

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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ABSTRACT *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. 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 and financial distress/financial well-being. Correlation and regression analyses revealed that perceived financial distress was significantly associated with levels of depressive symptoms. 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?” 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. The findings from this study can be used to create new and/or enhance existing programs, services, and/or interventions that focus on the identified financial priorities and needs. Collaborative efforts among professionals in different disciplines are also needed, as ways to manage and alleviate financial distress should be considered and discussed when addressing the mental health of African American women.*

KEYWORDS *African American women, Depression, Depressive symptoms, Risk factors for depression, Perceived financial distress, Financial strain, Economic strain, Financial priorities, Financial needs*

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}

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Research clearly shows that women are more likely than men to become depressed.⁸⁻¹² 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 women.^{2,13} Numerous explanations exist that illuminate the difficulty in accurately assessing the true prevalence of depression.

Depression among African American women remains under detected, inadequately treated, “missed diagnosed,” mis-diagnosed, and under-diagnosed.^{6,8,10,14-26} 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.^{10,11,13,15,21,27} They also have alternative ways of coping that cause delays or conflicts with seeking care from a professional.^{9,15,18,28-30} They are also less likely to participate in mental health research studies.¹⁷ Of note is that in addition to the individual factors mentioned above, mis-diagnosis by a professional (physician or other medical and/or health care professional) can also result in depression being under-diagnosed in this population.

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.² At any given time 16 % to 28 % of African American women have psychological distress that is indicative of clinical depression, and consequences of high levels of depressive symptoms may be just as debilitating as those of depression.^{2,8-10,13,31} So in lieu of a focus on depression, which requires a formal diagnosis, numerous mental health research studies have focused on psychological distress.²

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.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.³² 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.³³ Financial distress can last a short time, or it can become a persistent state for individuals or families at all income levels.³³

Financial strain/stress/distress are subjective reactions. Measuring these reactions can help researchers understand individuals’ perceptions about and reactions to their financial condition.³³ 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.³³ For example, people who are financially distressed, including persons who are not by definition living in poverty, often live paycheck to paycheck.³³ 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.³⁴⁻³⁹ Schulz et al.⁴⁰ 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.”³⁴ It appears that as financial distress increases, individuals may experience a myriad of stress-related mental and physical symptoms and illnesses.^{36,37,41,42} 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.^{41,42} As expected, individuals reporting lower financial distress/higher financial well-being reported better health.⁴³ 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 types of financial stressors affects the level of financial distress that an individual feels. One major stressor is living at or below poverty. For the purposes of this article, the definition of poverty as found in the book, *An Atlas of Poverty in America: One Nation, Pulling Apart, 1960–2003* by Glasmeier⁴⁴ will be used: “Being in poverty means that you receive or earn insufficient income to pay for necessities of daily living; Poverty... reflect[s] a state or condition of being in which an individual lacks the ability to enjoy life due to lack of access to basic needs such as food, clothing, shelter, health care, and essential requirements for a successful work life such as a decent education and access to a vehicle.” 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.^{33,43} 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.³² 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.^{32,35} 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.³²

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.⁴¹ A study by Lyons and Yilmazer⁴¹ 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.^{33,35,37,40,42,45,46}

Study Focus: Financial Priorities and Needs

There were two main purposes for conducting this study. First, the authors sought to examine the association of financial distress and depressive symptoms among African American women, and it was anticipated that there would be a positive relationship between perceived financial distress and depressive symptoms. Second, the authors wanted to explore what the identified financial priorities and needs are of the women in this study as this may prove beneficial to professionals seeking to address and improve the mental health of African American women.

METHODS

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 4 months via flyers that were posted at various health care centers and distributed via email. Participants were self-selecting and also referred other individuals from within their social networks who met eligibility criteria. Women requested packets if they were interested. Each survey packet contained an informational script and receipt of a completed survey by mail was consent for participation in the study.

Approval to conduct the study was granted by the University of Pittsburgh IRB (number PRO10010073, June 28, 2010).

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-SR₁₆)⁴⁷ was used to measure depressive symptoms. It is 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).⁴⁷ 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).⁴⁷ The total score ranges from 0 to 27 (continuous measure) with higher scores indicating higher levels of depressive symptoms.⁴⁷ Participant's scores from the QIDS-SR₁₆ were also grouped by severity of depression (categorical measure) based on the data presented in Table 3 of the article titled, *Inventory of Depressive Symptomatology (IDS) & Quick Inventory of Depressive Symptomatology (QIDS)*.⁴⁷ Scores are noted in parentheses: none (0–5), mild (6–10), moderate (11–15), severe (16–20), and very severe (21–27).⁴⁷

The Personal Financial Wellness Scale (PFW), a self-report, eight-item instrument, was used to measure perceived financial distress/financial well-being.³⁶ 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.³⁶ 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 (continuous measure) with lower scores indicating higher levels of financial distress/lower levels of financial well-being.³⁶ According to Prawitz et al.,³⁶ the scores can be interpreted as follows:

- 1.0 Overwhelming financial distress/lowest financial well-being
- 2.0 Extremely high financial distress/extremely low financial well-being
- 3.0 Very high financial distress/very poor financial well-being
- 4.0 High financial distress/poor financial well-being
- 5.0 Average financial distress/average financial well-being
- 6.0 Moderate financial distress/moderate financial well-being
- 7.0 Low financial distress/good financial well-being
- 8.0 Very low financial distress/very good financial well-being
- 9.0 Extremely low financial distress/extremely high financial well-being
- 10.0 No financial distress/highest financial well-being.

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.

Statistical Analyses

SPSS was used for all analyses. 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.^{48,49} Both values were still reported.

To investigate the relationship between the continuous measures of perceived financial distress and depressive symptoms, Pearson’s correlations and simple linear regression were used. To assess differences and make comparisons in mean financial distress scores by severity of depression, a one-way ANOVA was used. Since there was only one continuous predictor (financial distress), in order to use the one-way ANOVA, severity of depression was considered the predictor and financial distress was considered the outcome variable.⁵⁰ Also, the five categories for severity of depression were further condensed into three groups (none, mild, and moderate to very severe). Categorization into three groups was chosen because there were too few cases in the depression categories of severe (one case) and very severe (three cases).

Effect size estimates (r , adjusted R^2 , and η^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.⁵¹ For Pearson's r , interpretation of the effect sizes are as follows: recommended minimal=0.2, moderate=0.5, and strong=0.8.⁵¹ For adjusted R^2 and η^2 , interpretation of the effect sizes are as follows: recommended minimal=0.04, moderate=0.25, and strong=0.64.⁵¹

Qualitative Analysis

The responses to the two open-ended questions were entered into a spreadsheet, read thoroughly, and coded for common themes and subthemes. The qualitative data was initially coded by a single individual who revisited and revised the themes and subthemes multiple times to arrive at the final codes. This information was then reviewed by two other individuals, independent of one another to check for agreement. Once the themes and subthemes were agreed upon, the results were analyzed (summarized) in order to answer the research questions proposed.

RESULTS

Participants

Of the 239 packets requested, 113 were returned. Two surveys were excluded because of age ineligibility; one participant was older than 44 and another participant's age was unknown. This brought the total of eligible returned surveys to 111 for a response rate of 46 %. According to some research, there is no standard response rate, as several factors determine an acceptable response rate including the population being studied and the survey's purpose.⁵²⁻⁵⁴ However, as a rule of thumb for mail surveys, a return rate of 50 % is considered adequate, 60 % is considered good, and 70 % is considered very good.^{55,56} For this study, the response rate would be considered near adequate, but the aims of this study were exploratory in nature and generalization was not the purpose.

The socio-demographic characteristics of the participants are presented in Table 1.

The average age of the participants was 31, and a majority of the women heard about the study from someone they knew (66.1 %). The highest percentage of responses for religious affiliation was protestant (48.1 %). A majority of the women (82.8 %) had no (30.6 %), one (26.1 %), or two (26.1 %) children under 18 and 85.6 % of the respondents had no children over 17. Over half of the women that participated in the study were single/never married (62.2 %) and employed full-time (62.2 %). In regards to education, more than half of the women (62.7 %) attended some college (20 %), had a technical or Associates degree (22.7 %), or held a Bachelor's degree (20 %). When considering income, 77.9 % of the women had incomes that were less than \$40,000. Over 75 % of the women had no chronic medical conditions (86.5 %). Within the past 6 months, 53.2 % of the women had no major life events taking place and 27.5 % had one major life event. Twenty-nine of the 111 (26.1 %) women who participated in the study reported being previously diagnosed with depression or a mental illness and 13.5 % of the women (15 of the 111) reported that they were currently receiving mental health treatment. Of the 15 women who were currently receiving mental health treatment, 93 %, or 14, also reported being formerly diagnosed with depression or another mental illness.

TABLE 1 Socio-demographic characteristics

Characteristic	Number	Percent
How did you hear about this survey (<i>n</i> =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 ^a , years (<i>n</i> =111)		
18–26	28	
27–35	51	25.2
36–44	32	45.9
Average age	31.57	28.8
Religious affiliation (<i>n</i> =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, Seventh-day Adventist, Jehovah's Witness, Pentecostal)	50	48.1
Total number of children 17 and under (<i>n</i> =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 (<i>n</i> =111)		
0	95	85.6
1	9	8.1
2	2	1.8
3	4	3.6
6	1	0.9
Marital/relationship status (<i>n</i> =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 (<i>n</i> =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	0.9
Unemployed	13	11.7
Education (<i>n</i> =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

TABLE 1 *Continued*

Characteristic	Number	Percent
Master's degree	10	9.1
Professional degree	1	0.9
Doctorate degree	1	0.9
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	0.9
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	0.9
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

^aNo participants were 20 or 39 years of age

Depressive Symptoms and Perceived Financial Distress

Normality of the Variables Depressive symptom scores ranged from 0 to 21 and followed a non-normal distribution, $D(109)=0.123$, $p<0.001$, $W(109)=0.932$, $p<0.001$, whereas perceived financial distress/financial well-being scores ranged from 1 to 9.9 and followed an approximately normal distribution according to the

K-S test, $D(111)=0.078$, $p=0.096$, but not the S-W test $W(111)=0.932$, $p=0.001$. Transformations were performed and the square root transformations were used for both variables as it made both distributions closer to normal; $D(109)=0.080$, $p=0.083$, $W(109)=0.976$, $p=0.044$, and $D(111)=0.061$, $p=0.200$, $W(111)=0.977$, $p=0.057$, respectively.

Relationships Perceived financial distress/financial well-being ($M=4.031$; $SD=2.134$) was significantly associated with levels of depressive symptoms ($M=7.39$; $SD=4.393$), $r=-0.397$, $p<0.001$, $n=109$, in that higher levels of personal financial well-being/lower levels of financial distress were indicative of lower levels of depressive symptoms.

The results of the simple linear regression were also statistically significant $F(1,107)=20.075$, $p<0.001$, with an adjusted R^2 of 0.150, meaning 15 % of the variability for depressive symptoms was explained by levels of perceived financial distress/financial well-being. Figure 1 illustrates the relationship.

Differences and Comparisons When looking at participants' scores for depressive symptoms ($n=109$), according to the categories for severity of depression (Figure 2), 44 women had scores indicative of no depression, 40 had scores indicative of mild depression, 21 had scores indicative of moderate depression, one had a score indicative of severe depression, and three had scores indicative of very severe depression.

According to the one-way ANOVA performed, there was a significant difference in the mean financial distress scores among three categories for severity of depression (none, mild, and moderate to very severe), $F(2,108)=8.877$, $p=0.000$, $\eta^2=0.141$. Post hoc comparisons using the Tukey HSD test indicated that the average financial distress score for individuals with moderate to very severe levels of depressive symptoms significantly differed from the average financial distress score for individuals with no ($p=0.000$) and mild ($p=0.003$) levels of depressive symptoms. There was no significant difference between average financial distress scores for individuals with no and mild ($p=0.731$) levels of depressive symptoms.

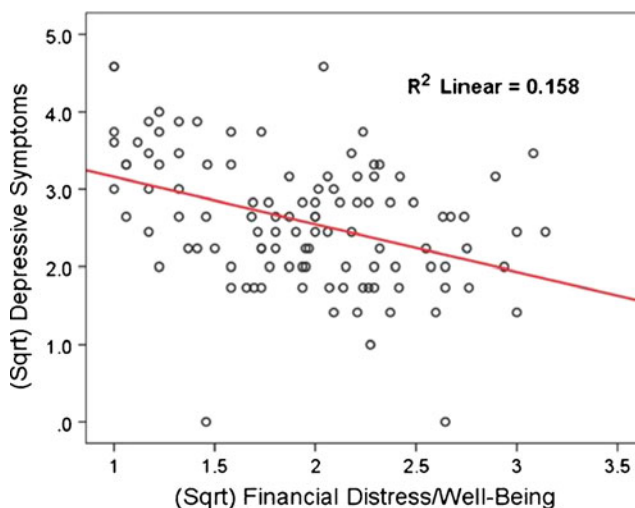


FIGURE 1. Scatterplot showing the relationship between perceived financial distress and levels of depressive symptoms.

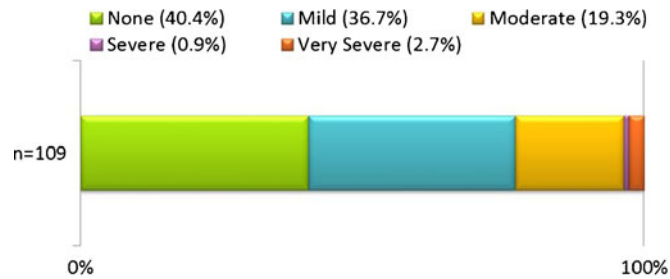


FIGURE 2. Severity of depression among participants.

Table 2 presents the means, standard deviations, confidence intervals, and the minimum and maximum scores for perceived financial distress by severity of depression.

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 and Figure 3 present the types and numbers of beneficial programs and/or help identified.

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 %), and 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 4 and Figure 4 present how and the numbers of ways participants’ would spend the lottery prize.

DISCUSSION

As previously stated, depression and depressive symptoms have been strongly associated with financial adversity or strain.^{34–39} In line with previous research findings, this study hypothesized and found a positive relationship between perceived financial distress and depressive symptoms. Perceived financial distress was also found to significantly predict levels of depressive symptoms.

When comparing average levels of financial distress, a significant difference in average scores between women who were experiencing moderate to very severe

TABLE 2 Average financial distress scores by severity of depression

Severity of depression	Perceived financial distress				
	<i>n</i>	<i>M</i>	<i>SD</i>	95 % CI	Min–max scores
None (0–5)	44	4.62	1.91	[4.04, 5.20]	1.5 9.0
Mild (6–10)	42	4.29	2.06	[3.65, 4.93]	1.0 9.9
Moderate–very severe (11–27)	25	2.58	2.05	[1.73, 3.42]	1.0 9.5
Total	111	4.03	2.13	[2.03, 4.44]	1.0 9.9

TABLE 3 Participants' indicated financial needs (*n*=101)

Beneficial programs or help ^a	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
2. Financial education		50.5
2a. Money management	32	
2b. Advisor/counselor/trainer	10	
2c. Empowerment/literacy/entrepreneurship	3	45
3. Employment	7	7
4. Talking to someone	10	10
5. Programs...		
5a. Church programs	2	
5b. For mothers, single parents	4	
5c. For kids	3	
5d. That give according to need	6	17
6. Education	2	2
7. Loans	5	5
8. Change guidelines/policies		
8a. Lower utility costs	1	
8b. Qualifications for programs	8	
8c. Enforce help from non-custodial parent	2	11
9. Resources	4	4
10. Spirituality	3	3
11. Other	2	2
12. I do not have any financial difficulties	3	3
13. None/unsure	4	4

^aParticipants may have identified more than one beneficial program or service

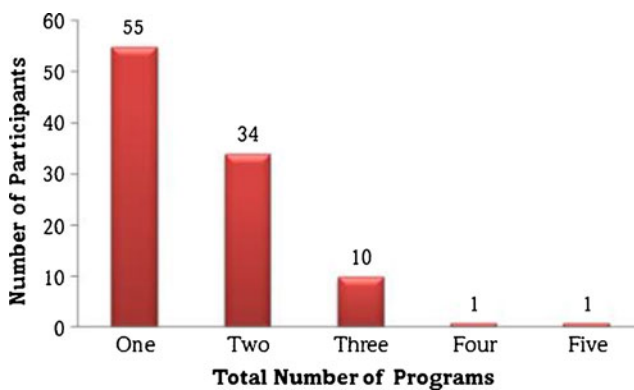
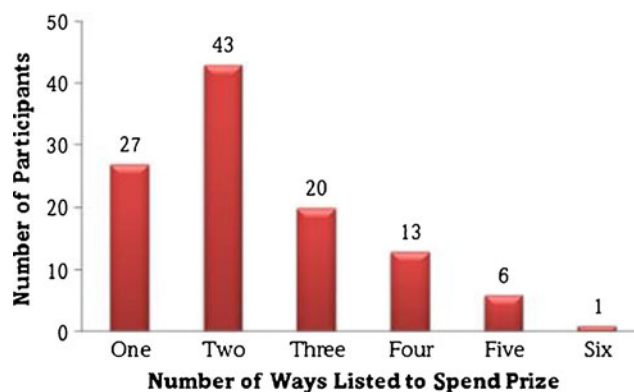


FIGURE 3. Total number of beneficial programs or help identified by participants (*n*=101).

TABLE 4 Participants' indicated financial priorities ($n=110$)

Lottery prize ^a	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
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
3. Save (\$1,000–\$5,000; money market account; emergency or “rainy day”)	42	42
4. House		
4a. Down payment/purchase	18	
4b. Repairs/improvements	6	24
5. Kids (not specified)	1	
5a. Clothes/shoes/school supplies	4	
5b. Education	5	
5c. Save	4	14
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
7. Vehicle	10	10
8. Give to/spend on others (not specified)	5	
8a. Family	15	
8b. Donate/charity	4	24
9. Church (includes tithes)	16	16
10. Trip/travel/vacation	8	8
11. Towards a business	5	5
12. Invest	3	3

^aParticipants may have identified more than one way in which they would spend the lottery prize

**FIGURE 4.** Total number of ways to spend \$10,000 lottery prize ($n=110$).

levels of depressive symptoms and women who were experiencing no depressive symptoms was found. There was also a significant difference in average scores found between women who were experiencing moderate to very severe levels of depressive symptoms and women who were experiencing mild depressive symptoms. Yet, no significant difference was found in average financial distress scores between women experiencing mild depressive symptoms and women experiencing no depressive symptoms.

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,⁵⁷ which found that a majority of the patients (86 %) participating in therapy identified problems of finances, work, or unemployment (economic stress).⁵⁷ 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.⁵⁷

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. Moreover, 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.

It was also of interest to assess how the women 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;³² 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.³⁷
- Integrate educational programs and research about the health and financial areas.⁴³ 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).⁵⁸ 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,^{59–61} 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.⁶¹
- 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.³³ 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.³³

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.

LIMITATIONS

Major limitations of this study are due to the study design, the sampling strategy, and the targeted population.

The research design used was a non-probability, cross-sectional descriptive study as 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.⁶² The main disadvantage of this design is that it is difficult to make causal inferences^{62–64}; therefore, 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 USA. Nonetheless, causal inference was not the purpose, and 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.

The sampling techniques employed were convenience and snowball (purposive).^{65,66} Snowball sampling is a chain referral sampling method that relies on referrals from initial subjects to generate additional subjects.⁶⁴ Convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher.⁶⁷ For this study, women were recruited via email and from facilities that they often frequented (health centers) and they then referred other individuals from within their social networks who met eligibility criteria, and those individuals in turn referred others. These sampling methods can introduce bias in terms of the target population

because participants will tend to refer other respondents who are similar to themselves; in turn, as already stated, this may not be reflective of the general population in the area.^{64,68,69} This also leads to the exclusion of individuals not in the social network of the participants. Self-selection bias has the potential to be present as well since 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.⁶³ Finally, individuals who had a particular interest in research topic were probably more likely to return the questionnaires than those who were less interested.⁵³

Since completion of the survey was anonymous, the researchers could not identify or follow up with non-responders in an effort to increase the response rate; thus, another limitation of the study is the low response rate. However, response rates are thought to be more important when the study's purpose is to measure effects or make generalizations to a larger population and less important if the purpose is to gain insight.⁵⁶ Again, the aims of this study were exploratory in nature; therefore, the results can be seen as a beginning on which to base future studies.

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REFERENCES

1. Beato CV. Mental Health and Mental Disorders. Healthy People 2010 Progress Review: U.S. Department of Health and Human Services; 2003.
2. Brown DR, Keith VM. The epidemiology of mental disorders and mental health among African American women. In: Brown DR, Keith VM, eds. *In and Out of Our Right Minds*. New York: Columbia University Press; 2003: 23–58.
3. Dwight-Johnson M, Lagomasino IT. Addressing depression treatment preferences of ethnic minority patients. *Gen Hosp Psychiatry*. 2007; 29(3): 179–181.
4. Dwight-Johnson M, Sherbourne CD, Liao D, Wells KB. Treatment preferences among depressed primary care patients. *J Gen Intern Med*. 2000; 15(8): 527–534.
5. Givens JL, Katz IR, Bellamy S, Holmes WC. Stigma and the acceptability of depression treatments among African Americans and whites. *J Gen Intern Med*. 2007; 22(9): 1292–1297.
6. Myers HF, Lesser I, Rodriguez N, et al. Ethnic differences in clinical presentation of depression in adult women. *Cultur Divers Ethnic Minor Psychol*. 2002; 8(2): 138–156.
7. Saver BG, Van-Nguyen V, Keppel G, Doescher MP. A qualitative study of depression in primary care: missed opportunities for diagnosis and education. *J Am Board Fam Med*. 2007; 20(1): 28–35.
8. United States Department of Health and Human Services. Healthy People 2010: Understanding and Improving Health. . Mental Health and Mental Disorders. Chapter 18. 2nd ed. Washington, DC: U.S. Government Printing Office; 2000.
9. Carrington CH. Clinical depression in African American women: diagnoses, treatment, and research. *J Clin Psychol*. 2006; 62(7): 779–791.
10. Van Hook MP. Women's help-seeking patterns for depression. *Soc Work Health Care*. 1999; 29(1): 15–34.
11. Waite R, Killian P. Exploring depression among a cohort of African American women. *J Am Psychiatr Nurses Assoc*. 2007; 13(3): 161–169.

12. Ward EC. Examining differential treatment effects for depression in racial and ethnic minority women: a qualitative systematic review. *J Natl Med Assoc.* 2007; 99(3): 265–274.
13. Black Women and Mental Health. Available at: <http://www.blackwomenshealth.com/2006/articles.php?id=56>. Accessed January 28, 2008.
14. Baker FM. Diagnosing depression in African Americans. *Community Ment Health J.* 2001; 37(1): 31–38.
15. Brown C, Abe-Kim JS, Barrio C. Depression in ethnically diverse women: implications for treatment in primary care settings. *Prof Psychol Res Pract.* 2003; 34(1): 10–19.
16. Das AK, Olfson M, McCurtis HL, Weissman MM. Depression in African Americans: breaking barriers to detection and treatment. *J Fam Pract.* 2006; 55(1): 30–39.
17. Dubowitz H, Feigelman S, Lane W, et al. Screening for depression in an urban pediatric primary care clinic. *Pediatrics.* 2007; 119(3): 435–443.
18. Jackson AP. The use of psychiatric medications to treat depressive disorders in African American women. *J Clin Psychol.* 2006; 62(7): 793–800.
19. Keeley RD, Smith JL, Nutting PA, Dickinson LM, Dickinson WP, Rost KM. Does a depression intervention result in improved outcomes for patients presenting with physical symptoms? *J Gen Intern Med.* 2004; 19(6): 615–623.
20. Kohn LP, Oden T, Munoz RF, Robinson A, Leavitt D. Adapted cognitive behavioral group therapy for depressed low-income African American women. *Community Ment Health J.* 2002; 38(6): 497–504.
21. Mahan V. Challenges in the treatment of depression. *J Am Psychiatr Nurses Assoc.* 2006; 11(6): 366–370.
22. O'Malley AS, Forrest CB, Miranda J. Primary care attributes and care for depression among low-income African American women. *Am J Public Health.* 2003; 93(8): 1328–1334.
23. Reinberg S. Depression May Be World's Most Disabling Disease: Global Study Finds it takes a bigger toll than other chronic conditions. Available at: <http://abcnews.go.com/Health/Healthday/story?id=4508589&page=1>. Accessed February 1, 2008.
24. Simpson SM, Krishnan LL, Kunik ME, Ruiz P. Racial disparities in diagnosis and treatment of depression: a literature review. *Psychiatr Q.* 2007; 78(1): 3–14.
25. Turner RJ, Lloyd DA. Stress burden and the lifetime incidence of psychiatric disorder in young adults: racial and ethnic contrasts. *Arch Gen Psychiatry.* 2004; 61(5): 481–488.
26. Borowsky SJ, Rubenstein LV, Meredith LS, Camp P, Jackson-Triche M, Wells KB. Who is at risk of nondetection of mental health problems in primary care? *J Gen Intern Med.* 2000; 15(6): 381–388.
27. Hines-Martin V, Malone M, Kim S, Brown-Piper A. Barriers to mental health care access in an African American population. *Issues Ment Health Nurs.* 2003; 24(3): 237–256.
28. Hines-Martin VP. African American consumers: what should we know to meet their mental health needs? *J Am Psychiatr Nurses Assoc.* 2002; 8(6): 188–193.
29. Lang AJ. Mental health treatment preferences of primary care patients. *J Behav Med.* 2005; 28(6): 581–586.
30. Snowden LR. Barriers to effective mental health services for African Americans. *Ment Health Serv Res.* 2001; 3(4): 181–187.
31. Keith VM. In and out of our right minds: strengths, vulnerabilities, and the mental well-being of African American women. In: Brown DR, Keith VM, eds. *In and Out of Our Right Minds*. New York: Columbia University Press; 2003: 277–292.
32. Aldana SG, Liljenquist W. Validity and reliability of a financial strain survey. *Financ Counsel Plann.* 1998; 9(2): 11–19.
33. O'Neill B, Prawitz AD, Sorhaindo B, Kim J, Garman ET. Financial distress: definition, effects and measurement. *Consumer Interest Annual.* 2006; 52: 458–465.
34. Coiro MJ. Depressive symptoms among women receiving welfare. *Women Health.* 2001; 32(1–2): 1–23.
35. Jackson AP, Brooks-Gunn J, Huang CC, Glassman M. Single mothers in low-wage jobs: financial strain, parenting, and preschoolers' outcomes. *Child Dev.* 2000; 71(5): 1409–1423.

36. Prawitz AD, Garman ET, Sorhaindo B, O'Neill B, Kim J, Drentea P. In charge financial distress/financial well-being scale: development, administration, and score interpretation. *Financ Counsel Plann.* 2006; 17(1): 34–50.
37. Reading R, Reynolds S. Debt, social disadvantage and maternal depression. *Soc Sci Med.* 2001; 53(4): 441–453.
38. Schulz A, Parker E, Israel DB, Fisher DT. Social context, stressors, and disparities in women's health. *J Am Med Womens Assoc.* 2001; 56(4): 143–149.
39. Zimmerman FJ, Katon W. Socioeconomic status, depression disparities, and financial strain: what lies behind the income–depression relationship? *Health Econ.* 2005; 14(12): 1197–1215.
40. Schulz AJ, Israel BA, Zenk SN, et al. Psychosocial stress and social support as mediators of relationships between income, length of residence and depressive symptoms among African American women on Detroit's eastside. *Soc Sci Med.* 2006; 62(2): 510–522.
41. Lyons AC, Yilmazer T. Health and financial strain: evidence from the survey of consumer finances. *South Econ J.* 2005; 71(4): 873–890.
42. O'Neill B, Sorhaindo B, Xiao JJ, Garman ET. Negative health effects of financial stress. *Consumer Interest Annual.* 2005; 51: 260–262.
43. O'Neill B, Prawitz AD, Sorhaindo B, Kim J, Garman ET. Changes in health/negative financial events, and financial distress/financial well-being for debt management program clients. *Financ Counsel Plann.* 2006; 17(2): 46–63.
44. Glasmeier AK. *An Atlas of Poverty in America: One Nation, Pulling Apart, 1960–2003.* New York: Routledge; 2006.
45. Drentea P, Lavrakas PJ. Over the limit: the association among health, race, and debt. *Soc Sci Med.* 2000; 50(4): 517–529.
46. Price RH, Choi JN, Vinokur AD. Links in the chain of adversity following job loss: how financial strain and loss of personal control lead to depression, impaired functioning and poor health. *J Occup Health Psychol.* 2002; 7(4): 302–312.
47. University of Pittsburgh Epidemiology Data Center. Inventory of Depressive Symptomatology (IDS) & Quick Inventory of Depressive Symptomatology (QIDS). 2012. Available at: <http://www.ids-qids.org/index2.html>. Accessed August 1, 2008.
48. Field A. *Exploring Assumptions. Discovering Statistics Using SPSS.* 3rd ed. Thousand Oaks: Sage; 2009: 131–165.
49. Yazici B, Yolacan S. A comparison of various tests of normality. *J Stat Comput Simulat.* 2007; 77(2): 175–183.
50. UCLA. SPSS Data Analysis Examples: Ordinal Logistic Regression. UCLA Academic Technology Services, Statistical Consulting Group. Available at: <http://www.ats.ucla.edu/stat/spss/dae/ologit.htm>. Accessed July 17, 2012.
51. Ferguson CJ. An effect size primer: a guide for clinicians and researchers. *Prof Psychol Res Pract.* 2009; 40(5): 532–538.
52. Babbie ER. *The Practice of Social Research.* 12th ed. Belmont: Wadsworth; 2010.
53. Fowler FJ. *Survey Research Methods.* Thousand Oaks: Sage; 2002.
54. Taylor-Powell E, Hermann C. *Collecting Evaluation Data: Surveys: University of Wisconsin—Extension;* 2000.
55. Olney C. Increasing Survey Response Rates [Powerpoint Presentation]. Available at: http://nmlm.gov/scr/training/presentations/Olney_response_rate.pdf. Accessed July 10, 2012.
56. The University of Texas at Austin. Response Rates. September 21, 2011. Available at: <http://www.utexas.edu/academic/ctl/assessment/iar/teaching/gather/method/survey-Response.php>. Accessed July 17, 2012.
57. Falconnier L, Elkin I. Addressing economic stress in the treatment of depression. *Am J Orthopsychiatry.* 2008; 78(1): 37–46.
58. Xiao J, O'Neill B, Prochaska J, et al. Application of the transtheoretical model of change to financial behavior. *Consumer Interest Annual* [serial online]. 2001;47(April 4).
59. Braveman PA, Cubbin C, Egerter S, et al. Socioeconomic status in health research: one size does not fit all. *JAMA.* 2005; 294(22): 2879–2888.

60. Cohen H, Northridge M. Getting political: racism and urban health. *Am J Public Health*. 2000; 90(6): 841–642.
61. Moss N. Socioeconomic disparities in health in the US: an agenda for action. *Soc Sci Med*. 2000; 51: 1627–1638.
62. Levin KA. Study design III: cross-sectional studies. *Evid Based Dent*. 2006; 7: 24–25.
63. Heckathorn DD. Respondent-driven sampling II: deriving valid population estimates from chain-referral samples of hidden populations. *Soc Probl*. 2002; 49(1): 11–34.
64. Johnston LG, Sabin K. Sampling hard-to-reach populations with respondent driven sampling. *Methodological Innovations Online*. 2010; 5(2): 38–48.
65. Aday L, Cornelius L. *Designing and Conducting Health Surveys*. 3rd ed. San Francisco: Jossey-Bass; 2006: 124–153.
66. Neuman WL. *Social Research Methods: Quantitative and Qualitative Approaches*. 6 ed. Upper Saddle River: Pearson Education; 2006.
67. Experiment-Resources.com. Convenience Sampling. Available at: <http://www.experiment-resources.com/convenience-sampling.html>. Accessed July 10, 2012.
68. Faugier J, Sargeant M. Sampling hard to reach populations. *J Adv Nurs*. 1997; 26: 790–797.
69. Goela S, Salganikb MJ. Assessing respondent-driven sampling. *Proc Natl Acad Sci U S A*. 2010; 107(15): 6743–6747.