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Prevalence and Correlates of Depressive Symptoms and Resiliency among African American Women in a Community-Based Primary Health Care Center

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Abstract

The purpose of this cross-sectional pilot study was to determine the prevalence and correlates of depressive symptoms and resiliency among 290 African American women (AAW) in a community-based primary health care center. Descriptive statistics, Pearson product-moment correlation, and logistic regression analyses were conducted. Findings indicate that depressive symptoms are experienced by 49% of the participants, while 10% indicated a history of suicidal ideation. Participants had moderately high resiliency scores that had a statistically significant inverse relationship with depressive symptoms. This suggests that resiliency is potentially a protective factor for depressive symptoms. Depressive symptoms were positively correlated with participants' diagnosis of at least one chronic disease. The strongest predictors of depressive symptoms were previous diagnoses of a mental health condition and unemployment. This study identifies risk and potential protective factors for depression among a clinic sample of AAW.

Keywords

African American women; depressive symptoms; resiliency; primary care

Depression is a major public health problem that has deleterious effects on the overall U.S. population. Major depression is a mental disorder that significantly impairs the social, physical, and emotional functioning of its sufferers,^{1,2,3,4} and manifests with the symptoms that are physiological, emotional, motivational, behavioral, and cognitive as specified by the

*Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV).*⁵ Major depression is one of the most common mental health problems in the United States affecting approximately, 14.8 million adults; and women ages 18 to 45 years old account for the largest proportion of this group, and experience considerable levels of functional impairment.⁶ Women are at greater risk for major depression, being twice as likely as men to suffer from it, and one woman in four is likely to suffer from a serious depressive episode at some time in her life.^{7,8,9}

Risk factors for depression and African American Women

A paucity of research studies on depression in AAW (African American Women) has existed for decades; and this paucity contributes to the problems of misdiagnoses, under-diagnoses, and under-treatment of depression for this population.¹⁰ Additional empirical data are needed to determine effective strategies for improving diagnoses and culturally centered psychotherapeutic treatment of depression among AAW.

Stressful life events (SLE), either in childhood or current, are the most significant environmental risk factors in developing depression.^{11,12} Indeed, the risk for developing depression increases as the number and severity of stressful life events increases.¹³ This may be particularly challenging for AAW since this population of women may face extra stress due to their gender and ethnic minority status while simultaneously attempting to manage daily life circumstances.

African American women are frequently not confronted with isolated stressors, but with a constellation of multiple issues that can engender stress, such as balancing work and home life demands, managing personal relationships, nurturing identity development, and creating a purpose in life that motivates them toward positive goals and an orientation for achievement and success.¹⁴ Unlike White women, AAW's low socioeconomic and structural position in United States society, and their experiences of institutional racism and sexism, may provoke mental and emotional distress that can add to their vulnerability for depression. For example, in a cross-sectional study conducted by McKnight-Eily *et al.*,¹⁵ correlations were established between depression and poor social support, problematic employment/work issues, difficulties managing physical health problems, and general dissatisfaction with life.

Addressing the issues that may elevate adult AAW's risk for depression is critically important, in part due to their significant roles regarding economic responsibility, emotional support, and socio-cultural foundations of stability that they characteristically contribute to enhancing the stability of African American families and communities. Specifically, 32% of AAW represent single-female-headed parent households in the U.S.,¹⁶ oft en as the primary caretakers of their children. In another report, it is suggested that nearly 72% of the births to Black women are out of wedlock; this figure eclipses that of most other groups: 17% of Asians, 29% of Whites, 53% of Hispanics, and 66% of Native Americans were born to unwed mothers in 2008.¹⁷ Untreated depression increases the chance of risky behaviors such as drug or alcohol addiction; it can ruin personal relationships, contribute to problems at work, make it difficult to overcome serious illnesses, and increase one's risk for suicide.¹⁸

Furthermore, co-morbidities exist for depression and selected chronic diseases which may negatively impact the quality of life and life expectancy for AAW.¹⁹ These ramifications could stimulate negative and damaging consequences for African American families and communities.

Previous research has suggested that certain psychosocial variables also contribute to the risk for developing depression among vulnerable populations of women. A spectrum of psychological-personality, emotional and behavioral constructs^{8,20} interpersonal-expectations, maladaptive motivations, and negative beliefs about self, others and situations^{21,22} have been identified as antecedents to depression.

The concept of resiliency may be an important consideration as a buffer for African American women at risk for depression, and depressive symptoms. Resiliency emphasizes the presence of positive factors which allow an individual to thrive in the face of adversity, with optimal social and interpersonal functioning.^{23,24}

The implications for mental health and illness are clear: individuals with high resiliency have low psychopathology, while individuals with low resiliency report more psychopathology, e.g., in depression, generalized anxiety disorder, post-traumatic stress disorder, and schizophrenia.^{23,25} Higher resiliency in individuals that have these disorders is associated with better treatment response, and importantly, may improve with treatment outcomes.²³ Imperative in the consideration of potential protective factors, resiliency may be enhanced by training individuals to strengthen this construct.^{26,27,28,29,30,31,32}

Role of mental health in primary care

Depression is a *treatable* medical illness that can occur in any woman, at any time, and for various reasons, regardless of age, race, or income.³³ Research centered on improving mental health outcomes in the primary care setting is considered a public health priority.³⁴ Not only do a large percentage of individuals receive all or part of their mental health treatment in primary care settings,³⁵ but racial minorities in particular are more likely to report depressive symptoms to primary care physicians than to mental health practitioners.^{36,37,38} However, primary care physicians are less likely to diagnose depression among African Americans;^{39,40,41} additionally, African Americans are underrepresented in outpatient mental health settings.^{38,40} However, more women than men reported that they prefer advice about depression from their primary care physician.⁴² Thus, the primary care setting may be a critical link to aid in identifying and addressing depression and associated issues for AAW.

However, when many African Americans enter treatment for mental health concerns, they are often exposed to inequalities in care.³⁶ For example, African Americans may be under-diagnosed and under-treated for affective disorders, and over-diagnosed and over-treated for psychotic disorders.⁴³ Furthermore, African Americans are less likely than Whites to receive newer and more comprehensive treatment modalities.⁴⁴ These inequalities have been attributed to a lack of cultural competency and bias in service delivery on the part of mental health and medical professionals.^{44,45} Such disparities concerning mental health services and quality care have resulted in poorer mental health outcomes for African Americans.⁴⁶

Nationwide attention was focused on racial/ethnic disparities in mental health services and outcomes in the Surgeon General's Report, *Mental Health: Culture, Race and Ethnicity*.⁴⁷ This report documented that minorities receive lower quality mental health care in general than Whites; wide disparities in mental health services for African Americans, Latinos, and Asian Americans persist to this day. Moreover, Holden and Xanthos⁴⁴ reported that African Americans experience more mental health disadvantages relative to European Americans with respect to financial barriers, barriers to help seeking, and poorer quality services. In a study among AAW, mental health treatment seeking barriers included poor access to care, stigma, and lack of awareness about mental illness.⁴⁸ Additionally, AAW's failure to perceive the need for care, may partially account for the low rates of care for depression among this population.⁴⁹

Summary

Limited research investigations exist about the prevalence and correlates of depressive symptoms and resilience among AAW in community-based primary health care settings. The lack of adequate and sufficient research contributes to the problems of misdiagnoses, under-diagnoses, and under-treatment of depression and depressive symptoms for AAW. We will add to the limited body of empirical research concerning risk and protective factors of depressive symptoms for AAW. Focusing on resilience is particularly relevant and promising in part because AAW have a history of being strong and self-reliant in their families and communities, which may yield a considerable capacity for resilience. Furthermore, there is a need to better understand some of the complexities of depressive symptoms and resilience, which this investigation will also help accomplish. Our exploratory study was guided by the following research hypothesis: There is a relationship between depressive symptoms and resilience. Ultimately, our multi-disciplinary investigative team seeks to contribute to the reduction of mental health disparities, promote better mental health and well-being for AAW, families, and communities.

Methods

This cross-sectional pilot study was guided by the following research question: What is the relationship between depressive symptoms and resilience among AAW attending a community-based primary health care center? This study was approved by the Institutional Review Board and Comprehensive Family Health care Center (CFHC) Research Oversight Committee at Morehouse School of Medicine to ensure that the protection of human subjects and ethical practice standards of research for the investigation were achieved.

Research participants and study site

The research participants included a convenience sample of 290 adult AAW that were patients at a community-based primary health care center, the CFHC. The CFHC is located in an urban area of metro Atlanta, Georgia and was established to provide complete medical and preventive health care services to local communities, with a special focus on minority and underserved populations. It serves approximately 3,500 clients per year, predominantly (>90%) African Americans. The CFHC physicians are committed to providing the highest quality of care to the members of the community through clinical services, community

health education, and research. The staff comprises highly trained professionals in the fields of psychology, nutrition, and health education. This team of health care providers is dedicated to offering comprehensive patient care and preventive care services to all members of the community.

Recruitment, informed consent process, and screening activities took place in a private section of the clinic waiting area. All of the potential research participants were patients of the CFHC who were scheduled for a visit. Interested individuals who—based on the inclusion/exclusion criteria—were eligible for participation were approached in the general waiting area by a research assistant and provided information on the study. Upon providing consent to participate, the subject was asked to complete the battery of assessment tools in a separate private section of the waiting area.

Assessment measures

Several self-report paper-and-pencil psychosocial measures were given to the research participants. All of these assessment measures are designed for literacy at or below the eighth grade level. The tools have adequate psychometric properties as indicated by reliability and validity information reported in the literature; and based on previous use of the assessment measures in other investigations that involved African Americans conducted by the principal investigator. The entire battery of assessment measures took approximately 10–15 minutes for each of the research participants to complete.

Measure of depressive symptoms (dependent/outcome variable)—The Patient Health Questionnaire (PHQ-9)⁵⁰ is a nine-item self-report screening tool of depressive symptoms experienced by individuals during the past two weeks. The items of the questionnaire correspond with the symptoms of depression indicated in the DSM-IV that is used for diagnostic purposes. The PHQ-9 has been widely used with primary care patients and demonstrated excellent psychometric properties with ethnic minorities (including African Americans), with Cronbach's alpha reliability coefficients ranging from .79 to .89.^{51,52} It has been validated against the gold standard of individuals receiving a diagnosis of depression and with the Beck Depression Inventory (construct validity). Primary Factors of the PHQ-9 include: factor 1: depressive symptoms (worthlessness, sadness, lack of concentration, low libido, suicidal thoughts and speech and motor retardation); and factor 2: indulgence and withdrawal (overeating, weight gain and excessive sleep). A sample question is: "feeling bad about yourself or that you are a failure, or have let yourself down" (not at all, several days, more than half the days, nearly every day). Severity score ranges include: 0–4 (no depressive symptoms), 5–9 (mild depressive symptoms), 10–14 (moderate depressive symptoms), 15–19 (moderately severe depressive symptoms), and 20–27 (severe depressive symptoms).

Measure of resilience (independent variable)—The Connor-Davidson Resilience Scale (CD-RISC)²³ is a 35-item self-administered scale with questions that load to five factors (personal competence, trust in instincts, positive acceptance of change/secure relationships, locus of control and spiritual influences). It has been used in a wide variety of populations including community, primary care and psychiatry outpatients. Among African

Americans, it has shown psychometric properties with Cronbach's alpha reliability coefficients ranging from .87 to .92.^{53,54} The CD-RISC's construct validity has been validated with measures of self-esteem, task-oriented coping, and life satisfaction.^{55,56} A sample question on this tool is: "I think of myself as a strong person when dealing with life's challenges and difficulties" (not true at all to true nearly all of the time). The range of scores is: 0–48 (low resilience), 49–96 (moderate resilience), and 97–144 (high resilience).

Measure of background/demographic factors (independent variable)—A demographic questionnaire was developed by the principal investigator that queried basic background information about the respondent, including age (years); annual household income (range); employment (unemployment, employment, other-student, homemaker, retired, disabled); level of education completed (no formal schooling to post-graduate degree); marital status (never married, married, separated, divorced, widowed, cohabitating); health insurance status (private, government, uninsured); previous diagnosis of health conditions (diabetes, high blood pressure, heart condition, arthritis, stomach problems, back problems); and previous diagnosis of mental health conditions (anxiety disorders, depression, bipolar disorder, schizophrenia).

Procedures

Study recruitment flyers were posted in various areas within the CFHC. Interested women participated in the informed consent process with trained research assistants in the clinic waiting room. Next, research participants participated in the informed consent process and subsequently completed the self-report assessment measures (which took approximately 15 minutes) administered by trained research assistants. Each of the research participants received \$5.00 as an incentive for study participation. No further contact was made with the research participant.

Data analysis plan

Data analyses were carried out through the use of the Statistical Package for the Social Sciences.⁵⁷ Basic descriptive statistics such as mean, standard deviation, standard error of the mean, range, proportion and 95% confidence intervals were used to describe continuous and/or nominal or categorical variables. Pearson product-moment correlation analysis was performed to determine significant relationships between depressive symptoms, resilience and demographic/background variables. Binary logistic regression analysis was used to identify significant associations of depressive symptoms (categorized as yes-PHQ-9 scores 5 or no-PHQ-9 scores 4). Finally, Cronbach's alpha reliability coefficients will be generated for each of the assessment tools in order to determine their psychometric applicability for the target population under investigation.

Results

Assessment measures

Demographic/background factors—Among the 290 AAW in the sample the mean age reported was around 42 years with reported ages ranging from 18 to 82. Approximately 42% had never been married and over three-quarters of the women reported household incomes

ranging from under \$5,000 to \$49,999. Almost half of the women were high school graduates (24.1%) or completed some college (21.7%). More than half of the women reported being employed (56.4%) and having private insurance (58.3%). Additional demographic information is provided in Table 1.

Diagnosed health and mental health conditions—Table 2 presents the distribution of diagnosed health and mental health conditions reported by study participants. Overall, the women reported being diagnosed with an average of 1.67 (SD = 2.46) health or mental health conditions. As shown (Figure 1) high blood pressure was the most frequently reported diagnosed illness (42.8%, $n = 123$), followed by back problems (21.1%, $n = 61$), arthritis (20.5%, $n = 59$), and diabetes (15.6%, $n = 45$). Depression (16.7%, $n = 48$) was the most frequently reported diagnosed mental illness.

Depressive symptoms—The PHQ-9 had good internal consistency (9 items; $\alpha = .87$). A mean PHQ-9 score of 5.84 (SD = 5.62; range = 0–25) was observed among study participants. Half of the women reported some level of depressive symptoms, with 20% reporting moderate to severe depressive symptoms (31% reported mild depressive symptoms, 9% moderate depressive symptoms, 7% moderately severe depressive symptoms, and 3% severe depressive symptoms).

Resilience—The modified CD-RISC scale showed excellent reliability with the sample (36 items; $\alpha = .96$). The average modified CD-RISC score was 110.64 (SD = 24.64), with scores ranging from 4–144. Most of the women in the sample (76%) reported high levels of resilience.

Correlation of variables

Tables 3 and 4 present correlations between depressive symptoms and resilience and select demographic variables, as well as diagnosed health and mental health conditions. Depressive symptoms have a strong inverse association with resilience ($r = -.589$, $p = .01$), a strong positive association with a diagnosed mental health disorder ($r = .458$, $p = .01$), and a weak positive association with having at least one health condition ($r = .201$, $p = .01$). Resilience has a weak positive association with education level ($r = .201$, $p = .01$), a weak negative association with health insurance coverage ($r = -.246$, $p = .01$), a moderate negative association with a diagnosed mental health disorder ($r = -.391$, $p = .01$), and a weak negative association with at least one diagnosed health condition ($r = -.198$, $p = .01$).

Associations with depressive symptoms

Binary logistic regression analyses (Table 5) indicated that three associations explained 41% of the variance ($R = .41$, $F(3, 204) = 46.74$, $p < .01$). Resilience was found to be the strongest association of depressive symptoms, with a significant inverse association ($\beta = -.47$, $p < .01$). Being diagnosed with a mental health condition ($\beta = .26$, $p < .01$) and unemployment status ($\beta = .11$, $p < .05$) had significant positive associations in predicting of depressive symptoms. Results also suggest that resilience may serve as a buffer for depressive symptoms.

Discussion

This exploratory investigation yielded important information about depressive symptoms and resilience among adult AAW; and our research hypothesis is supported. Depressive symptoms were prevalent among adult AAW in a primary health care center; since 50% of research participants indicated that they experienced some level (mild, moderate, severe) of depressive symptoms.

The majority of research participants (98%) had moderate to high resilience, which emerged as a potential buffer for depressive symptoms among this sample of AAW. High levels of resilience may support some degree of protection from the severity of overall depressive symptoms; however, the experience and consequences of isolated depressive symptoms may not be protected and may increase AAW's propensity for a depressive episode.

Low resilience and high depressive symptoms were associated with unemployment, less than a college education, previous diagnosis of a mental disorder, diagnosis of at least one chronic disease, and lack of health insurance coverage.¹⁵ These bio-psychosocial factors may be characterized as major stressors for AAW which could increase their experience of depressive symptoms and their ability to cope with challenges in a resilient manner.

This study has implications for research, practice, and prevention. One implication is addressing the need for consistent, quality mental health treatment options for this specific population. Clinicians tend to assume that there is a universal psychotherapeutic treatment system that can be applied to all ethnic and racial groups.⁴⁶ Findings from this study can be added to the existing knowledge of this particular field and increase overall knowledge to make findings more generalizable to this specific population and to devise treatment options based on the needs of those reporting. As such, it is recommended that primary care clinicians devote more time into deriving mental health diagnoses and more time in discussion with patients in regards to their respective mental health, which will lead to better interventions and care strategies for those with depressive symptoms; this will contribute to efforts in preventing the increase of severity of these symptoms.

The present study will add to the limited body of research about risk and potential protective factors for depressive symptoms among a community-based primary health care sample of AAW. It may also provide implications for better integration of screening for depressive symptoms, assessment, and support for AAW at risk for depression in a primary care clinic. Additionally, the study identifies bio-psychosocial factors related to depressive symptoms for AAW that may support the development of psycho-educational prevention materials and strategies. A report of the World Health Organization, entitled *The Global Burden of Disease* demonstrated that major depression presents the greatest disease burden for women when compared with several other chronic diseases; women of color reported symptoms of depression as their greatest impairment in functioning.⁵⁸ Depression among African American women (AAW) may be disproportionately under-recognized and under treated.^{59,60,61} Furthermore, due to cultural influences, depression may be exhibited differently among African American women than among others.^{62,63,64,65} When compared with males and women of differing ethnicities, reports indicate that AAW make

approximately three million mental health visits each year; they are also reported to have a higher risk than men of initial episode and onset of depression.^{8,36} Findings from the Summit on Women and Depression convened by the American Psychological Association in 2000 suggested that the examination of genetic factors, sex hormones, life stress and trauma, interpersonal relationships, and cognitive styles may provide greater insight into contributors to depression for women.⁶⁶

Study limitations

Despite many strengths, this study has several limitations including (1) a moderately small sample size, (2) use of a convenience sample, (3) use of self-report assessment measures, and (4) use of a cross-sectional design which does not allow for the determination of antecedent-consequence relationship(s). These issues may affect the external validity of the study, specifically concerning the generalizability of the findings that were ascertained.

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Notes

1. Strine TW, Kroenke K, Dhingra S, et al. The association between depression, health related quality of life, social support, life satisfaction, and disability in community-dwelling US adults. *J Nerv Ment Dis.* 2009 Jan; 197(1):61–64. [PubMed: 19155812]
2. Williams DR, Gonzalez HM, Neighbors H, et al. Prevalence and distribution of major depressive disorder in African Americans, Caribbean blacks, and non-Hispanic whites: Results from the National Survey of American Life. *Arch Gen Psychiatry.* 2007 Mar; 64(3):305–315. [PubMed: 17339519]
3. Hasin DS, Goodwin RD, Stinson FS, et al. Epidemiology of major depressive disorder, results from the National Epidemiologic Survey on Alcoholism and Related Conditions. *Arch Gen Psychiatry.* 2005 Oct; 62(10):1087–1106.
4. Kessler RC, Berglund P, Demler O, et al. The epidemiology of major depressive disorder: results from the National Comorbidity Survey Replication (NCS-R). *JAMA.* 2003 Jun 18; 289(23):3095–3105. [PubMed: 12813115]
5. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders.* 4th ed.. Washington, DC: American Psychiatric Publishing, Inc.; 1994.
6. Substance Abuse and Mental Health Services Administration. *Results from the 2009 National Survey on Drug Use and Health: mental health findings.* Rockville, MD: Center for Behavioral Health Statistics and Quality; 2010.
7. National Institute of Mental Health. *Depression.* (NIH Publication No. 083561). Rockville, MD: National Institute of Health; 2008. Available at: <http://www.nimh.nih.gov/health/publications/depression/complete-index.shtml>.
8. McGrath, E.; Keita, GP.; Strickland, BR., et al. *Women and depression: risk factors and treatment issues.* Washington, DC: American Psychological Association; 1990.
9. Peden AR, Hall LA, Rayens MK, et al. Negative thinking mediates the effect of self-esteem on depressive symptoms in college women. *Nurs Res.* 2000 Jul-Aug;49(4):201–207. [PubMed: 10929691]
10. Carrington CH. Clinical depression in African American women: diagnoses, treatment, and research. *J Clin Psychol.* 2006 Jul; 62(7):779–791. [PubMed: 16703605]

11. Kendler KS, Karkowski LM, Prescott CA. Causal relationship between stressful life events and the onset of major depression. *Am J Psychiatry*. 1999 Jun; 156(6):837–841. [PubMed: 10360120]
12. Chapman DP, Whitfield CL, Felitti VJ, et al. Adverse childhood experiences and the risk of depressive disorders in adulthood. *J Affect Disord*. 2004 Oct 15; 82(2):217–225. [PubMed: 15488250]
13. Hettema JM, Kuhn JW, Prescott CA, et al. The impact of generalized anxiety disorder and stressful life events on risk for major depressive episodes. *Psychol Med*. 2006 Jun; 36(6):789–795. Epub 2006 Mar 6. [PubMed: 16515735]
14. Taylor, SE.; Holden, K. The health status of Black women. In: Braithwaite, RL.; Taylor, SE.; Treadwell, HM., editors. *Health issues in the Black community*. 3rd ed.. San Francisco, CA: Jossey-Bass; 2009.
15. McKnight-Eily LR, Presley-Cantrell L, Elam-Evans LD, et al. Prevalence and correlates of current depressive symptomatology and lifetime diagnosis of depression in Black women. *Womens Health Issues*. 2009 Jul-Aug;19(4):243–252. [PubMed: 19589473]
16. Centers for Disease Control and Prevention (CDC). Family structure and children's health in the United States: findings from the National Health Interview Survey, 2001–2007. Washington, DC: U.S. Department of Health and Human Services, National Center for Health Statistics; 2010. Available at: http://www.cdc.gov/nchs/data/series/sr_10/sr10_246.pdf.
17. Martin, JA.; Hamilton, BE.; Ventura, SJ., et al. 2010 state-level estimates for the percentage of births to unmarried mothers by race/Hispanic origin. Hyattsville, MD: National Center for Health Statistics; 2012.
18. WebMD. Depression health center: untreated depression. WebMD (website). 2013. Available at: <http://www.webmd.com/depression/guide/untreated-depression-effects>.
19. Moussavi S, Chatterji S, Verdes E, et al. Depression, chronic diseases, and decrements in health: results from the World Health Surveys. *Lancet*. 2007 Sep 8; 370(9590):851–858. [PubMed: 17826170]
20. Blatt, SJ. Experiences of depression: theoretical, research and clinical perspectives. Washington, DC: American Psychological Association; 2004.
21. Hammen C, Brennan PA. Depressed adolescents of depressed and non-depressed mothers: tests of an interpersonal impairment hypothesis. *J Consult Clin Psychol*. 2001 Apr; 69(2):284–294. [PubMed: 11393605]
22. Nolen-Hoeksema S, Stice E, Wade E, et al. Reciprocal relations between rumination and bulimic, substance abuse, and depressive symptoms in female adolescents. *J Abnorm Psychol*. 2007 Feb; 116(1):198–207. [PubMed: 17324030]
23. Connor KM, Davidson JR. Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). *Depress Anxiety*. 2003; 18(2):76–82. [PubMed: 12964174]
24. Tusaie K, Dyer J. Resilience: a historical review of the construct. *Holist Nurs Pract*. 2004 Jan-Feb; 18(1):3–10. [PubMed: 14765686]
25. Weisman A, Rosales G, Kymalainen J, et al. Ethnicity, family cohesion, religiosity and general emotional distress in patients with schizophrenia and their relatives. *J Nerv Ment Dis*. 2005 Jun; 193(6):359–368. [PubMed: 15920376]
26. Richardson GE. The metatheory of resilience and resiliency. *J Clin Psychol*. 2002 Mar; 58(3):307–321. [PubMed: 11836712]
27. Kumpfer KL, Bluth B. Parent/child transactional processes predictive of resilience or vulnerability to "substance abuse disorders". *Subst Use Misuse*. 2004 Apr; 39(5):671–698. [PubMed: 15202804]
28. Siqueira LM, Diaz A. Fostering resilience in adolescent females. *Mt Sinai J Med*. 2004 May; 71(3):148–154. [PubMed: 15164126]
29. Aronowitz T. The role of "envisioning the future" in the development of resilience among at-risk youth. *Public Health Nurs*. 2005 May-Jun;22(3):200–208. [PubMed: 15982193]
30. Fergus S, Zimmerman MA. Adolescent resilience: a framework for understanding healthy development in the face of risk. *Annu Rev Public Health*. 2005; 26:399–419. [PubMed: 15760295]

31. Hines AM, Merdinger J, Wyatt P. Former foster youth attending college: resilience and the transition to young adulthood. *Am J Orthopsychiatry*. 2005 Jul; 75(3):381–394. [PubMed: 16060734]
32. Yi JP, Smith RE, Vitaliano PP. Stress-resilience, illness, and coping: a person-focused investigation of young women athletes. *J Behav Med*. 2005 Jun; 28(3):257–265. [PubMed: 16015460]
33. Mental Health America. Depression in women. Alexandria, VA: Mental Health America; 2010. Available at: <http://www.nmha.org/index.cfm?objectid=C7DF952E-1372-4D20-C8A3DDCD5459D07B>.
34. Menke R, Flynn H. Relationships between stigma, depression, and treatment in White and African American primary care patients. *J Nerv Ment Dis*. 2009 Jun; 197(6):407–411. [PubMed: 19525740]
35. Cooper-Patrick L, Powe NR, Jenekes MW, et al. Identification of patient attitudes and preferences regarding treatment of depression. *J Gen Intern Med*. 1997 Jul; 12(7):431–438. [PubMed: 9229282]
36. Alegría M, Chatterji P, Wells K, et al. Disparity in depression treatment among racial and ethnic minority populations in the United States. *Psychiatr Serv*. 2008 Nov; 59(11):1264–1272. [PubMed: 18971402]
37. Pingitore D, Snowden L, Sansome RA, et al. Persons with depressive symptoms and the treatments they receive: a comparison of primary care physicians and psychiatrists. *Int J Psychiatry Med*. 2001; 31(1):41–60. [PubMed: 11529390]
38. Snowden LR. Barriers to effective mental health services for African Americans. *Ment Health Serv Res*. 2001 Dec; 3(4):181–187. [PubMed: 11859964]
39. Borowsky SJ, Rubenstein LV, Meredith LS, et al. Who is at risk of nondetection of mental health problems in primary care? *J Gen Intern Med*. 2000 Jun; 15(6):381–388. [PubMed: 10886472]
40. Cooper LA, Gonzales JJ, Gallo JJ, et al. The acceptability of treatment for depression among African American, Hispanic, and White primary care patients. *Med Care*. 2003 Apr; 41(4):479–489. [PubMed: 12665712]
41. Gallo JJ, Bogner HR, Morales KH, et al. Patient ethnicity and the identification and active management of depression in late life. *Arch Intern Med*. 2005 Sep 26; 165(17):1962–1968. [PubMed: 16186465]
42. Scholle SH, Kelleher K. Preferences for depression advice among low income women. *Matern Child Health J*. 2003 Jun; 7(2):95–102. [PubMed: 12870625]
43. Greenberg GA, Rosenheck RA. Change in mental health service delivery among Blacks, Whites, and Hispanics in the Department of Veteran Affairs. *Adm Policy Ment Health*. 2003 Sep; 31(1):31–43. [PubMed: 14650647]
44. Holden KB, Xanthos C. Disadvantages in mental health care among African Americans. *J Health Care Poor Underserved*. 2009 May; 20(2 Suppl):17–23. [PubMed: 19711490]
45. Shim R, Baltrus P, Bradford D, et al. Characterizing depression and co-morbid medical conditions in African American women in a primary care setting. *J Natl Med Assoc*. (in press).
46. Baker FM, Bell CC. Issues in the psychiatric treatment of African Americans. *Psych Serv*. 1999 Mar; 50(3):362–368.
47. U.S. Department of Health and Human Services. Mental health: culture, race and ethnicity—a supplement to mental health: a report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services; 2001. Available at: <http://health-equity.pitt.edu/866/1/sma-01-3613.pdf>.
48. Ward EC, Clark le O, Heidrich S. African American women's beliefs, coping behaviors, and barriers to seeking mental health services. *Qual Health Res*. 2009 Nov; 19(11):1589–1601. [PubMed: 19843967]
49. Nadeem E, Lange JM, Miranda J. Perceived need for care among low-income immigrant and U.S. born Black and Latina women with depression. *J Womens Health (Larchmt)*. 2009 Mar; 18(3):369–375. [PubMed: 19281320]
50. Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med*. 2001 Sep; 16(9):606–613. [PubMed: 11556941]

51. Mohr DC, Hart SL, Howard I, et al. Barriers to psychotherapy among depressed and nondepressed primary care patients. *Ann Behav Med*. 2006 Dec; 32(3):254–258. [PubMed: 17107299]
52. Huang FY, Chung H, Kroenke K, et al. Using the Patient Health Questionnaire-9 to measure depression among racially and ethnically diverse primary care patients. *J Gen Intern Med*. 2006 Jun; 21(6):546–552.
53. Brown DL. African American resiliency: examining racial socialization and social support as protective factors. *Journal of Black Psychology*. 2008 Feb; 34(1):32–48.
54. Steinhardt MA, Mamerow MM, Brown SA, et al. A resilience intervention in African American adults with type 2 diabetes: a pilot study of efficacy. *Diabetes Educ*. 2009 Mar-Apr;35(2):274–284. [PubMed: 19204102]
55. Campbell-Sills L, Ford DR, Stein MB. Demographic and childhood environmental predictors of resilience in a community sample. *J Psychiatr Res*. 2009 Aug; 43(12):1007–1012. Epub 2009 Mar 4. [PubMed: 19264325]
56. Haddadi P, Besharat MA. Resilience, vulnerability, and mental health. *Procedia-Social and Behavioral Sciences*. 2010; 5:639–642.
57. SPSS Inc. SPSS Statistics for Windows, version-17.0. Chicago, IL: SPSS Inc.; 2008.
58. Murray, CJL.; Lopez, AD., editors. *Global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries, risk factors in 1990 and projected to 2020*. Cambridge, MA: Harvard University Press; 1996.
59. National Alliance on Mental Illness (NAMI). Women and depression fact sheet. Arlington, VA: NAMI; 2008. Available at: http://www.nami.org/Content/NavigationMenu/Mental_Illnesses/Women_and_Depression/womenanddepression.pdf.
60. Levin A. Depression care for Black women may hinge upon cultural factors. *Psych News*. 2008; 43(15):11–40.
61. Bender, E. Depression treatment in Black women must consider social factors. Arlington, VA: Psychiatric News; 2005. Available at: <http://psychnews.psychiatryonline.org/newsarticle.aspx?articleid=109533>.
62. Mental Health America. Depression and African Americans. Alexandria, VA: Mental Health America; 2013. Available at: <http://www.mentalhealthamerica.net/go/information/get-info/depression/depression-and-african-americans>.
63. Safran MA, Mays RA, Huang LN, et al. Federal collaboration on health disparities research. *Am J Public Health*. 2009 Nov; 99(11):1962–1966. [PubMed: 19820213]
64. Wallerstein NB, Duran B. Using community-based participatory research to address health disparities. *Health Promot Pract*. 2006 Jul; 7(3):312–323. Epub 2006 Jun 7. [PubMed: 16760238]
65. Jackson JS, Torres M, Caldwell CH, et al. The National Survey of American Life: a study of racial, ethnic, and cultural influences on mental disorders and mental health. *Int J Methods Psychiatr Res*. 2004; 13(4):196–207. [PubMed: 15719528]
66. Mazure, CM.; Keita, GP.; Blehar, MC. *Summit on women and depression: proceedings and recommendations*. Washington, DC: American Psychological Association; 2002.

Figure 1.
Diagnosed health and mental health conditions.

Table 1

Demographic Profile Of The Sample

Demographic Factors	N	Percent (%)
Age (n = 290)	Mean 41.78 (SD = 5.71)	Range = 18–82
Marital Status (n =290)		
Never Married	122	42.1
Married	76	26.2
Separated	15	5.2
Divorced	53	18.3
Widowed	15	5.2
Co-habitating/Living together	9	3.1
Total Household Income (n =273), \$		
Under 5000	46	16.8
5000–9,999	33	11.4
10,000–14,999	23	8.4
15,000–24,999	22	8.1
25,000–34,999	43	15.8
35,000–49,999	46	16.8
50,000–74,999	36	13.2
75,000–99,999	13	4.8
100,000 and over	11	4.0
Education (n = 290)		
No School	2	.7
Middle or Grade School	6	2.1
Some High School	27	9.3
High School Graduate	70	24.1
Technical or Vocational School	37	12.8
Some College	63	21.7
College Graduate	57	19.7
Post Graduate Degree	28	9.7

Demographic Factors	N	Percent (%)
Health Insurance Coverage (n = 288)		
Private Insurance	168	58.3
Government (Medicaid/Medicare)	114	39.6
Uninsured	7	2.1
Employment (n = 289)		
Employed	163	56.4
Unemployed	48	16.6
Other (homemaker, student, retired, disabled)	78	27.0

Table 2

Diagnosed Health and Mental Health Conditions

Diagnosed Condition	N	Percent (%)
Diabetes	46	15.9
High Blood Pressure	123	42.4
Heart Condition	12	4.1
Arthritis	59	20.3
Depression	48	16.6
Anxiety Disorders	21	7.2
Bipolar Disorders	10	3.4
Schizophrenia	6	2.1
Asthma	39	13.4
Chronic Stomach Problems	17	5.9
Back Problems	61	21.0
Number of Diagnosed Conditions	Mean	SD
Range = 25 (0–25)	1.67	2.441

Table 3

Correlation of Depression and Resilience Scores to Select Demographic Variables

Selected Variables of Interest	PHQ-9	CD-RISC	Marital Status	Education	Insurance
PHQ-9	—				
CD-RISC	-.589**	—			
Marital Status	-.018	.095	—		
Education	-.128*	.201**	.014	—	
Insurance	-.188**	-.246**	.102	-.393**	—
Employment	.115	-.079	.182**	-.232**	.470**

* Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

PHQ-9 = Patient Health Questionnaire

PHQ-9 = Patient Health Questionnaire

Table 4
Correlation of Depression and Resilience Scores to Diagnosed Health and Mental Health Conditions

Selected Variables of Interest	PHQ-9	CD-RISC	Diabetes	HBP	Heart Condition	Mental Health Condition
PHQ-9	—					
CD-RISC	-.589**	—				
Diabetes	.101	-.038	—			
HBP	-.020	.019	.458**	—		
Heart Condition ^a	.049	-.095	.152*	.175**	—	
Mental Health Condition ^b	.458**	-.391**	.040	.126*	.118*	—
At Least One Diagnosed Health Condition	.201**	-.198**	.406**	.430**	.199**	.581**

* Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

^a Includes Heart Attack, Angina, and Heart Failure

^b Includes Depression, Anxiety Disorders, Bipolar Disorders, and Schizophrenia

PHQ-9 = Patient Health Questionnaire

CD-RISC = Connor-Davidson Resilience Scale

Table 5Regression Analysis for Predictors of Depressive Symptoms^a

Constant	20.79** (1.52)
Resilience	-0.11** (0.01)
Diagnosed Mental Health Condition	3.68** (0.84)
Unemployed status	1.674* (0.80)
R-Squared	0.41

* Indicates significance at the p .05 level

** Indicates significance at the p .01 level

^a Standard errors are reported in parentheses