquired about the presence of other chronic health conditions, recent major life events, a previous diagnosis of a mental illness, and current mental health treatment.

The Quick Inventory of Depressive Symptomatology – Self Report 16 ($QIDS\text{-}SR_{16}$) [58] – was used to measure depressive symptoms. The total score ranges from 0 to 27 with higher scores indicating higher levels of depressive symptoms.[58] This measure was treated as continuous.

The Personal Financial Wellness Scale (PFW), a self-report, eight-item instrument, was used to measure perceived financial distress/financial well-being.[35] A total score was calculated for each participant by summing the number of points for responses to each of the eight items and then dividing the total by eight.[35] For individuals with fewer than eight responses the total number of points for responses was divided by the total number of items answered. The total score ranges from 1 to 10 with lower scores indicating higher levels of financial distress/lower levels of financial well-being.[35] This measure was treated as continuous.

The Ways of Religious Coping Scale (WORCS), a 40-item, self-report instrument was used for assessing religious coping strategies.[59] A total score, an external (social) score, and an internal (private) score was calculated for each participant. Higher scores were indicative of greater religious coping. These measures were treated as continuous.

Overall religious coping was measured by a single question, "To what extent is your religion involved in understanding or dealing with stressful situation in any way?"[60] Responses were: Not involved at all, not very involved, somewhat involved, and very involved. This measure was treated as ordinal.

4.3.3 Statistical analyses

SPSS was used for data management, descriptive summaries, and to make inferences; all analyses conducted were two-tailed. Frequencies were used to analyze the responses to the socio-demographic questions and to describe the study population. Frequency distributions

and summary statistics (means, score ranges, and standard deviations) were also examined for depressive symptoms, financial distress, and religious coping.

The dependent (depressive symptoms) and independent (financial distress and religious coping) variables were checked for normality using the Lilliefors corrected Kolmogorov-Smirnov (K-S) test. K-S was used because although the Shapiro-Wilks W (S-W) test has more power to detect differences from normality it does not work well when several values are the same in the data set.[61, 62] Both values were still reported.

In order to determine if any of the socio-demographic variables would be controlled for in the regression model correlations, one-way independent ANOVAs and t-tests were performed.

For depressive symptoms and age, total number of children 17 and younger, total number of children 18 and older, number of medical conditions, and number of major life events correlations were conducted.

For levels of depressive symptoms and religious affiliation, marital/relationship status, employment status, education level, income, and overall religious coping one-way independent ANOVAs were used.

For levels of depressive symptoms and formal mental health diagnosis and current treatment for a mental health condition t-tests were performed.

Variables that were significantly associated with depressive symptoms were included in the regression model.

To investigate relationships between total, external and internal religious coping, perceived financial distress and depressive symptoms, Pearson's and Spearman correlations were used. Independent-samples t-tests and Mann Whitney U tests were conducted to

examine differences and to make comparisons of mean scores for total, external, and internal religious coping and severity of depression. Participants' scores from the QIDS-SR_{16} were categorized in terms of severity of depression; scores are noted in parentheses: none (0-5), mild (6-10), moderate (11-15), severe (16-20), very severe (21-27).[58] A one-way independent ANOVA was also performed to note whether overall religious coping had a significant effect on perceived financial distress.

Hierarchical regression, the general strategy to test for an interaction,[54] was used to determine if total, external, and/or internal religious coping were moderators in the relationship between financial distress and depressive symptoms. Three separate regressions were performed, one for each moderator.

Prior to data analysis the predictor (financial distress) and moderator (total, external, and internal religious coping) variables were centered and product terms were formed by multiplying the centered predictor variable and each of the centered moderator variables.[55] Variables were entered into the equation as follows: the identified covariates were entered first, the predictor variable was entered second, the moderator variable was entered third, and the interaction term was entered in the last step. The regression models were checked to ensure that major assumptions of linear regression were not violated: number of cases-to-independent variables, normality, linearity, homoscedasticity, multicolinearity, independence of errors, and outliers and influential data points.

Effect size estimates (Cohen's *d*, *r*, r_s, η^2, and Adjusted R^2) were also reported to estimate the magnitude of associations as they are resistant to sample size influence, thus providing a truer measure of the magnitude of effect between variables.[63] For Cohen's *d,* interpretation of the effect sizes are as follows: recommended minimal = .41, moderate =

1.15, and strong = 2.70.[63] For Pearson's *r,* and Spearman's r_s, interpretation of the effect sizes are as follows: recommended minimal = .2, moderate = .5, and strong = .8.[63] For adjusted R^2 and Eta Squared (η^2), interpretation of the effect sizes are as follows: recommended minimal = .04, moderate = .25, strong = .64).[63]

4.4 RESULTS

4.4.1 Participants

Of the 239 packets requested, 113 (47%) were returned. Two surveys were excluded because of age ineligibility; one participant was older than 44 and another participant's age was unknown. Table 4.1 presents the socio-demographic characteristics of the remaining 111 (46%) eligible participants.

Table 4.1. Socio-Demographic Characteristics

Characteristic	Number	Percent
How did you hear about this survey (n=109)		
Health Center	14	12.8
Received an email	23	21.1
Other (i.e. Researcher, friend, co-worker, relative, Facebook)	72	66.1
Age, years (n=111)*		
18-26	28	25.2
27-35	51	45.9
36-44	32	28.8
Average age	31.57	

Table 4.1. Continued

Characteristic	Number	Percent
Religious affiliation (n=104)		
Catholic	6	5.8
Muslim	1	1.0
No religious affiliation	12	11.5
Other (i.e. Confused, Christian, Lutheran, Methodist, Non-Denominational)	27	26
Prefer not to say	8	7.7
Protestant (i.e. Baptist, COGIC, Methodist, Seven-day Adventist, Jehovah's Witness, Pentecostal)	50	48.1
Total number of children 17 and under (n=111)		
0	34	30.6
1	29	26.1
2	29	26.1
3	9	8.1
4	4	3.6
5	4	3.6
7	2	1.8
Total number of children older than 17 (n=111)		
0	95	85.6
1	9	8.1
2	2	1.8
3	4	3.6
6	1	.9
Marital/Relationship status (n=111)		
Single, Never Married	69	62.2
Married	24	21.6
Divorced	7	6.3
Living with a significant other/domestic partner	11	9.9
Employment (n=111)		
Employed (Full-Time)	69	62.2
Employed (Part-Time)	7	6.3
Self-employed	8	7.2
Homemaker	4	3.6
Student	9	8.1
Retired	1	.9
Unemployed	13	11.7

Table 4.1. Continued

Characteristic	Number	Percent
Education (n=110)		
Grades 9-11	4	3.6
Grade 12 or GED	16	14.5
Some college, but did not finish	22	20
Technical or Associate degree	25	22.7
Bachelor's degree	22	20
Some graduate work	9	8.2
Master's degree	10	9.1
Professional degree	1	.9
Doctorate degree	1	.9
Annual income (n=109)		
Less than $10,000	29	26.6
$10,000 - $24,999	25	22.9
$25,000 - $39,999	31	28.4
$40,000 - $54,999	14	12.8
$55,000 - $69,999	6	5.5
$70,000 - $84,999	2	1.8
$85,000 - $100,000	0	0
Over $100,000	2	1.8
Number of medical conditions (n=111)		
0	96	86.5
1	11	9.9
2	3	2.7
4	1	.9
How often medical conditions interfere with daily activities (n=111)		
Never	3	2.7
Rarely	2	1.8
Sometimes	10	9
Not applicable	96	86.5
Number of major life events (past 6 months) (n=109)		
0	58	53.2
1	30	27.5
2	14	12.8
3	4	3.7
4	1	.9
5	2	1.8

Table 4.1. Continued

Characteristic	Number	Percent
How often major life events interfere with daily activities (n=111)		
Never	8	7.2
Rarely	15	13.5
Sometimes	21	18.9
All the Time	9	8.1
Not applicable	58	52.3
Diagnosis of depression or mental illness (n=111)		
Yes	29	26.1
No	82	73.9
Currently receiving mental health treatment (n=111)		
Yes	15	13.5
No	96	86.5

*= no participants were 20 or 39 years of age

The average age of the participants was 31, and a majority of the women heard about the study from someone they knew (66.1%). Other major characteristics of the women were that they were Protestant (48.1%); had no (30.6%), one (26.1%), or two (26.1%) children under 18, and a majority had no children over 17 (85.6%); they were mostly single/never married (62.2%) and employed full-time (62.2%); some women had attended some college (20%), had a technical or Associate degree (22.7%), or held a Bachelor's degree (20%); they had incomes of less than $10,000 (26.6%), between $10,000 and $24,999 (22.9%), or between $25,000 and $39,999 (28.4%); a majority had no chronic medical conditions (86.5%) and had none (53.2%) or one (27.5%) major life event take place within the past six months. A total of 29 (26.1%) women had been formally diagnosed with depression or a mental illness, and 15 (13.5%) women were currently receiving mental health treatment. Fourteen (93%) of the 15 women who were currently receiving mental health treatment also had a formal diagnosis of depression or another mental illness.

4.4.2 Depressive symptoms, perceived financial distress, and religious coping

4.4.2.1 Normality

Depressive symptom scores followed a non-normal distribution, D(109) = .123, p< .001, W(109) = .932, $p < .001$, whereas, financial distress/financial well-being scores followed an approximately normal distribution according to the K-S test, D(111) = .078, $p = .096$, but not the S-W test W(111) = .932, $p = .001$. Transformations were performed, and the square root transformations were used for both variables as it made both distributions closer to normal; D(109) = .080, $p = .083$, W(109) = .976, $p = .044$, and, D(111) = .061, $p = .200$, W(111) = .977, p = .057, respectively.

Total WORCS scores followed a normal distribution, D(98) = .073, $p = .200$, W(98) = .983, $p = .221$, and transformation was not needed. External WORCS scores, D(110) =.233, $p < .001$, W(110) = .783, p < .001, and internal WORCS scores, D(107) = .113, $p = .002$, W(107) = .930, $p < .001$, both followed a non-normal distribution but no transformations made the distributions closer to normal so non-parametric tests were used when appropriate.

4.4.2.2 Control Variables

Age, n = 109, $r = .105$, $p = .279$, total number of children 17 and younger, n = 109, $r = .180$, $p = .060$, total number of children 18 and over, n = 109, $r = .022$, $p = .823$, number of medical conditions, n = 109, $r = .091$, $p = .346$, and number of major life events within the past six months, n = 107, $r = .014$, $p = .888$, were not significantly associated with depressive symptoms.

Religious affiliation, $F(5,96) = 1.376$, $p = .240$, $\eta^2 = .067$, marital/relationship status, $F(3,105) = .527$, $p = .665$, $\eta^2 = .015$, employment status, $F(6,102) = 1.470$, p = .196, $\eta^2 = .080$, education level, $F(8,99) = .846$, $p = .565$, $\eta^2 = .064$, income, $F(6,100) = .674$, p = .671, $\eta^2 = .039$, and overall religious coping, $F(3,104) = .841$, $p = .474$, $\eta^2 = .024$, had no significant effect on levels of depressive symptoms.

There was no significant difference in mean levels of depressive symptoms between individuals who were (M = 9.07, SD = 4.415) currently receiving mental health treatment and those who were not (M = 7.13, SD = 4.353), $t(107) = 1.752$, $p = .083$, $d = 0.523$. However, there was a significant difference in mean levels of depressive symptoms between individuals with (M = 10.10, SD = 4.655) and without (M = 6.41, SD = 3.877) a formal mental health diagnosis, $t(107) = 4.132$, $p < .001$, $d = 0.924$. The measure of formal mental health diagnosis was included in the regression model.

4.4.2.3 Relationships

The only significant correlation was between depressive symptoms and financial distress. Table 4.2 presents correlations and other psychometric properties for religious coping by depressive symptoms and financial distress.

Table 4.2. Summary of Correlations and Psychometric Properties for Religious Coping with Depressive Symptoms and Financial Distress

Measures	Depressive Symptoms	Financial Distress	Total Religious Coping	External Religious Coping[a]	Internal Religious Coping[a]
Depressive Symptoms	-	-.397** (109)	-.068 (96)	-.043 (108)	-.117 (105)
Financial Distress	-	-	.096 (98)	.021 (110)	.089 (107)
M	7.39	4.031	75.087	7.44	35.74
SD	4.393	2.134	32.888	8.839	16.343
α	.806	.937	.959	.922	.950
Range (Potential)	0-27	1-10	0-160	0-40	0-60
Range (Actual)	0-21	1-9.9	7-148	0-37	4-60

Note. Sample sizes are listed in parentheses.
[a] = Spearman Rho correlations were used
** < .001

4.4.2.4 Differences and comparisons

There was no significant effect of overall religious coping on perceived financial distress/financial-well-being, $F(3, 106) = .190$, $p = .903$, $\eta^2 = .00535$. Figure 4.2 displays the responses of one hundred ten participants.

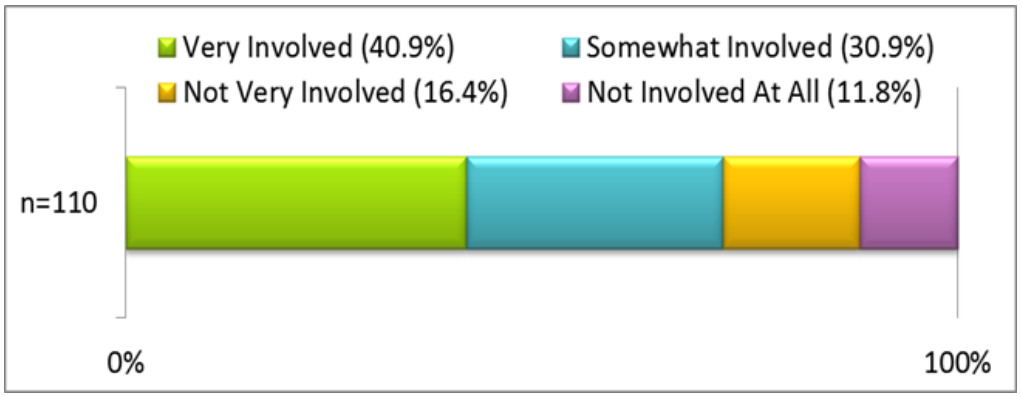

Figure 4.2. Participants' responses to the Overall Religious Coping Question: "To what extent is your religion involved in understanding or dealing with stressful situations in any way?"

Table 4.3 presents the means and standard deviations for religious coping scores according to severity of depression.

Table 4.3. Average Religious Coping Scores by Severity of Depression

Severity of Depression	Total Religious Coping			External Religious Coping			Internal Religious Coping		
	n	*M*	SD	*n*	*M*	SD	*n*	*M*	SD
None (0-5)	38	77.9	30.1	43	7.19	8.07	43	37.4	15.3
Mild (6-10)	38	73.6	34.0	40	7.03	7.78	39	36.1	16.6
Moderate-Very Severe (11-27)	20	74.0	36.6	25	8.44	11.6	23	32.9	17.7

There were no significant differences in mean *total religious coping* scores between individuals with no and mild levels of depressive symptoms, $t(74) = .588$, $p = .558$, $d = .135$; between individuals with no and moderate to very severe levels of depressive symptoms, $t(56) = .446$, $p = .657$, $d = .119$; or between individuals with mild and moderate to very severe levels of depressive symptoms, $t(56) = -.034$, $p = .973$, $d = .009$.

There were no significant differences in mean *external religious coping* scores between individuals with no (*Mdn* = 4) and mild (*Mdn* = 4) levels of depressive symptoms, *U* = 850, *Z* = -.092, *p* = .927, *r* = .010; between individuals with no and moderate to very severe (*Mdn* = 3) levels of depressive symptoms, *U* = 480.5, *Z* = -.729, *p* = .466, *r* = .088; or between individuals with mild and moderate to very severe levels of depressive symptoms, *U* = 450, *Z* = -.678, *p* = *.498*, *r* = .084.

There were also no significant differences in mean *internal religious coping* scores between individuals with no (*Mdn* = 40) and mild (*Mdn* = 40) levels of depressive symptoms, *U* = 819.50, *Z* = -.176, *p* = .860, *r* = .019; between individuals with no and moderate to very severe (*Mdn* = 34) levels of depressive symptoms, *U* = 424.5, *Z* = -.943, *p* = .346, *r* = .116; or between individuals with mild and moderate to very severe levels of depressive symptoms, *U* = 408, *Z* = -.591, *p* = .555, *r* = .075.

4.4.2.5 Hierarchical regression

Model 1: Total Religious Coping

The control variable mental health diagnosis significantly predicted levels of depressive symptoms *F*(1, 94) = 9.719, *p* = .002. Financial distress/financial well-being significantly improved the prediction when added, *F*(1, 93) = 6.581, *p* = .012. When entered, neither total religious coping, *F*(1, 92) = .002, *p* = .968, nor the interaction between financial distress and total religious coping, *F*(1, 91) = 3.383, *p* = .069, significantly improved the prediction. The entire group of variables together significantly predicted levels of depressive symptoms *F*(4, 91) = 5.128, *p* = .001. The regression weights are presented in Table 4.4. Regression diagnostics for the model are presented in Table 4.5.

Model 2: External Religious Coping

The control variable mental health diagnosis significantly predicted levels of depressive symptoms, $F(1, 106) = 16.658$, $p = .000$. Financial distress/financial well-being significantly improved the prediction when added, $F(1, 105) = 10.701$, $p = .001$. When entered, neither external religious coping, $F(1, 104) = 1.318$, $p = .254$, nor the interaction between financial stress and external religious coping, $F(1, 103) = 3.016$, $p = .085$, significantly improved the prediction. The entire group of variables significantly predicted levels of depressive symptoms $F(4, 103) = 8.473$, $p = .000$. The regression weights are presented in Table 4.4. Regression diagnostics for the model are presented in Table 4.5.

Model 3: Internal Religious Coping

The control variable mental health diagnosis significantly predicted levels of depressive symptoms $F(1, 103) = 15.953$, $p = .000$. Financial distress/financial well-being significantly improved the prediction when added, $F(1, 102) = 10.394$, $p = .002$. When entered, neither internal religious coping, $F(1, 101) = 1.088$, $p = .299$, nor the interaction between financial stress and internal religious coping, $F(1, 100) = 3.442$, $p = .067$, significantly improved the prediction. The entire group of variables significantly predicted levels of depressive symptoms $F(4, 100) = 8.264$, $p = .000$. The regression weights are presented in Table 4.4. Regression diagnostics for the model are presented in Table 4.5.

Table 4.4. Hierarchical Multiple Regression Analysis Summary for Interaction Effects Between Financial Distress and Religious Coping to Predict Levels of Depressive Symptoms, Controlling for Mental Health Diagnosis, Financial Distress and Religious Coping

	Total Religious Coping				External Religious Coping				Internal Religious Coping			
Predictor	ΔR^2	B	SEB	β	ΔR^2	B	SEB	β	ΔR^2	B	SEB	β
Step 1	.094**				.136***				.134***			
(constant)		3.45	.327			3.63	.295			3.53	.301	
Diagnosis		-.506	.182	-.269**		-.603	.165	-.320***		-.552	.168	-.292**
Step 2	.060*				.080**				.080**			
Financial Distress		-.108	.038	-.276**		-.122	.034	-.313**		-.119	.035	-.306**
Step 3	.000				.010				.008			
Religious Coping		-.001	.002	-.032		.006	.008	.068		-.005	.005	-.092
Step 4	.030				.022				.026			
Financial Distress X Religious Coping		.002	.001	.179		.005	.003	.153		.004	.002	.163
Adjusted R^2	.148				.218				.218			
n	96				108				105			

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

Table 4.5. Results from Checking Assumptions of the Regression Equations

Regression Assumptions	Total Religious Coping	External Religious Coping	Internal Religious Coping
Number of cases	24:1	27:1	26.25:1
Normality	K-S p=.200 S-W p=.037	K-S p=.200 S-W p=.032	K-S p=.063 S-W p=.014
Linearity (Residual plot fitted with a Loess line)	Appears linear	Appears linear	Appears linear
Homoscedasticity (Levene's)	p=.738	p=.579	p=.869
Multicolinearity	All VIFs < 4 All tolerances >.20	All VIFs < 4 All tolerances >.20	All VIFs < 4 All tolerances >.20
Outliers (Leverage)	5% expected =4.8 Leverage 0 >.5	5% expected= 5.2 Leverage 0 >.5	5% expected= 5.25 Leverage 0 >.5
Independence of errors (Durbin-Watson)	1.893	1.802	1.765
Influential data points (Cook's D)	0 > .88	0 > .88	0 > .88

4.5 DISCUSSION

Religious forms of coping are especially helpful to people who are confronted with uncontrollable, unmanageable, or otherwise difficult situations.[53] Having such a significant role in the life of African Americans, religion and spirituality are often associated with the ability to cope with adverse health experiences and have been shown to affect the physical and psychological well-being of African Americans.[48, 49] Depression has been noted as a condition for which women often reported turning to religion/spirituality since many women believe that mental health conditions can be treated by engaging in spiritual and religious practices.[45] In a study by Cooper, Brown, Vu, Ford, et al.[64] African Americans were more likely than whites to rate spirituality as an extremely important aspect of care for depression. Based on this knowledge, this study sought to explore if and how religious coping affected depressive symptoms, financial distress, and the relationship between financial distress and depressive symptoms.

A majority of the women in this study stated that their overall religion was either very involved (40.9%) or somewhat involved (30.9%) in understanding or dealing with stressful situations; however, overall religious coping had no effect on levels of depressive symptoms.

The mean financial distress score for participants was 4.031, and the mean score on the QIDS-SR_{16} was 7.39, indicating that the study population on average had high financial distress and levels of depressive symptoms that corresponded to mild depression. Yet no significant differences in average total, internal, or external religious coping scores when looking at severity of depression were found, and there were no significant correlations

between total, external, or internal religious coping and depressive symptoms or financial distress. In fact, the only significant associations were between financial distress and depressive symptoms and between depressive symptoms and a formal diagnosis of mental illness. Unfortunately, the time of diagnosis was not captured, so it is unknown if the diagnosis was days, months, or even years prior to the study.

Though no difference was noted in average religious coping scores, by severity of depression, when looking at mean religious coping scores the women in this study were more likely to use private (internal) as opposed to social (external) religious coping mechanisms. This was expected as it was anticipated that total and internal religious coping would affect the relationship between financial distress and depressive symptoms. Higher levels of total religious coping or higher levels of internal religious coping were expected to result in lower levels of depressive symptoms, when experiencing financial distress. External religious coping was not expected to have an effect.

As expected, external religious coping was not found to be a moderator in the relationship between depressive symptoms and financial distress, but contrary to what was anticipated, total religious coping and internal religious coping were not found to be moderators of the relationship either. Not surprisingly, a formal diagnosis of a mental illness and perceived financial distress were significant predictors of depressive symptoms in all three models.

These findings may appear to negate the hypothesis contention that religion and spirituality are protective factors for depression/depressive symptoms, but religious coping only measures the use of religion/spirituality to deal with stressful situations. It does not measure the religiosity or spirituality of the individual.

Religiosity or religious involvement is defined as one's adherence to prescribed beliefs (about God or a set of gods) and practices or rituals of an organized religion.[48, 49, 51] Both subjective and organizational religious involvement have been found to exert a protective effect on health and mental health and positively influence long-term well-being and life satisfaction.[47, 48, 53, 65, 66] A study of African American women in Missouri found that those with low levels of religious involvement reported significantly more psychological symptoms than women with high levels.[53] Also, people who were church members were significantly less likely to report depressive symptoms and more likely to report better general health than those who were not.[65]

Spirituality has been cited as a constitutive element of optimal health for women, as it facilitates mental well-being, contributes to life satisfaction, and is associated with other positive health outcomes.[48, 50, 67, 68] Studies have linked lower rates of depressive symptoms to greater spirituality.[52] Perdue, Johnson, Singley, and Jackson[69] noted that many African American mental health clients in their study were highly influenced by their sense of the spiritual when coping with mental illness. Spirituality significantly influences what people think and believe and spirituality, or the religious practice by which it is expressed, has been shown to distinctly influence African American health beliefs, practices, and outcomes.[47, 48, 67]

Thus, the role of spirituality and religion not only in the culture of African American women but in dealing with depression/depressive symptoms by serving as a protective factor for this population remains significant. As a result, interventions and/or programs that address the mental health of African American women should incorporate religion and/or spirituality. For example:

- Educating mental health professionals and other professionals who provide care and services to African American women regarding the importance of religion and spiritual beliefs can ensure that culturally specific depression care is provided that incorporates the beliefs of the individual.[46] Identification of spirituality as a potential resource could inform public health practitioners to develop spiritually based interventions to help people better cope.[52]
- Researchers should become familiar with the discrete measures of religion and spirituality developed in the fields of sociology and anthropology. Further research using these existing measures would advance their understanding of the possible means by which religion and spirituality affect health and healthcare choices, and how they may mediate the health of African- American women.[45]

The above suggestions would be ways to intervene by looking at and strengthening protective factors, in this case, religiosity and spirituality. Many other suggestions can be made given the information presented; these merely provide some examples of what can potentially be done to reach and help African American women most at risk for depression/depressive symptoms.

4.6 LIMITATIONS

Major limitations of this study are due to the study design, the sampling strategy, and the targeted population. The study results are not generalizable and are not appropriate for making inferences about the entire population within Allegheny County, the surrounding area, or other areas in the United States. Since this was not a random sample, self-selection

bias has the potential to be present; people had a choice of whether to complete the surveys or not, and those who did may actually be different from those who chose not to. Additionally, participants recommended people within their social networks and thus the sample may not be reflective of the general population in the area.

4.7 NOTES

(a) This study was approved by the University of Pittsburgh Institutional Review Board (Appendix D).

(b) Appreciation is expressed to the Personal Finance Employee Education Foundation @ http://www.personalfinancefoundation.org/scale/well-being.html for permission to use the PFW scale.

(c) Permission to use the Ways of Religious Coping scale (WORCS) was obtained directly from Dr. Edwin D. Boudreaux @ Edwin.Boudreaux@umassmed.edu.

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5.0 FINANCIAL DISTRESS AND DEPRESSIVE SYMPTOMS AMONG AFRICAN AMERICAN WOMEN: THE MODERATING ROLE OF SOCIAL SUPPORT

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Manuscript in Preparation

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5.1 ABSTRACT

Objective: Studies show that greater satisfaction with perceived social support from relatives and friends is important in reducing levels of depressive symptoms. Financial distress, on the other hand, has been associated with higher levels of depressive symptoms. Financial strain or distress is also positively correlated with less available instrumental support, yet research on the interaction between these factors is limited. Thus, the purpose of the present study was to examine if and how financial distress and social support interact to affect levels of depressive symptoms.

Methods: Surveys from 111 African American women, ages 18-44, who reside in Allegheny County, PA were used to gather demographic information and measures of depressive symptoms, financial distress/financial well-being, and social support. Hierarchical regression was used to determine the moderating effect of total and tangible social support.

Results: Total and tangible social support were not significantly correlated with perceived financial distress or depressive symptoms, but perceived financial distress was significantly associated with depressive symptoms. Total social support was not a moderator in the relationship between perceived financial distress and depressive symptoms. However, tangible social support was found to be a moderator, in that higher levels of tangible social support resulted in lower levels of depressive symptoms for individuals with high and average levels of financial distress.

Conclusion: The availability of tangible social support can help alleviate depressive symptoms for women experiencing financial distress. Identifying organizations, programs,

services, and or individuals that can provide such support should be considered when addressing the mental health of African American women.

Public Health Significance: If financial distress can be relieved via increased instrumental support, depressive symptoms will be eased. It may be necessary to think outside the box; propose, rewrite and evaluate policies that promote financial growth and savings; step into other arenas and collaborate with professionals and experts of other fields in order to address this issue.

5.2 INTRODUCTION

Of all mental illnesses, major depressive disorder (MDD), referred to in this article as depression, is the most commonly occurring affective or mood disorder.[1-8] Research clearly shows that women are more likely than men to become depressed.[2, 9-12] What is not as clear is the prevalence rate of depression among women. Some studies note that the rates among African American women are similar or lower than rates for white women, yet other studies estimate the rates of depression to be 50% higher for African American woman.[8 13] Numerous explanations exist that illuminate the difficulty in accurately assessing the true prevalence of depression.

Depression among African American women remains undetected, untreated, inadequately treated, misdiagnosed and under-diagnosed.[2, 4, 12, 14-25] A lack of knowledge and disbelief that they are or could be suffering from depression coupled with trying to live up to the image of being a “strong black woman” contribute to their not seeking treatment for depression.[10, 12, 13, 25-27] They also have alternative ways of coping that cause delays in or

conflicts with seeking care from a professional. They usually confront their problems, turn to religious leaders, their spirituality and/or prayer, or seek help from within their own social milieu (significant others, family, friends, neighbors).[9, 18, 26, 28-30] In addition, they are less likely to participate in mental health research studies.[15]

5.2.1 Health focus: depressive symptoms

Even with different measures and different methods, research generally points out that younger African American women, ages 18-44, have higher levels of depressive symptoms than white women, African American men, and white men.[8] At any given time 16 to 28% of African American women have psychological distress that is indicative of clinical depression; consequences of high levels of depressive symptoms may be just as debilitating as those of depression.[2, 8, 9, 12, 13, 31] So in lieu of a focus on depression, which requires a formal diagnosis, numerous mental health research studies have focused on psychological distress.[8]

Depressive symptoms can occur as part of the psychological stress response, and the presence of depressive symptoms is the most commonly used indicator of psychological distress.[8]

5.2.2 Risk factor: financial distress

In this article the terms “financial distress,” “financial strain,” “financial stress,” and “economic hardship” will be used interchangeably.

Financial strain is composed of cognitive, emotional, and behavioral responses to the experience of financial hardship that occurs when real expenses exceed income and one is unable to meet his/her financial responsibilities.[33] Thus, it is not solely dependent upon income, Similarly, financial distress has been defined as a reaction (mental or physical discomfort) to stress about one's state of general financial well-being, including perceptions about one's capacity to manage economic resources (such as income and savings), pay bills, repay debts, and provide for the needs and wants of life.[34] Financial distress can last a short time, or it can become a persistent state for individuals or families at all income levels.[34]

Financial strain/stress/distress are subjective reactions. Measuring these reactions can help researchers understand individuals' perceptions about and reactions to their financial condition.[34] Although objective measures of an individual's financial state (household income and/or debt-to-income ratio) provide evidence of where one stands financially, two individuals with the same levels of income and economic resources may have different levels of perceived financial distress and financial well-being.[34] Thus, using subjective measures such as financial distress will provide invaluable insight above and beyond objective measures alone.

Depression and depressive symptoms have been strongly associated with financial adversity or strain.[35-40] Schulz, Israel, Zenk, et al.[41] found that financial stress was the strongest direct predictor of symptoms of depression. In fact, McLoyd and Wilson called depression a "normative and situational response to economic hardship."[40] It appears that as financial distress increases, individuals may experience a myriad of stress-related mental and physical symptoms and illnesses that can be detrimental to their health.[35, 36 42, 43

likewise, individuals reporting lower financial distress/higher financial well-being reported better health.[44] In fact, it was found that financial satisfaction plays the most influential role in determining global life satisfaction among black women.[31]

It then appears that financial distress may contribute to making African American women most vulnerable to the effects of depression/depressive symptoms.

5.2.3 Protective factor: social support

Research suggests that factors such as perceived social support, deep religiosity and spirituality, extended families, and other coping strategies serve to soften the assaults on the mental well-being of African American women.[8] The focus of this article is social support.

Social support is the physical and emotional comfort given to us by our family, friends, co-workers and others and it is associated with how networking helps people cope with stressful events.[45, 46] There are four different categories of social support: [45, 46] 1) Emotional support involves the provision of empathy, love, trust and caring; 2) Instrumental or tangible support involves the provision of tangible aid and services that directly assist a person in need; 3) Informational support involves the provision of advice, suggestions, and information that a person can use to address problems; and 4) Appraisal support involves the provision of information that is useful for self-evaluation purposes.

Many studies have demonstrated that social support acts as a moderating (protective) factor in the development of psychological and/or physical disease such as clinical depression or hypertension.[45, 46] Greater satisfaction with perceived social support from relatives and friends has been shown to be important in reducing levels of depressive symptoms.[47] One study noted that black women who had acute economic

problems reported lower levels of depressive symptoms if they had strong social support systems compared to those who did not.[47] In a study looking at financial strain, less available instrumental support was found to be positively correlated with financial strain.[38]

Considering the above study findings, it appears that social support may prove to be a beneficial buffer when dealing with the effects of depression and/or depressive symptoms and financial strain.

5.2.4 Study focus: the moderating role of social support

Mediators and moderators are variables that affect the association between an independent variable and an outcome variable.[48] A *mediator* is the mechanism through which a predictor influences an outcome variable and provides additional information about how or why two variables are strongly associated.[48, 49] On the other hand, a *moderator* is a variable that affects the strength and/or direction of the association between a predictor and an outcome, in which the association between the two variables “depends on" the value (or level) of the moderator variable.[48-50] Figure 5.1. shows the conceptual and statistical models of a moderator effect. [48-50]

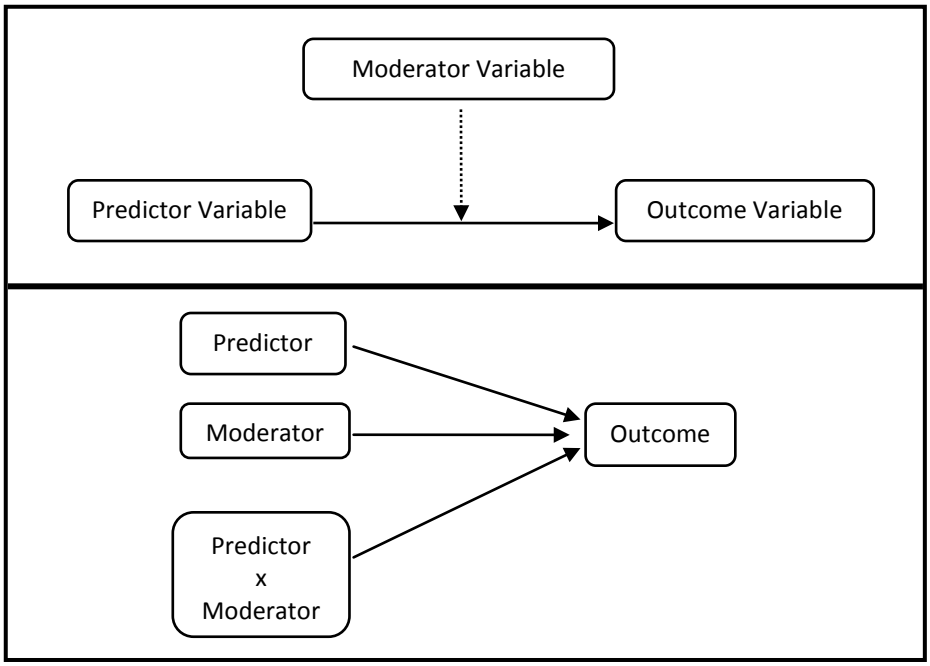

Figure 5.1. Conceptual (top) and statistical (bottom) models of a moderator effect

The purpose of this study was to determine if social support was a moderator and to explore how financial distress and social support interact to affect levels of depressive symptoms. It was anticipated that total social support would not have an effect on the relationship between perceived financial distress and depressive symptoms but that higher levels of tangible social support would result in lower levels of perceived financial distress and therefore lower levels of depressive symptoms.

5.3 METHODS

5.3.1 Recruitment

A survey was administered to a cross-sectional sample of African American women, ages 18-44, who resided in Allegheny County, PA. Participants were recruited over a period of four months via flyers that were posted at various health care centers and distributed via email. Participants also referred other individuals from within their social networks who met eligibility criteria. Women requested packets if they were interested and returned the completed surveys by mail.

5.3.2 Measures

Socio-demographic data were collected through questions regarding how the participant heard about the study, the participants' age, religious affiliation, number of children, marital status, employment status, highest level of education, income, and overall religious coping. Additionally, questions inquired about the presence of other chronic health conditions, recent major life events, a previous diagnosis of a mental illness, and current mental health treatment.

The Quick Inventory of Depressive Symptomatology – Self Report 16 (QIDS-SR_{16}) [51] – was used to measure depressive symptoms. The total score ranges from 0 to 27 with higher scores indicating higher levels of depressive symptoms.[51] This measure was treated as continuous.

The Personal Financial Wellness Scale (PFW), a self-report, eight-item instrument, was used to measure perceived financial distress/financial well-being.[35] A total score was calculated for each participant by summing the number of points for responses to each of the eight items and then dividing the total by eight.[35] For individuals with fewer than eight responses the total number of points for responses was divided by the total number of items answered. The total score ranges from 1 to 10 with lower scores indicating higher levels of financial distress/lower levels of financial well-being.[35] This measure was treated as continuous.

The Inventory of Socially Supportive Behaviors (ISSB), a 40-item, self-report scale was used to measure social support.[51] A total and tangible social support score was calculated for each participant. The higher the score, the greater the social support. These measures were treated as continuous.

5.3.3 Statistical analyses

SPSS was used for data management, descriptive summaries, and to make inferences; all analyses conducted were two-tailed. Frequencies were used to assess the responses to the socio-demographic questions and to describe the study population. Frequency distributions and summary statistics (means, score ranges, and standard deviations) were also examined for depressive symptoms, financial distress, and religious coping.

The dependent (depressive symptoms) and independent (financial distress and social support) variables were checked for normality using the Lilliefors corrected Kolmogorov-Smirnov (K-S) test. K-S was used because although the Shapiro-Wilks W (S-W) test has

more power to detect differences from normality it does not work well when several values are the same in the data set.[52, 53] Both values were still reported.

In order to determine if any of the socio-demographic variables would be controlled for in the regression model correlations, one-way independent ANOVAs and t-tests were performed.

For depressive symptoms and age, total number of children 17 and younger, total number of children 18 and older, number of medical conditions, and number of major life events correlations were conducted.

For levels of depressive symptoms and religious affiliation, marital/relationship status, employment status, education level, income, and overall religious coping one-way independent ANOVAs were used.

For levels of depressive symptoms and formal mental health diagnosis and current treatment for a mental health condition t-tests were performed.

Variables that were significantly associated with depressive symptoms were included in the regression model.

To investigate relationships between total and tangible social support, perceived financial distress and depressive symptoms, Pearson's and Spearman correlations were used. Independent-samples t-tests and Mann Whitney U tests were conducted to examine differences and to compare mean scores for total and tangible social support and severity of depression. Participants' scores from the QIDS-SR_{16} were categorized in terms of severity of depression; scores are noted in parentheses: none (0-5), mild (6-10), moderate (11-15), severe (16-20), very severe (21-27).[51]

Hierarchical regression, the general strategy to test for an interaction,[48] was used to determine if total and/or tangible social support were moderators in the relationship between financial distress and depressive symptoms. Two separate regressions were performed, one for each moderator.

Prior to data analysis, the predictor (financial distress) and moderator (total and tangible social support) variables were centered and product terms were formed by multiplying the centered predictor variable and each of the centered moderator variables.[49] Variables were entered into the equation as follows: the identified covariates were entered first, the predictor variable was entered second, the moderator variable was entered third, and the interaction term was entered in the last step. The regression models were checked to ensure that major assumptions of linear regression were not violated: number of cases-to-independent variables, normality, linearity, homoscedasticity, multicolinearity, independence of errors, and outliers and influential data points.

Effect size estimates (Cohen's *d*, *r*, r_s, η^2, and Adjusted R^2) were also reported to estimate the magnitude of associations as they are resistant to sample size influence, thus providing a truer measure of the magnitude of effect between variables.[54] For Cohen's *d,* interpretation of the effect sizes are as follows: recommended minimal = .41, moderate = 1.15, and strong = 2.70.[54] For Pearson's *r,* and Spearman's r_s, interpretation of the effect sizes are as follows: recommended minimal = .2, moderate = .5, and strong = .8.[54] For adjusted R^2 and Eta Squared (η^2), interpretation of the effect sizes are as follows: recommended minimal = .04, moderate = .25, strong = .64).[54]

5.4 RESULTS

5.4.1 Participants

Of the 239 packets requested, 113 (47%) were returned. Two surveys were excluded because of age ineligibility; one participant was older than 44 and another participants' age was unknown. Table 5.1 presents the socio-demographic characteristics of the remaining 111 (46%) eligible participants.

Table 5.1. Socio-Demographic Characteristics

Characteristic	Number	Percent
How did you hear about this survey (n=109)		
Health Center	14	12.8
Received an email	23	21.1
Other (i.e. Researcher, friend, co-worker, relative, Facebook)	72	66.1
Age, years (n=111)*		
18-26	28	25.2
27-35	51	45.9
36-44	32	28.8
Average age	31.57	
Religious affiliation (n=104)		
Catholic	6	5.8
Muslim	1	1.0
No religious affiliation	12	11.5
Other (i.e. Confused, Christian, Lutheran, Methodist, Non-Denominational)	27	26
Prefer not to say	8	7.7
Protestant (i.e. Baptist, COGIC, Methodist, Seven-day Adventist, Jehovah's Witness, Pentecostal)	50	48.1

Table 5.1. Continued

Characteristic	Number	Percent
Total number of children 17 and under (n=111)		
0	34	30.6
1	29	26.1
2	29	26.1
3	9	8.1
4	4	3.6
5	4	3.6
7	2	1.8
Total number of children older than 17 (n=111)		
0	95	85.6
1	9	8.1
2	2	1.8
3	4	3.6
6	1	.9
Marital/Relationship status (n=111)		
Single, Never Married	69	62.2
Married	24	21.6
Divorced	7	6.3
Living with a significant other/domestic partner	11	9.9
Employment (n=111)		
Employed (Full-Time)	69	62.2
Employed (Part-Time)	7	6.3
Self-employed	8	7.2
Homemaker	4	3.6
Student	9	8.1
Retired	1	.9
Unemployed	13	11.7
Education (n=110)		
Grades 9-11	4	3.6
Grade 12 or GED	16	14.5
Some college, but did not finish	22	20
Technical or Associate degree	25	22.7
Bachelor's degree	22	20
Some graduate work	9	8.2
Master's degree	10	9.1
Professional degree	1	.9
Doctorate degree	1	.9

Table 5.1. Continued

Characteristic	Number	Percent
Annual income (n=109)		
Less than $10,000	29	26.6
$10,000 - $24,999	25	22.9
$25,000 - $39,999	31	28.4
$40,000 - $54,999	14	12.8
$55,000 - $69,999	6	5.5
$70,000 - $84,999	2	1.8
$85,000 - $100,000	0	0
Over $100,000	2	1.8
Number of medical conditions (n=111)		
0	96	86.5
1	11	9.9
2	3	2.7
4	1	.9
How often medical conditions interfere with daily activities (n=111)		
Never	3	2.7
Rarely	2	1.8
Sometimes	10	9
Not applicable	96	86.5
Number of major life events (past 6 months) (n=109)		
0	58	53.2
1	30	27.5
2	14	12.8
3	4	3.7
4	1	.9
5	2	1.8
How often major life events interfere with daily activities (n=111)		
Never	8	7.2
Rarely	15	13.5
Sometimes	21	18.9
All the Time	9	8.1
Not applicable	58	52.3
Diagnosis of depression or mental illness (n=111)		
Yes	29	26.1
No	82	73.9
Currently receiving mental health treatment (n=111)		
Yes	15	13.5
No	96	86.5

*= no participants were 20 or 39 years of age

The average age of the participants was 31, and a majority of the women heard about the study from someone they knew (66.1%). Other major characteristics of the women were that they were mostly Protestant (48.1%); had no (30.6%), one (26.1%), or two (26.1%) children under 18, and a majority had no children over 17 (85.6%); they were mostly single/never married (62.2%) and employed full-time (62.2%); some women had attended some college (20%), had a technical or Associate degree (22.7%), or held a Bachelor's degree (20%); they had incomes of less than $10,000 (26.6%), between $10,000 and $24,999 (22.9%), or between $25,000 and $39,999 (28.4%); a majority had no chronic medical conditions (86.5%) and had none (53.2%) or one (27.5%) major life event take place within the past six months. A total of 29 (26.1%) women had been formally diagnosed with depression or a mental illness, and 15 (13.5%) women were currently receiving mental health treatment. Fourteen (93%) of the 15 women that were currently receiving mental health treatment also had a formal diagnosis of depression or another mental illness.

5.4.2 Depressive symptoms, perceived financial distress, and social support

5.4.2.1 Normality

Depressive symptom scores followed a non-normal distribution, $D(109) = .123$, $p < .001$, $W(109) = .932$, $p < .001$, whereas, financial distress/financial well-being scores followed an approximately normal distribution according to the K-S test, $D(111) = .078$, $p = .096$, but not the S-W test $W(111) = .932$, $p = .001$. Transformations were performed and the square root transformations were used for both variables as it made both distributions closer to normal; $D(109) = .080$, $p = .083$, $W(109) = .976$, $p = .044$, and, $D(111) = .061$, $p = .200$, $W(111) = .977$, $p = .057$, respectively. Social support scores followed a non-normal

distribution, $D(96) = .124$, $p = .001$, W(96) = .936, $p < .001$. The log transformation was used as it made the distribution closer to normal, D(96) = .085, $p = .082$, W(96) = .982, $p = .225$. Tangible social support scores followed a non-normal distribution, $D(107) = .145$, $p < .001$, W(107) = .873, $p < .001$. None of the transformations made the distribution closer to normal and non-parametric tests were used when appropriate for analysis.

5.4.2.2 Control Variables

Age, n = 109, $r = .105$, $p = .279$, total number of children 17 and younger, n = 109, $r = .180$, $p = .060$, total number of children 18 and over, n = 109, $r = .022$, $p = .823$, number of medical conditions, n = 109, $r = .091$, $p = .346$, and number of major life events within the past six months, n = 107, $r = .014$, $p = .888$, were not significantly associated with depressive symptoms.

Religious affiliation, $F(5,96) = 1.376$, $p = .240$, $\eta^2 = .067$, marital/relationship status, $F(3,105) = .527$, $p = .665$, $\eta^2 = .015$, employment status, $F(6,102) = 1.470$, $p = .196$, $\eta^2 = .080$, education level, $F(8,99) = .846$, $p = .565$, $\eta^2 = .064$, income, $F(6,100) = .674$, $p = .671$, $\eta^2 = .039$, and overall religious coping, $F(3,104) = .841$, $p = .474$, $\eta^2 = .024$, had no significant effect on levels of depressive symptoms.

There was no significant difference in mean levels of depressive symptoms between individuals who were (M = 9.07, SD = 4.415) currently receiving mental health treatment and those who were not (M = 7.13, SD = 4.353); $t(107) = 1.752$, $p = .083$, $d = 0.523$. However, there was a significant difference in levels of depressive symptoms between individuals with (M = 10.10, SD = 4.655) and without (M = 6.41, SD = 3.877) a formal

mental health diagnosis; t(107) = 4.132, $p < .001$, $d = 0.924$. The measure of formal mental health diagnosis was included in the regression model.

5.4.2.3 Relationships

The only significant correlation was between depressive symptoms and financial distress. Table 5.2 presents correlations and other psychometric properties for social support by depressive symptoms and financial distress.

Table 5.2. Summary of Correlations and Psychometric Properties for Social Support with Depressive Symptoms and Financial Distress

Measure	Depressive Symptoms	Financial Distress	Social Support	Tangible Social Support
Depressive Symptoms	-	-.397** (109)	-.173 (95)	-.076 (105)
Financial Distress	-	-	-.036 (96)	-.040 (107)
M	7.39	4.031	86	19.98
SD	4.393	2.134	30.80	8.26
Alpha	.806	.937	.966	.866
Range (Potential)	0-27	1-10	40-200	11-55
Range (Actual)	0-21	1-9.9	40-175	11-51

Note. Sample sizes are listed in parentheses.
[a]=Spearman Rho correlations were used
**<.001

5.4.2.4 Differences and comparisons

On average, individuals who had mild depressive symptoms had higher levels of social support than individuals with moderate to severe depressive symptoms, $t(54) = 2.222$, $p =$

.031, d = .636. There were no significant differences in mean total social support scores between individuals who had mild or moderate to very severe levels of depressive symptoms and individuals who had no depressive symptoms, $t(71) = -1.073$, $p = .287$, $d = .277$, and $t(59) = 1.473$, $p = .146$, $d = .395$, respectively.

There were no significant differences in mean tangible social support scores between women with no (*Mdn* = 19) and mild (*Mdn* = 19) levels of depressive symptoms, $U = 786.5$, $Z = -.289$, $p = .772$, $r = .032$; between women with no and moderate to very severe (*Mdn* = 17) levels of depressive symptoms, $U = 449$, $Z = -.878$, $p = .380$, $r = .107$; or between women with mild and moderate to very severe levels of depressive symptoms, $U = 397.5$, $Z = -.848$, $p = .396$, $r = .107$.

Table 5.3 presents the means and standard deviations for social support scores according to severity of depression.

Table 5.3. Average Social Support Scores by Severity of Depression

	Total Social Support			Tangible Social Support		
Severity of Depression	*n*	*M*	SD	*n*	*M*	SD
None (0-5)	39	85.3	28.5	43	19.8	7.51
Mild (6-10)	34	93.3	32.6	38	21.2	10.1
Moderate-Very Severe (11-27)	22	76.1	31.1	24	18	6.26

5.4.2.5 Hierarchical Regression

Model 1: Total Social Support

The control variable mental health diagnosis significantly predicted levels of depressive symptoms $F(1, 93) = 11.942$, $p = .001$. Financial distress significantly improved the prediction when added, $F(1, 92) = 18.248$, $p = .000$. When entered, total social support, $F(1, 91) = 3.435$, $p = .067$, and the interaction between financial stress and total social support, $F(1, 90) = 1.638$, $p = .204$, did not significantly improve the prediction. The entire group of variables significantly predicted levels of depressive symptoms $F(4, 90) = 9.648$, $p = .000$. The regression weights are presented in Table 5.4. Regression diagnostics are presented in Table 5.5.

Model 2: Tangible Social Support

The control variable mental health diagnosis significantly predicted levels of depressive symptoms $F(1, 102) = 15.347$, $p = .000$. Financial distress significantly improved the prediction when added, $F(1, 101) = 11.344$, $p = .001$. When entered, tangible social support did not significantly improve the prediction, $F(1, 100) = 1.176$, $p = .281$. The interaction between financial distress and tangible social support significantly improved the prediction when added $F(1, 99) = 5.271$, $p = .024$. The entire group of variables significantly predicted levels of depressive symptoms $F(4, 99) = 9.008$, $p = .000$. The regression weights are presented in Table 5.4. Regression diagnostics are presented in Table 5.5. Figure 5.2 illustrates the moderating effect of tangible social support.

Table 5.4. Hierarchical Multiple Regression Analysis Summary for Interaction Effects Between Financial Distress and Social Support to Predict Levels of Depressive Symptoms, Controlling for Mental Health Diagnosis, Financial Distress and Social Support

	Total Social Support				Tangible Social Support			
Predictor	ΔR^2	B	SEB	β	ΔR^2	B	SEB	β
Step 1	.114**				.131***			
(constant)		3.32	.300			3.52	.309	
Diagnosis		-.427	.166	-.234*		-.548	.172	-.283**
Step 2	.147***				.088**			
Financial Distress		-.154	.035	-.403***		-.134	.036	-.326***
Step 3	.027				.009			
Social Support		-.004	.002	-.151		-.013	.009	-.131
Step 4	.013				.039*			
Financial Distress X Social Support		.001	.001	.114		.008	.003	.202*
Adjusted R^2	.269				.237			
n	95				104			

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

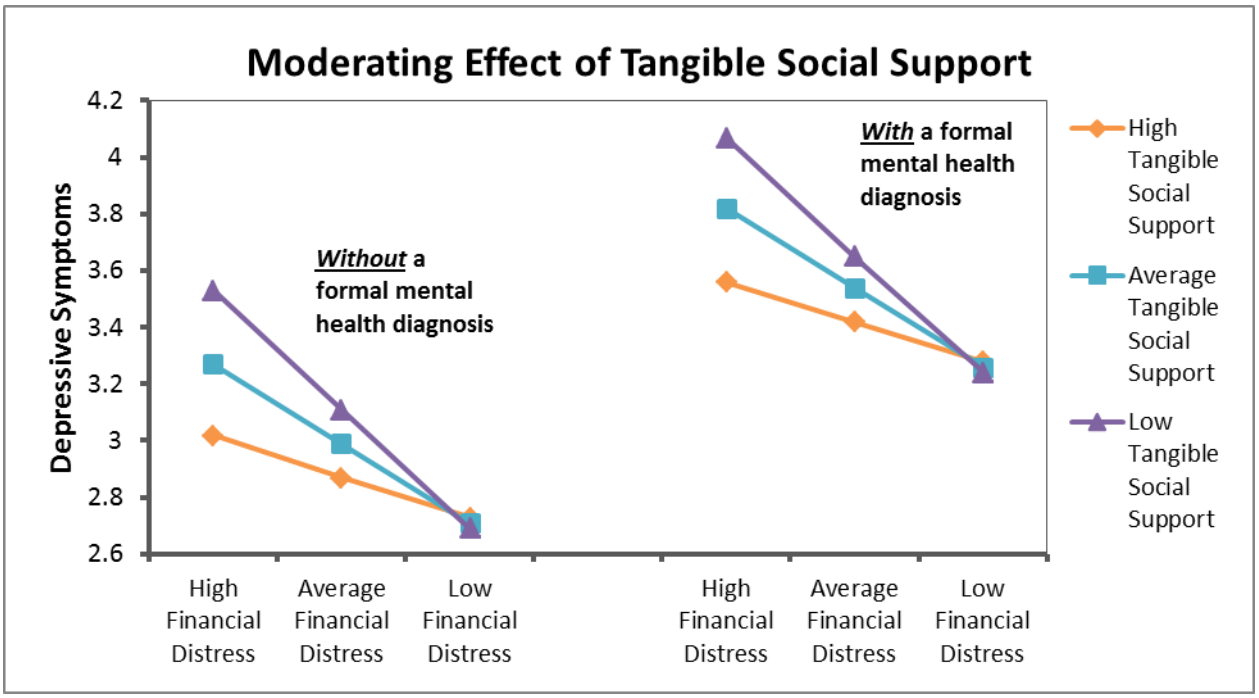

Figure 5.2. Interaction between Tangible Social Support and Financial Distress

Table 5.5. Results from Checking Assumptions of the Regression Equations

Regression Assumptions	Total Social Support	Tangible Social Support
Number of cases	23.75:1	26:1
Normality	K-S p=.081 S-W p=.066	K-S p=.008 S-W p=.046
Linearity (Residual plot fitted with a Loess line)	Appears linear	Appears linear
Homoscedasticity (Levene's)	p=.605	p=.938
Multicolinearity	All VIFs < 4 All tolerances >.20	All VIFs < 4 All tolerances >.20
Outliers (Leverage)	5% expected =4.75 Leverage 0 >.5	5% expected= 5.2 Leverage 1 >.5
Independence of errors (Durbin-Watson)	1.700	1.626
Influential data points (Cook's D)	0 > .88	0 > .88

5.5 DISCUSSION

Cricco-Lizza[55] looked at the everyday lives of 130 black, low-income, urban mothers and found that having a limited amount of financial resources was an on-going issue for the women in the study. The women mentioned high levels of stress and the daily struggles they experienced related to a lack of material and human resources.[55] Not surprisingly, less available instrumental support is positively correlated with financial strain, and in a study by Jackson, Brooks-Gunn, Huang, and Glassman,[38] mothers who were able to turn to friends and family for financial help when they needed to were less likely to experience financial strain than those who were not. Another study by Siefert, Finlayson, Williams, et al.[56]

examined modifiable risk and protective factors for probable depression in 824 African American mothers living in the 39 poorest census tracts in Detroit. This study also found that instrumental support was strongly related to reduced risk of depression and that mothers who reported the availability of someone who could loan them money in a crisis and the availability of help with childcare were much less likely to be depressed.[56]

Strong social support networks may also mitigate the effect of stress and protect minority group members from depression.[47] In fact, mothers who perceived more support to be available to them reported fewer symptoms of depression, regardless of the number of stressful events they experienced.[40] Additionally, it has been found that black women who had acute economic problems reported lower levels of depressive symptoms if they had strong social support systems compared to those who did not have strong support.[47]

Based on these research findings, this study sought to examine if and how social support affected depressive symptoms, financial distress, and the relationship between financial distress and depressive symptoms. It was anticipated that higher levels of tangible social support would result in lower levels of perceived financial distress and in return lower the levels of depressive symptoms. Total social support was not expected to have an effect on the relationship.

The mean financial distress score for participants was 4.031, and the mean score on the QIDS-SR_{16} was 7.39, meaning the study population on average had high financial distress and levels of depressive symptoms that corresponded to mild depression.

There were no significant correlations between total or tangible social support and depressive symptoms. In fact, the only significant associations found were between

financial distress and depressive symptoms and between depressive symptoms and a formal diagnosis of mental illness.

The only significant difference in average social support scores when looking at severity of depression was between individuals who had levels of depressive symptoms indicative of mild depression and individuals with moderate to very severe levels of depressive symptoms. Average tangible social support scores were similar for individuals across all three categories.

As was hypothesized, total social support was not a moderator in the relationship between depressive symptoms and financial distress and tangible social support did moderate the relationship. Higher levels of tangible social support resulted in lower levels of depressive symptoms for individuals with high and average levels of financial distress. Individuals with a formal mental health diagnosis had higher levels of depressive symptoms than individuals without a formal mental health diagnosis at all levels (high, average, and low) of tangible social support. Unfortunately, the time of diagnosis was not captured, so it is unknown if the diagnosis was days, months, or even years prior to the study. A more recent diagnosis may mean the individual is still in a state of depression, which would explain the higher average levels of depression for that group. Even still, high and average levels of tangible social support resulted in lower depressive symptoms for both groups of individuals. Not surprisingly, a formal diagnosis of a mental illness and perceived financial distress were significant predictors of depressive symptoms in all three models.

Given the above, it may be worthwhile to focus on establishing social support networks that provide not only emotional support but also instrumental support when addressing the mental health of African American women. Social support or safety networks

could be implemented that would include pooling resources at public agencies (e.g., making emergency transportation available), addressing material problems by creating crisis response teams, and establishing emergency relief funds through churches and community centers.[57] Additionally, if social organizations establish relationships with one another, social support networks can be formed that could provide women with the instrumental and emotional support that they may need. The premise is that if financial distress can be relieved via increased instrumental support, depressive symptoms will be eased.

5.6 LIMITATIONS

Major limitations of this study are due to the study design, the sampling strategy, and the targeted population. The study results are not generalizable and are not appropriate for making inferences about the entire population within Allegheny County, the surrounding area, or other areas in the United States. Nonetheless, given the exploratory nature of the study, the results may serve as a basis for similar or future research in other comparable areas with a similar population. Since this was not a random study, self-selection bias may be present; people had a choice of whether to complete the surveys or not, and those who did may actually be different from those who chose not to. Additionally, participants recommended people within their social networks and thus the sample may not be reflective of the general population in the area.

5.7 NOTES

(a) This study was approved by the University of Pittsburgh Institutional Review Board (Appendix D).

(b) Appreciation is expressed to the Personal Finance Employee Education Foundation @ http://www.personalfinancefoundation.org/scale/well-being.html for permission to use the PFW scale.

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6.0 SUMMARY AND CONCLUSIONS

It will be difficult for public health practitioners to meet the objectives MHMD-4.2 and MHMD-9.2 of *Healthy People 2020* if African American women are not being diagnosed and/or receiving/seeking treatment for depression. Additionally, if African American women do not meet the criteria for a formal diagnosis of depression but have high levels of depressive symptoms, this is still detrimental to the health and quality of life for these women. Thus, it is imperative to be creative and think outside of the box to determine other ways to reach populations most at risk. This paper suggested that we begin looking at risk and protective factors.

Financial distress has been shown to be associated with depressive symptoms, while religiosity/spirituality and social support have been shown to help buffer the effects, yet research on the interaction between these factors or what factors may contribute to financial distress is limited. This study aimed to fill in some of the gaps in the literature by examining the relationship between perceived financial distress and depressive symptoms, identifying financial priorities and needs that may contribute to financial distress, and exploring the role of religious coping and/or social support in the relationship between financial distress and depressive symptoms.

6.1 FINDINGS

The main findings of this dissertation study were that:

- A positive relationship exists between perceived financial distress and depressive symptoms and perceived financial distress significantly predict levels of depressive symptoms.
- Levels of depressive symptoms were significant associated with having a formal diagnosis of mental illness.
- Many of the women in this study were experiencing overwhelming to high levels of financial distress and levels of depressive symptoms that corresponded to mild depression.
- When asked about beneficial programs or help during times of financial difficulty women frequently mentioned tangible assistance and/or financial education.
- When exploring financial priorities, if given a significant amount of money a majority of the women stated they would use it to pay bills, pay debts, and/or save.
- A majority of the women in this study stated that their overall religion was either very involved or somewhat involved in understanding or dealing with stressful situations, but overall religious coping had no effect on depressive symptoms.
- Women in this study were more likely to use private (internal) as opposed to social (external) religious coping mechanisms.
- Total, external, and internal religious coping as well as total social support were not found to be moderators in the relationship between depressive symptoms and financial distress; and

- Tangible social support moderated the relationship between depressive symptoms and financial distress in that higher levels of tangible social support resulted in lower levels of depressive symptoms for individuals with high and average levels of financial distress.

6.2 STUDY LIMITATIONS

Due to the study design, the sampling strategy, and the targeted population, the study results will not be appropriate to make inferences about the entire population within Allegheny County, the surrounding area, or other areas in the United States. Nonetheless, the results may serve as a basis for similar or future research in other comparable areas with a similar population.

The main issues of biases in this study are that it was not a random sample and self-selection bias has the potential to be present; people had a choice of whether to complete the surveys or not and those who did may actually be different from those who chose not to. Measurement bias was controlled by using scales that have previously been tested for reliability and validity. Even still, other unknown biases may have occurred.

6.3 RECOMMENDATIONS

Based on the results of this study it is recommended that professionals interested in the mental health of African American women begin looking at and using risk and

protective factors to design programs to reach African American women that may otherwise be missed. Specifically, professionals should consider ways to alleviate financial distress, incorporate spiritual/religious beliefs in treatment services, and/or strengthen social support networks that make tangible assistance available. More research is needed to find appropriate measures to assess perceived financial distress and to further measure and explore the role of religion and spirituality.

This, in no way, implies that there are no other risk factors or protective factors to be considered; but it does imply that if we do not make an effort to devise ways to reach African American women most at risk for depression, we will continue to see them suffer ill health from the negative effects of untreated depression and high levels of depressive symptoms. Their families and the society as a whole will continue to be affected and the disparity gap will not only persist, but become wider.

6.4 PUBLIC HEALTH SIGNIFICANCE

This knowledge will prove beneficial to professionals seeking to address and improve the mental health of African American women by adding new information to the literature in turn, providing a conceptual framework on which to base new and existing programs, services, and/or interventions that address depression, as well as, programs geared towards personal finances and wealth building.

It will also draw attention to the need for 1) improved policies that promote the finances of the poor; 2) improved policies that promote mental health; and 3) collaborative efforts between physicians, mental health professionals, social service workers, community

organizations, financial planners, financial advisors, debt counselors, and employment counselors to fulfill unmet needs and for planning appropriate interventions. It will also serve as a potential basis for evaluating existing treatment programs/plans.

APPENDIX A

RECRUITMENT FLYER

THE FINANCIAL STRESS AND HEALTH STUDY

Researchers at the University of Pittsburgh's Graduate School of Public Health are seeking to better understand how financial stress affects the health and well-being of African American women…

Are you an African American Woman between the ages of 18 and 44?

Do you live in Allegheny County?

Are you interested in providing information that could benefit other African American women?

If you answered yes to all three questions then you are eligible to participate!

For this research study you will be asked to complete a survey and return it using the self-addressed stamped envelope provided. **THAT'S ALL!!!**

For more information or to request a survey packet please contact Angelica J. Starkey at [redacted] or ajs117@pitt.edu

APPENDIX B

SURVEY INSTRUMENT

University of Pittsburgh
Graduate School of Public Health

THE FINANCIAL STRESS AND HEALTH STUDY: EXPLORING THE ROLE OF RELIGIOUS COPING AND SOCIAL SUPPORT

*** PLEASE DO NOT WRITE YOUR NAME ANYWHERE ON THIS SURVEY ***

CONTACT INFORMATION
Angelica JoNel Starkey, MPH, CPH, CHES
[redacted] • **ajs117@pitt.edu**

SECTION I

INSTRUCTIONS: Please answer the following questions about yourself. **Mark the boxes with an (x)** to indicate your response.

1. **How did you hear about this study?**
   - ☐ 1 Health Center: _____
   - ☐ 2 Saw a flyer posted at: _____
   - ☐ 3 Received an email
   - ☐ 99 Other:_____

2. **What is your age?**_____

3. **What is your religious affiliation?**
   - ☐ 1 Atheist
   - ☐ 2 Buddhist
   - ☐ 3 Catholic
   - ☐ 4 Hindu
   - ☐ 5 Jewish
   - ☐ 6 Muslim
   - ☐ 7 No religious affiliation
   - ☐ 8 Other:_____
   - ☐ 9 Prefer not to say
   - ☐ 10 Protestant (ie. Baptist, COGIC, Methodist, Seven-day Adventist, Jehovah's Witness, Pentecostal)

4. **How many children do you have who are…**
   a. Less than 5 years old? _____
   b. 5 through 12 years old? _____
   c. 13 through 17 years old? _____
   d. Older than 17? _____

5. **What is your current marital or relationship status?** *(mark only one)*
   - ☐ 1 Single, Never Married
   - ☐ 2 Married
   - ☐ 3 Separated
   - ☐ 4 Divorced
   - ☐ 5 Widowed
   - ☐ 6 Living with a significant other/domestic partner

6. **Are you currently . . . ?** *(check only one)*
   - ☐ 1 Employed (Full-Time)
   - ☐ 2 Employed (Part-Time)
   - ☐ 3 Self-employed
   - ☐ 4 Homemaker
   - ☐ 5 Student
   - ☐ 6 Retired
   - ☐ 7 Unemployed

7. **What is the *highest level* of education you have *completed*?**
   - ☐ 1 Grades 9-11
   - ☐ 2 Grade 12 or GED
   - ☐ 3 Some college, but did not finish
   - ☐ 4 Technical or Associate degree (i.e. AA, AS)
   - ☐ 5 Bachelor's degree (i.e. BS, BA, AB)
   - ☐ 6 Some graduate work
   - ☐ 7 Master's degree (i.e. MEd, MPH, MSW, MS, MA)
   - ☐ 8 Professional degree (i.e. MD, DDS, JD, DVM)
   - ☐ 9 Doctorate degree (i.e. PhD, DrPH, ScD, EdD, DSW)

8. **What is your yearly income?**
   - ☐ 1 Less than $10,000
   - ☐ 2 $10,000 - $24,999
   - ☐ 3 $25,000 - $39,999
   - ☐ 4 $40,000 - $54,999
   - ☐ 5 $55,000 - $69,999
   - ☐ 6 $70,000 - $84,999
   - ☐ 7 $85,000 - $100,000
   - ☐ 8 Over $100,000

9. **How many of the following medical conditions do you suffer from or have you suffered from at any time during your life?** (*HIV/AIDS, Epilepsy, Crohn's Disease, Stroke, Cancer, Diabetes, Heart Disease, Multiple Sclerosis, Lupus, Kidney Disease, Arthritis, Parkinson's disease, Thyroid Disease and/or Huntington's disease*) **YOU DO NOT NEED TO DISCLOSE THE SPECIFIC ILLNESS(ES).** _____ **(if zero, skip to question #11)**

10. **If you suffer from or have suffered from one or more of the medical conditions listed in question #9, how often does having the medical condition(s) interfere with your daily activities or what you would like to do?**
   - ☐ 1 Never
   - ☐ 2 Rarely
   - ☐ 3 Sometimes
   - ☐ 4 All the Time

11. **How many of the following major life events have you experienced in the past 6 months?** (*Major personal injury or illness, major injury or illness of a child, spouse, or loved one, loss of employment or a place to stay, death of a spouse or a loved one, pregnancy or the birth of a child, victim of a violent crime, change in relationship or marital status*) **YOU DO NOT NEED TO DISCLOSE THE SPECIFIC EVENT(S).** _____ **(if zero, skip to question #13)**

12. **If you have experienced one or more of the major life events listed in question #11, does the event(s) *CURRENTLY* interfere with your daily activities or things you would like to do?**
   - ☐ 1 Never
   - ☐ 2 Rarely
   - ☐ 3 Sometimes
   - ☐ 4 All the Time

13. **Have you ever been diagnosed as having depression or another mental illness by a physician or a mental health professional?**
    - ☐ 1 Yes
    - ☐ 2 No

14. **Are you currently being treated for depression or another mental health or emotional health issue (i.e. medications and/or counseling/therapy)?**
    - ☐ 1 Yes
    - ☐ 2 No

SECTION II

INSTRUCTIONS: Please read each item carefully, read all possible responses, and ***circle*** the ***one response*** to each item ***that best describes you*** for the ***past 7 days***

1. **Falling Asleep:**
   - 0 I never take longer than 30 minutes to fall asleep.
   - 1 I take at least 30 minutes to fall asleep less than half the time.
   - 2 I take at least 30 minutes to fall asleep more than half the time.
   - 3 I take more than 60 minutes to fall asleep more than half the time.

2. **Sleep During the Night:**
   - 0 I do not wake up at night.
   - 1 I have a restless, light sleep with a few brief awakenings each night.
   - 2 I wake up at least once a night, but I go back to sleep easily.
   - 3 I awaken more than once a night and stay awake for 20 minutes or more, more than half the time.

3. **Waking Up too Early:**
   - 0 Most of the time, I awaken no more than 30 minutes before I need to get up.
   - 1 More than half the time, I awaken more than 30 minutes before I need to get up.
   - 2 I almost always awaken at least one hour or so before I need to, but I go back to sleep eventually.
   - 3 I awaken at least one hour before I need to and can't go back to sleep.

4. **Sleeping Too Much:**
   - 0 I sleep no longer than 7-8 hours/night, without napping during the day.
   - 1 I sleep no longer than 10 hours in a 24-hour period including naps.
   - 2 I sleep no longer than 12 hours in a 24-hour period including naps.
   - 3 I sleep longer than 12 hours in a 24-hour period including naps.

5. **Feeling Sad:**
   - 0 I do not feel sad.
   - 1 I feel sad less than half the time.
   - 2 I feel sad more than half the time.
   - 3 I feel sad nearly all the time.

(PLEASE COMPLETE 6 OR 7 -- NOT BOTH)

6. Decreased Appetite:

0 My usual appetite has not decreased.
1 I eat somewhat less often or lesser amounts of food than usual.
2 I eat much less than usual and only with personal effort.
3 I rarely eat within a 24-hour period, and only with extreme personal effort or when others persuade me to eat.

- OR -

7. Increased Appetite:

0 My usual appetite has not increased.
1 I feel a need to eat more frequently than usual.
2 I regularly eat more often and/or greater amounts of food than usual.
3 I feel driven to overeat both at mealtime and between meals

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(PLEASE COMPLETE 8 OR 9-- NOT BOTH)

8. Decreased Weight (within the last 2 weeks):

0 My weight has not decreased.
1 I feel as if I've had a slight weight loss.
2 I have lost 2 pounds or more.
3 I have lost 5 pounds or more.

- OR -

9. Increased Weight (within the last 2 weeks):

0 I have not had a change in my weight
1 I feel as if I've had a slight weight gain.
2 I have gained 2 pounds or more.
3 I have gained 5 pounds or more.

---

10. Concentration/Decision Making:

0 There is no change in my usual capacity to concentrate or make decisions.
1 I occasionally feel indecisive or find that my attention wanders.
2 Most of the time, I struggle to focus my attention or to make decisions.
3 I cannot concentrate well enough to read or cannot make even minor decisions.

11. View of Myself:

0 I see myself as equally worthwhile and deserving as other people.
1 I am more self-blaming than usual.
2 I largely believe that I cause problems for others.
3 I think almost constantly about major and minor defects in myself.

12. Thoughts of Suicide or Death:

0 I do not think of suicide or death.
1 I feel that life is empty or wonder if it's worth living.
2 I think of suicide or death several times a week for several minutes.
3 I think of suicide or death several times a day in some detail or have actually tried to take my life.

13. General Interest:

0 There is no change from usual in how interested I am in other people or activities.
1 I notice that I am less interested in people or activities.
2 I find I have interest in only one or two of my formerly pursued activities.
3 I have virtually no interest in formerly pursued activities.

14. Energy Level:

0 There is no change in my usual level of energy.
1 I get tired more easily than usual.
2 I have to make a big effort to start or finish my usual daily activities (for example, shopping, homework, cooking, or going to work).
3 I really cannot carry out most of my usual daily activities because I just do not have the energy.

15. Feeling Slowed Down:

0 I think, speak and move at my usual rate of speed.
1 I find that my thinking is slowed down or my voice sounds dull or flat.
2 It takes me several seconds to respond to most questions and I'm sure my thinking is slowed.
3 I am often unable to respond to questions without extreme effort.

16. Feeling Restless:

0 I do not feel restless.
1 I'm often fidgety, wring my hands, or need to shift how I am sitting.
2 I have impulses to move about and am quite restless.
3 At times, I am unable to stay seated and need to pace around.

SECTION III

INSTRUCTIONS: Please read each item carefully and indicate **how often** these activities happened to you **during the past month (four weeks).**

	Circle one response for each item				
During the past four weeks, how often did other people do these activities for you, to you, or with you:	**Not at all**	**Once or twice**	**About once a week**	**Several times a week**	**About every day**
1. Looked after a family member when you were away. [T]	1	2	3	4	5
2. Was right there with you (physically) in a stressful situation.	1	2	3	4	5
3. Provided you with a place where you could get away for awhile.[T]	1	2	3	4	5
4. Watched after your possessions when you were away (pets, plants, home, apartment, etc.).[T]	1	2	3	4	5

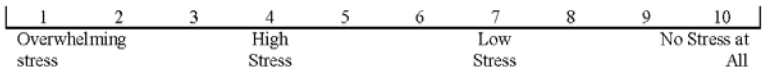
During the past four weeks, how often did other people do these activities for you, to you, or with you:	Not at all	Once or twice	About once a week	Several times a week	About every day
	Circle one response for each item				
5. Told you what she/he did in a situation that was similar to yours.	1	2	3	4	5
6. Did some activity together to help you get your mind off of things.	1	2	3	4	5
7. Talked with you about some interests of yours.	1	2	3	4	5
8. Let you know that you did something well.	1	2	3	4	5
9. Went with you to someone who could take action.	1	2	3	4	5
10. Told you that you are OK just the way you are.	1	2	3	4	5
11. Told you that she/he would keep the things that you talk about private-just between the two of you.	1	2	3	4	5
12. Assisted you in setting a goal for yourself.	1	2	3	4	5
13. Made it clear what was expected of you.	1	2	3	4	5
14. Expressed esteem or respect for a competency or personal quality of yours.	1	2	3	4	5
15. Gave you some information on how to do something.	1	2	3	4	5
16. Suggested some action that you should take.	1	2	3	4	5
17. Gave you over $25.[T]	1	2	3	4	5
18. Comforted you by showing you some physical affection.	1	2	3	4	5
19. Gave you some information to help you understand a situation you were in.	1	2	3	4	5
20. Provided you with some transportation.[T]	1	2	3	4	5
21. Checked back with you to see if you followed the advice you were given.	1	2	3	4	5
22. Gave you under $25.[T]	1	2	3	4	5
23. Helped you understand why you didn't do something well.	1	2	3	4	5
24. Listened to you talk about your private feelings.	1	2	3	4	5
25. Loaned or gave you something (a physical object other than money) that you needed.[T]	1	2	3	4	5

During the past four weeks, how often did other people do these activities for you, to you, or with you:	Not at all	Once or twice	About once a week	Several times a week	About every day
	Circle one response for each item				
26. Agreed that what you wanted to do was right.	1	2	3	4	5
27. Said things that made your situation clearer and easier to understand.	1	2	3	4	5
28. Told you how he/she felt in a situation that was similar to yours.	1	2	3	4	5
29. Let you know that he/she will always be around if you need assistance.	1	2	3	4	5
30. Expressed interest and concern in your well-being.	1	2	3	4	5
31. Told you that she/he feels very close to you.	1	2	3	4	5
32. Told you who you should see for assistance.	1	2	3	4	5
33. Told you what to expect in a situation that was about to happen.	1	2	3	4	5
34. Loaned you over $25.[T]	1	2	3	4	5
35. Taught you how to do something.	1	2	3	4	5
36. Gave you feedback on how you were doing without saying it was good or bad.	1	2	3	4	5
37. Joked and kidded to try to cheer you up.	1	2	3	4	5
38. Provided you with a place to stay.[T]	1	2	3	4	5
39. Pitched in to help you do something that needed to be done.[T]	1	2	3	4	5
40. Loaned you under $25.[T]	1	2	3	4	5

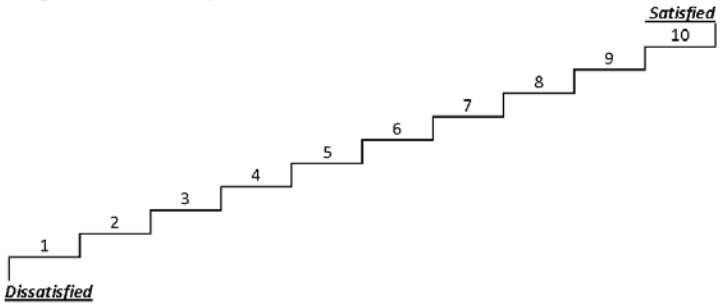
SECTION IV

INSTRUCTIONS: Please read each item carefully and ***circle*** the responses that are ***most appropriate*** for your situation

1. What do you feel is the ***level*** of your ***financial stress today***?



2. On the stair steps below, mark (with a circle) how ***satisfied*** you are with your **present financial situation.** The "1" at the bottom of the star steps represents complete dissatisfaction. The "10" at the top of the stair steps represents complete satisfaction. The ***more dissatisfied*** you are, the ***lower the number*** you should circle. The ***more satisfied*** you are, the ***higher the number*** you should circle.



3. How do you feel about your ***current financial condition?***

1	2	3	4	5	6	7	8	9	10
Feel Overwhelmed			Sometimes Feel Worried			Not worried			Feel Comfortable

4. How often do you ***worry*** about being able to meet ***normal monthly living expenses?***

1	2	3	4	5	6	7	8	9	10
All the Time			Sometimes			Rarely			Never

5. How confident are you that you could find the money to pay for a ***financial emergency*** that costs about **$1,000?**

1	2	3	4	5	6	7	8	9	10
No Confidence			Little Confidence			Some Confidence			High Confidence

6. How often does this happen to you? You want to go out to eat, go to a movie or do something else and ***don't go because you can't afford to?***

1	2	3	4	5	6	7	8	9	10
All the Time			Sometimes			Rarely			Never

7. How frequently do you find yourself just getting by financially and living ***paycheck to paycheck?***

1	2	3	4	5	6	7	8	9	10
All the Time			Sometimes			Rarely			Never

8. How ***stressed*** do you feel about your personal finances ***in general?***

1	2	3	4	5	6	7	8	9	10
Overwhelming stress			High Stress			Low Stress			No Stress at All

SECTION V

INSTRUCTIONS: Read each statement carefully and indicate how often you engage in the following behaviors when you experience a ***stressful situation***. Please respond to every item.

Circle one response for each item

How often do you engage in the following behaviors when you experience a stressful situation?	Not at all	Used Sometimes	Used often	Used very often	Used always
1. I say prayers.	0	1	2	3	4
2. I read scriptures.	0	1	2	3	4
3. I attend a religious support group.	0	1	2	3	4
4. I allow the Holy Spirit to direct my actions.	0	1	2	3	4
5. I confess to God.	0	1	2	3	4
6. I do not pray.	0	1	2	3	4
7. I get support from church/mosque/temple members.	0	1	2	3	4
8. I talk to church/mosque/temple leaders.	0	1	2	3	4
9. I look for a lesson from God in the situation.	0	1	2	3	4
10. I try to be a less sinful person.	0	1	2	3	4
11. I pray to God for inspiration.	0	1	2	3	4
12. I try to make up for my mistakes.	0	1	2	3	4
13. I put my problems in God's hands.	0	1	2	3	4
14. I pray for strength.	0	1	2	3	4
15. I talk to church/mosque/temple members.	0	1	2	3	4
16. I count my blessings	0	1	2	3	4
17. I talk to my minister/preacher/rabbi/priest.	0	1	2	3	4
18. I recall a bible passage.	0	1	2	3	4
19. I stop going to religious services.	0	1	2	3	4
20. I get help from clergy.	0	1	2	3	4
21. I use a bible story to help solve a problem.	0	1	2	3	4

How often do you engage in the following behaviors when you experience a stressful situation?	*Circle one response for each item* Not at all	Used Sometimes	Used often	Used very often	Used always
22. I pray for the help of a religious figure.	0	1	2	3	4
23. I solve problems without God's help.	0	1	2	3	4
24. I ask for God's forgiveness.	0	1	2	3	4
25. I donate time to a religious cause or activity.	0	1	2	3	4
26. I ask my religious leader for advice.	0	1	2	3	4
27. I share my religious beliefs with others.	0	1	2	3	4
28. I think about Jesus as my friend.	0	1	2	3	4
29. I get involved with church/mosque/temple activities.	0	1	2	3	4
30. I give money to my religious organization.	0	1	2	3	4
31. I base life decisions on my religious beliefs.	0	1	2	3	4
32. I find peace by going to a religious place.	0	1	2	3	4
33. I ask someone to pray for me.	0	1	2	3	4
34. I ask for a blessing.	0	1	2	3	4
35. I pray for help.	0	1	2	3	4
36. I go to a religious counselor.	0	1	2	3	4
37. I work with God to solve problems.	0	1	2	3	4
38. I find peace by sharing my problems with God.	0	1	2	3	4
39. I stop reading scriptures.	0	1	2	3	4
40. I recite a psalm.	0	1	2	3	4

41. **To what extent is your religion involved in understanding or dealing with stressful situations in any way?**
    - ☐ 1 Not involved at all
    - ☐ 2 Not very involved
    - ☐ 3 Somewhat involved
    - ☐ 4 Very Involved

SECTION VI

INSTRUCTIONS: Please **write** your responses to the following questions in the space provided. If you need more space you can write on the back side of the survey.

1. **What kinds of programs or other help would be beneficial to you during times of financial difficulties?**

2. **Imagine you won a $10,000 prize in a local lottery. What would you do with this money?**

--- CONTINUE TO PAGE 13 ---

JUST A FEW MORE THINGS!!!

1) Please mail your completed survey back using the self-addressed stamped envelope that was included in your packet. PLEASE DO NOT WRITE YOU NAME OR ADDRESS ANYWHERE ON THE ENVELOPE OR THE SURVEY!

2) IF YOU WOULD LIKE TO BE ENTERED INTO THE DRAWING that will be held at the completion of this project, please fill out the backside of the postcard that was included in your packet and mail it back using the self-addressed stamped envelope that was included in your packet. PLEASE DO NOT RETURN THE POSTCARD IN THE SAME ENVELOPE AS THE SURVEY.

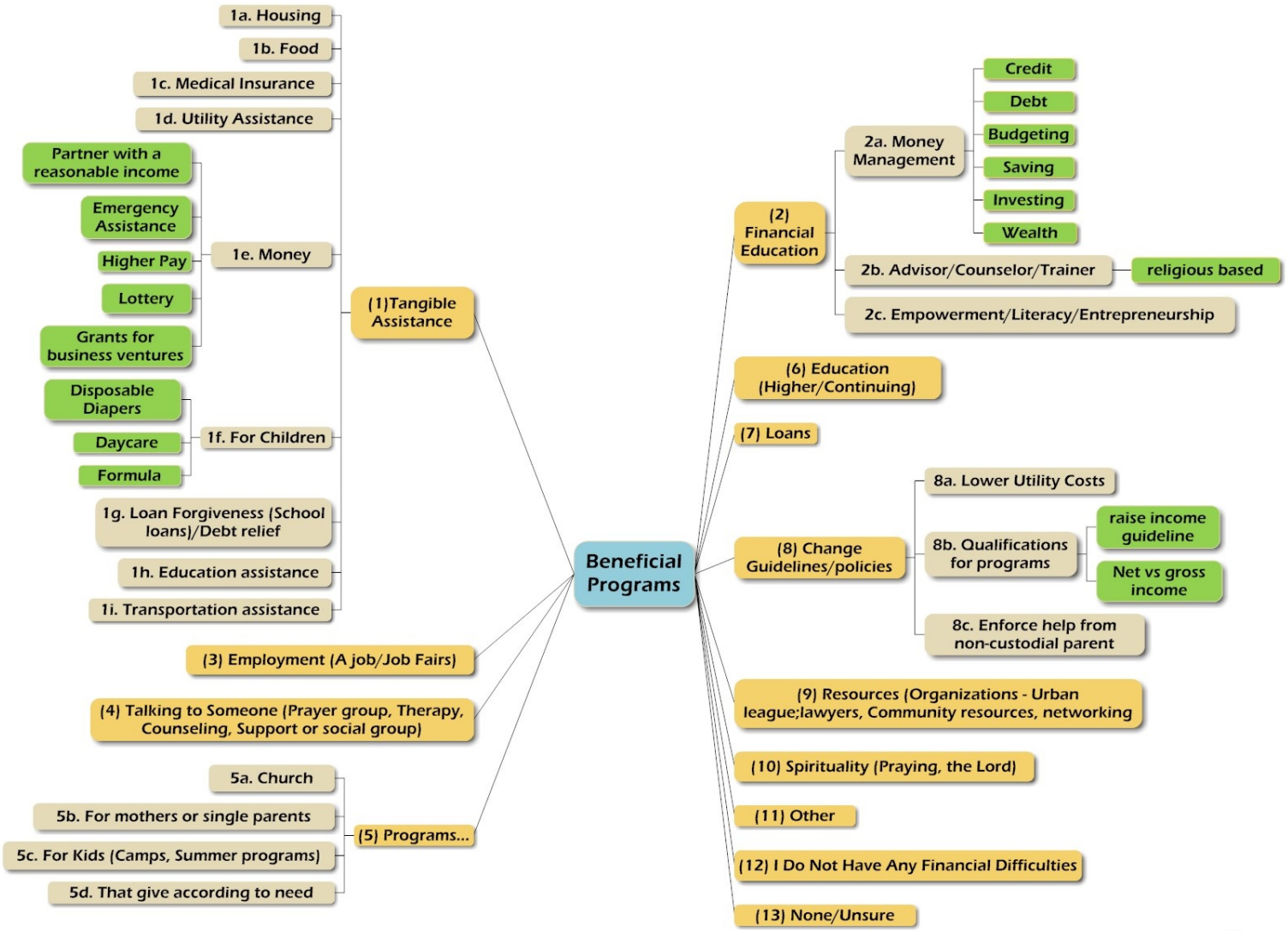
3) If you have any questions please contact Angelica J. Starkey @[redacted].

THANK YOU FOR YOUR PARTICIPATION!!

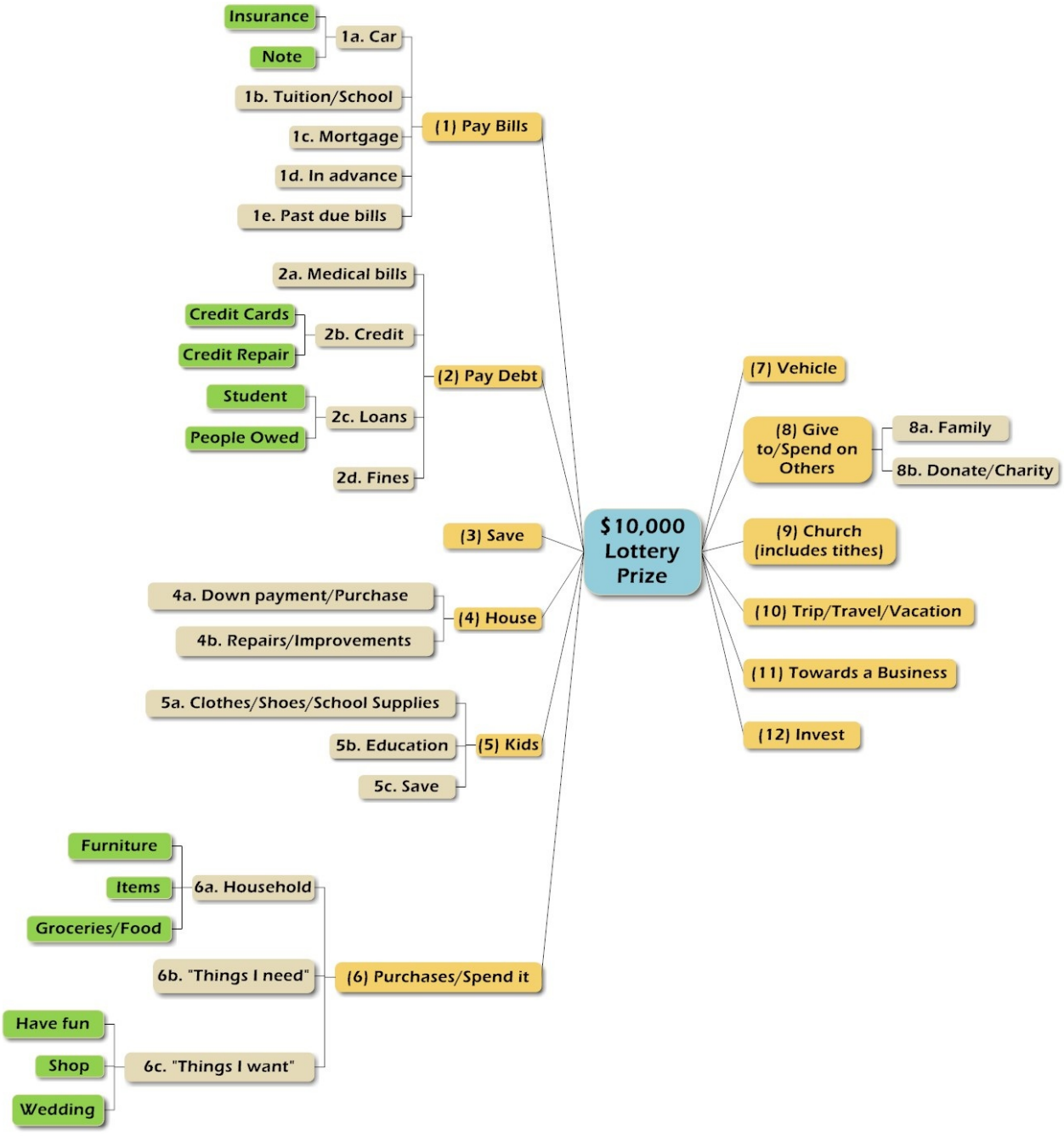
APPENDIX C

MIND MAPS

C.1 FINANCIAL NEEDS: BENEFICIAL PROGRAMS



C.2 FINANCIAL PRIORITIES: $10,000 LOTTERY PRIZE



APPENDIX D

IRB APPROVAL LETTER

Print

From: irb@pitt.edu (irb@pitt.edu)
To: ajs117@pitt.edu;
Date: Mon, June 28, 2010 4:58:18 PM
Cc:
Subject: PI Notification: IRB determination

University of Pittsburgh
Institutional Review Board

3500 Fifth Avenue
Pittsburgh, PA 15213
(412) 383-1480
(412) 383-1508 (fax)
http://www.irb.pitt.edu

Memorandum

To:	Angelica Starkey
From:	Sue Beers, PhD, Vice Chair
Date:	6/28/2010
IRB#:	PRO10010073
Subject:	Financial Stress and Health Among African American Women: Exploring the Role of Religious Coping and Social Support.

The above-referenced project has been reviewed by the Institutional Review Board. Based on the information provided, this project meets all the necessary criteria for an exemption, and is hereby designated as "exempt" under section
45 CFR 46.101(b)(2).

The IRB has approved the advertisement that was submitted for review as written. As a reminder, any changes to the wording of the approved advertisement would require IRB approval prior to distribution.

Please note the following information:

- If any modifications are made to this project, use the "**Send Comments to IRB Staff**" process from the project workspace to request a review to ensure it continues to meet the exempt category.
- Upon completion of your project, be sure to finalize the project by submitting a "**Study Completed**" report from the project workspace.

Please be advised that your research study may be audited periodically by the University of Pittsburgh Research Conduct and Compliance Office.

1 of 1

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