Published in final edited form as:

Int J Geriatr Psychiatry. 2013 September ; 28(9): 903–913. doi:10.1002/gps.3908.

Late-life Depression in Older African Americans: A Comprehensive Review of Epidemiological and Clinical Data

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Abstract

Objective—The population of older African Americans is expected to triple by 2050, highlighting the public health importance of understanding their mental health needs. Despite evidence of the negative impact of late-life depression, less is known of how this disorder affects the lives of older African Americans. Lack of studies focusing on how depression presents in older African Americans and their subsequent treatment needs lead to a gap in epidemiologic and clinical knowledge for this population. In this review, we aim to present a concise report of prevalence, correlates, course, outcomes, symptom recognition, and treatment of depression for these individuals.

Method—We performed a literature review of English-language articles identified from PubMed and Medline published between January 1990 and June 2012. Studies included older adults and contained the key words “geriatric depression in African Americans,” “geriatric depression in Blacks,” and geriatric depression in minorities.”

Results—Although in most studies older African Americans had higher or equivalence prevalence of depression compared to Caucasian Americans, we also found lower rates of recognition of depression and treatment. Many studies reported worse outcomes associated for depression among older African Americans compared older Caucasians.

Conclusions—Serious racial and ethnic disparities persist in the management of older African Americans with depression. Understanding their unmet needs and improving depression care for these individuals is necessary to reduce these disparities.

Keywords

Late-life Depression; Race; African Americans

Introduction

The number of African Americans over age 65 is expected to triple between 2010 and 2050 (DHHS, 2010), underscoring the public health importance of understanding their mental health needs. Depression is associated with increased disability, chronic medical conditions, and stressful life events, while placing significant burden on patients, their communities, the economy, and the healthcare system (Simon et al., 1995, Richardson et al., 2012, Gum et al., 2009). Despite evidence of the impact of depression on older adults generally, less is known about depression in older African Americans. Lack of studies focused on understanding

depression in older African Americans and subsequent treatment needs lead to a gap in epidemiologic and clinical knowledge for this group. In an effort to summarize the current literature, this review provides an overview of depression in older African Americans residing in the United States.

Methods

We performed an ad-hoc electronic search of English-language articles from PubMed and Medline, published between 01/01/1990 and 06/30/2012. This included studies of geriatric patients using the following keywords: “geriatric depression in African Americans,” “geriatric depression in Blacks” and “geriatric depression in minorities.” The search yielded 46 hits. After checking bibliographies for these articles, we chose those that were most relevant to our review, categorized as: prevalence and correlates, clinical course and outcomes, treatment and management, interventions, and research.

Results

Prevalence and Correlates

Prevalence Rates—Racial and ethnic minority older adults experience more psychological distress compared to Caucasians as a result of exposure to and/or experience with chronic stressors such as racism, discrimination, poverty, and violence (DHHS, 2001b). Yet, research on prevalence and symptom profiles of major depression (MDD) among older African Americans is conflicting. Some studies found older Caucasians to have higher depression prevalence rates than African Americans (Blazer et al., 1987, Smallegan, 1989, Woodward et al., 2012, Williams et al., 2007a, Aranda et al., 2011, Steffens et al., 2009), while others reported no significant racial differences (Somervell et al., 1989, Fyffe et al., 2004, Byers et al., 2010).

Major Depressive Disorder: Studies using diagnostic measures (i.e., Structured Clinical Interview for DSM-IV, the World Mental Health Composite International Diagnostic Interview) to assess MDD in community dwelling older adults found variations in prevalence. Data from the *National Survey of American Life* (NSAL) determined the 12-month (2.4%) and lifetime prevalence (5.8%) rates in older African Americans (Ford et al., 2007). The Aging, Demographics, and Memory Study (ADAMS), which examined prevalence of MDD and minor depression among older Americans born before 1954, (Steffens et al., 2009) reported that Caucasians and Hispanics had three times greater prevalence than African Americans. However, there was no significant difference in prevalence of MDD among older homecare patients (Fyffe et al., 2004).

Clinically Depressive Symptoms: Studies using the Center for Epidemiologic Studies Depression Scale (CES-D, 16) as the primary assessment measure, reported a range of prevalence rates for clinically significant depressive symptoms. Some researchers reported rates as high as 12.8%, while others reported between 5.4%–10.4% for older African Americans (Murrell et al., 1983, Blazer et al., 1998, Williams et al., 2007a, Woodward et al., 2012). Reported estimates among clinical samples of older African Americans have ranged from 6%–33% (Baker et al., 1995, Baker, 1995, Aranda et al., 2011), while rates within ambulatory care centers were 27.2%–30.0% (Rosenthal et al., 1987, Agarwal et al., 2010).

Subsyndromal Depression: Few studies have examined racial differences at various levels of depression severity (Charney et al., 2003). Cohen and colleagues investigated differences in syndromal and subsyndromal depression among racially diverse older urban elders. There was no significant difference in syndromal depression between Blacks (African American

and African Caribbean; 8%) and Caucasians (10%), but the difference in subsyndromal prevalence (13% vs. 28%, respectively) was significant (Cohen et al., 2005b). Factors associated with subsyndromal depressive symptoms among older African Americans were female gender, higher educational attainment, absence of French African Caribbean ethnicity, higher acute stress levels, weaker belief that religion can ameliorate mental illness, and greater use of antidepressants. Another study of subthreshold depression among older adults in congregate housing (N = 166; 22.9% African Americans, 77.1% Caucasians) reported primary risk factors of lower educational attainment, African American race, experiencing grief, and loneliness (Adams and Moon, 2009).

Correlates—Evidence from community samples suggested that older African Americans with multiple health concerns and functional impairments were at greater risk of reporting depressive symptoms (Sriwattanakomen et al., 2010). Additional correlates of depression among this group included female gender, single marital status, limited social support, chronic medical conditions, polypharmacy, frailty, a poor ego, and exposure to stress (Husaini, 1997, Okwumabua et al., 1997, Jang et al., 2008, Mills and Henretta, 2001, George and Lynch, 2003, Robison et al., 2009).

There were significant correlations between both socioeconomic status (SES) and educational attainment with depression among older African Americans (Jang et al., 2008). African Americans with lower SES had significantly higher rates of depressive symptoms compared to Caucasians, however after controlling for SES across all racial and age groups, there was no significant difference (Biafora, 1995). Similarly, a study examining demographic correlates of depressive symptoms among older African Americans and African Caribbean Americans found that participants with higher educational attainment and income reported fewer depressive symptoms compared to those with lower education and SES (Lincoln et al., 2010). Geographic location was also a correlate for older African Americans (Lincoln et al., 2010), with residents from the West reporting greater symptoms than those from the South. Regional differences may be related to greater religious involvement in Southerners (Taylor, 2004).

Age was a moderator for late-life depression in African Americans. Among “young old” African Americans (generally older than age 85), there was a stronger association between functional disability and depressive symptoms. African Americans over 75 were less likely to have a lifetime mood disorder than those ages 65–74 (Ford et al., 2007). Differences between the young-old and old-old could be attributed to a “healthy survivor effect” (Strauss et al., 2004), meaning that individuals without mental disorders are more likely to live to an older age. They could also be attributed to a cohort effect, which suggests that survivors of the racial segregation and inequality era may have greater psychological resources that protect against adverse mental health outcomes (Mills and Edwards, 2002).

Comorbid Medical Conditions—The rate of functional impairment and chronic illnesses increased with age, placing older adults at greater risk for depression (Djernes et al., 1998, Valvanne et al., 1996, Mezuk et al., 2011). Conversely, depressive symptoms contributed to increasing disability, worsening physical illnesses, greater risk of developing additional medical conditions, and mortality (Cole and Dendukuri, 2003, Unutzer, 2002). These relationships were observed among older African Americans. In cancer patients, researchers reported depression prevalence (27.2%), determined by the Geriatric Depression Scale, was exceptionally high compared to other documented rates among older African Americans. Risk factors associated with depression in this sample included being aged 50–64, unemployment, lack of health insurance, living alone, and multiple symptoms associated with cancer or its treatment (Agarwal et al., 2010).

Older African Americans with comorbid physical illnesses such as diabetes and cardiovascular disease had a higher rate of clinically significant depressive symptoms (21.1%) compared to healthier community-dwelling African Americans (8–17%) (Miller et al., 2004, George and Lynch, 2003). Yet, when compared to Caucasians, older African Americans with greater functional impairments had significantly lower levels of depressive symptoms (Cummings et al., 2003). The investigators attributed this to greater religious involvement among African Americans. Jang and colleagues found depressive symptoms were strongly correlated with chronic medical conditions and functional disability for older African American women compared to men (Jang et al., 2008), suggesting that African American women may have greater vulnerability to depressive symptoms in the presence of comorbid chronic illness.

Clinical Course and Outcomes

Clinical Course—The course of untreated depression in older African Americans was often poor. In a prospective study examining functional decline (Lenze et al., 2005), older African Americans were more persistently depressed compared to Caucasians. When predictors of depression over time were investigated, (Husaini, 1997) older Caucasians had greater depressive symptoms at baseline compared to African Americans. However, at 18-month follow-up, African Americans had higher rates of depressive symptoms. Older African Americans (Odd Ratio (OR) = 1.55; $P < 0.01$) had a significantly higher rate of recurrent MDD compared to Caucasians, demonstrating their higher chronicity of MDD (Gonzalez et al., 2010). In a study of the course of depressive symptoms among middle-aged and older Americans, older African Americans and Hispanic Americans had increased occurrence of elevated depressive symptoms and more fluctuations in depression course compared to Caucasians (Liang et al., 2011). Among African Americans given an appropriate depression diagnosis, symptoms were more persistent and debilitating than in Caucasians (Breslau et al., 2005).

Clinical Outcomes—There have been five variables found in community-dwelling older adults that have consistently been associated with depression outcomes: age, external locus of control, chronic somatic illness, baseline depression, and functional status (Licht-Strunk et al., 2007). Additional factors associated with depression include previous psychopathology, dysfunctional personality traits, poor coping strategies, stressful life events, low income, limited social support network, and female gender (Barry et al., 2008, Cole et al., 1999, Cole and Dendukuri, 2003), however none of these studies identified factors associated with depression outcomes specifically for older African Americans. In general, the most adverse outcomes associated with untreated depression included increased all-cause mortality, suicide, coronary heart disease, increased physical health problems, and functional disability (Unutzer et al., 2002, Ganguli et al., 2002, Wulsin and Singal, 2003, Simon and VonKorff, 1995).

Treatment and Management

Mental Health vs. Primary Care—African Americans, compared to Caucasians, were more likely to receive mental health services within primary care than in outpatient psychiatry (Cooper-Patrick et al., 1999, Gallo et al., 1995, Snowden and Pingitore, 2002). Primary care, therefore, presents the best opportunity for older African Americans to be treated for depression (DHHS, 2001b). There were no significant differences among primary care providers' assessment, diagnosis, or treatment of depression in ethnic and minority patients (Kales et al., 2005a), however, there was a difference in the prescribing patterns of physicians who were foreign medical graduates and those not board certified. These physicians were also more likely to prescribe older antidepressants (i.e. tricyclic

antidepressants) which may have more adverse effects for older adults (Kales et al., 2005b, Kales et al., 2006).

Older African American patients with positive CES-D scores (≥ 16) were less likely than Caucasians to be identified as depressed by primary care physicians (OR=0.40; 95% Confidence Interval (CI) =0.25–0.63)(Gallo et al., 2005). Older African Americans with depression were also less likely to receive active treatment within 6 months of observation (OR=0.63; 95% CI=0.19–2.16). After adjusting for patient characteristics, the association between ethnicity and identification of depressive symptoms remained significant. Similar findings were reported for older community-dwelling African Americans (Akincigil et al., 2012). Other studies reported that older African Americans received less depression care within the primary care setting (Unützer et al., 2003), and had significantly less retention in depression treatment than Caucasians (Fortuna et al., 2010).

Primary care physicians with less training in mental health assessment were found to have more difficulty recognizing depressive symptoms in older African Americans (Brown et al., 1996). STAR*D (Sequenced Treatment Alternatives to Relieve Depression) investigators reported that older age, African American race, and treatment within primary care were all risk factors for having a longer depressive episodes (Gilmer et al., 2008). These concerns are problematic for older African Americans who rely on primary care providers for mental health treatment. Older African American primary care patients also expressed a greater desire for their physicians to understand their culture compared to Caucasian patients (Jimenez et al., 2012).

In general, African Americans received services in mental health settings at about half the rate of Caucasians (Lasser et al., 2002). They had significantly less access to depression care and received inadequate treatment for depression compared to Caucasians (Alegria et al., 2008). They also had outpatient mental health visits of shorter duration than Caucasians (Olfson M, 2009). There were differences among older African Americans with depression who were and were not receiving treatment in mental health settings. Those with psychiatric treatment were more likely to be younger, female, have a family history of mental illness, and have more impairment in daily functioning. They were less likely to have social supports that provided advice, consult spiritualists, or have persistent depressive symptoms (Cohen et al., 2005a). Kales and colleagues demonstrated that psychiatrists were just as likely to diagnosis depression in older African Americans as they would Caucasians (Kales et al., 2005a). There were no significant differences in recommendations for depression management; however location of medical school training did have influence over diagnosis and treatment of patients of differing races.

Other service settings—Treatment of older African Americans varied according to the treatment setting. They had better response to medications than Caucasians on psychiatric inpatient units because they either delayed treatment or were treated less aggressively prior to hospitalization (Zubenko et al., 1994). Older African Americans nursing home residents were less likely to receive an antidepressant and/or psychotherapy than Caucasians (Adjusted Odds Ratios (AOR) = 0.79, $p < 0.05$) (Siegel et al., 2012). Older Caucasians within home healthcare had greater odds of receiving an antidepressant medication than older African Americans (AOR=2.75; 95% CI=1.67–4.57) (Pickett et al., 2012).

Antidepressant Medications—Higher depressive symptom severity was associated with greater use of antidepressants in older Caucasians, but not in African Americans (Gonzalez et al., 2008). Multiple studies have shown the rate of antidepressant use in older African Americans was about half that of Caucasians (Gonzalez et al., 2008, Grunebaum et al., 2008, Fyffe et al., 2004, Weissman et al., 2011a, Pickett et al., 2012). African Americans

had the lowest expenditures from antidepressant drugs (Chen and Rizzo, 2008) compared to other races, and were more likely to use older, generic medications (Chen and Rizzo, 2008, Weissman et al., 2011b, Ayalon et al., 2005). Compared to older Caucasian veterans, African American with subsyndromal depression were less likely to view antidepressant medication as beneficial (Kasckow et al., 2011).

Of African Americans that actually took antidepressant medication, there was no difference in their rate of response compared to Caucasians (Lesser et al., 2010). Studies, however, have reported a reduction in adherence rates to antidepressants in older African Americans (Ayalon et al., 2005, Bogner and de Vries, 2010). Among individuals with intentional nonadherence, there were concerns about adverse medication effects, stigma associated with taking antidepressants, and belief that antidepressants are less important than other medications. Unintentional nonadherence was associated with greater cognitive impairment (Ayalon et al., 2005).

Psychotherapy—Older adults sometimes showed preference for psychotherapy or counseling (Unützer et al., 2003). The rate of visits for talk therapy, counseling, or psychotherapy in African Americans was less than that of Caucasians in both primary care and mental health settings (Lasser et al., 2002). Joo and colleagues demonstrated that older African Americans with minor depression were less likely to participate in interpersonal psychotherapy (IPT) than Caucasians (AOR = 0.22, 95% CI = 0.06–0.80), but there was no racial association with IPT in those with MDD (Joo et al., 2010).

African Americans had impediments to participation in counseling, such as skepticism about developing a caring relationship with the counselor and a greater reluctance to seek referrals from personal (friends and family) sources (Joo et al., 2011), however evidence suggested that there were no racial differences in older adults regarding the attitude toward counseling or psychotherapy (Kasckow et al., 2011). Alvidrez and colleagues saw favorable responses in older African Americans who received psychoeducation about psychotherapy prior to treatment. They also found an increase in attendance to these sessions over a 3-month period (Alvidrez et al., 2005).

Role of Spirituality—Faith and spirituality played a vital role in depression risk, course, and treatment in older African Americans (Jimenez et al., 2012). Attending religious services regularly significantly reduced the odds of a lifetime mood disorder (AOR = 0.74, 95% CI = 0.59 – 0.92) (Chatters et al., 2008). African Americans were more reliant on religion or religious counsel to help improve their mood because of skepticism of biological agents (Givens et al., 2007). African Americans felt it was important to address and incorporate their faith practices into the depression treatment plan (Wittink et al., 2009). The role of clergy as a mental health provider was unclear given their varied levels of training and background, but most were thought to act as gatekeepers to mental health services (Taylor et al., 2000). Although many clergy were able to recognize symptoms in their congregants, they had a wide range of expertise in counseling for depression (Stansbury et al., 2009), and were found to be an important source of referral for older African Americans.

Interventions

There were a number of collaborative depression care management models that showed overall effectiveness in the treatment of depression (Gilbody et al., 2006, Neumeyer-Gromen et al., 2004, Williams et al., 2007b), but effectiveness for older African Americans were mixed. The Improving Mood-Promoting Access to Collaborative Treatment (IMPACT) study was a multisite, randomized controlled trial (RCT) that compared a collaborative care model of depression treatment in primary care centers to usual care.

Areán and colleagues found that older African Americans receiving collaborative depression care at 12-months had significantly greater rates of treatment by medication and psychotherapy than those receiving usual care. They also had lower depression severity and functional impairment than controls (Areán et al., 2005). The Prevention of Suicide in Primary Care Elderly: Collaborative Trial (PROSPECT) intervention effectively reduced suicide ideation and depressive symptoms in older primary care patients (Bruce et al., 2004, Alexopoulos et al., 2009), however at 2-year follow up, the intensity of the depression care management received by the older minority patients was 60–70% of Caucasians (Bao et al., 2011). The Primary Care Research in Substance Abuse and Mental Health for the Elderly (PRISME) study showed that older minority primary care patients were more likely to access mental health services in a collaborative care model (Bartels et al., 2004, Ayalon et al., 2007), but at 6-month follow-up minorities failed to show clinically significant improvement in depressive symptoms (Areán et al., 2008).

Research

Older African Americans have traditionally been under-represented in mental health research (DHHS, 2001a). African Americans were largely ignored in census data for mental illness until the 1930's when poor African Americans started to receive treatment in public settings and were included in research reports (Warheit et al., 1975). Prior to that time, African Americans largely received inadequate or no medical/mental health services at all. Decreased participation in mental health research and lack of effective recruitment strategies for African Americans remain significant concerns.

Bistricky and colleagues observed that older African Americans were less likely to be recruited into research studies through mental health sources than through non-mental health sources. This discrepancy is probably due to a lack of help-seeking in mental health settings by this demographic group (Bistricky et al., 2010). Recruitment of older African Americans was increased using a consumer-centered approach, which included building relationship with gate-keepers within the community who gained the trust of participants. The trust and buy-in of the gatekeepers were developed prior to recruitment (Shellman and Mokel, 2010). The use of African American research staff was also a useful recruitment approach. Oversampling also addressed issues of disparities, sample size and retention (Williams, 2000), allowing for greater generalizability and sufficient power to examine within-group differences. Non-comparative studies provided a better understand the nature of depression among older African Americans as a specific racial group (González et al., 2010, Lincoln et al., 2010).

Discussion

Disparities in severity and chronicity of depression, symptom recognition, and treatment of older African Americans in the United States have all been well documented. There, however, remains a paucity of studies that explain the reasons for these differences and how best to address them. Therefore, more extensive efforts to include older African Americans in late-life depression research are needed. The older African American population in the United States is expected to increase in the coming decades, placing a greater importance on the need to address their mental health concerns.

It is important to mention some of the limitations in conducting research in older African Americans. Recruitment and retention should be addressed at the onset of designing any study that includes older minorities. Epidemiological studies aimed at more accurately estimating lifetime depression prevalence should take into account the effect of survival mortality, but this will probably be less of a consideration given that the effects should be uniform across racial groups. Geriatric researcher should also consider the potential for

underrepresentation of older African Americans in skilled nursing facilities, correctional facilities, and adult care/supported living facilities.

Conclusion

The purpose of this review was to synthesize data from existing literature on older African Americans with depression and to highlight related public health concerns. In doing so, we hope to have raised awareness of the need to better understand the reasons for such poor outcomes for depression care for this group. We also hope to stimulate further discussion of better ways of providing depression care that is meaningful and acceptable to older African Americans.

Acknowledgments

Supported by funds from NIMH T32 MH073553.

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Table 1

Prevalence and Correlates of Late-life Depression for African Americans

Study	Sample	Prevalence	Correlates (Higher rates)
Major Depressive Disorder			
National Survey of American Life (NSAL) (Ford et al., 2007)	N= 837 African Americans Nationally representative sample/Community Age 55	DSM-IV World Mental Health Composite International Diagnostic Interview (WMH-CIDI) Lifetime: <ul style="list-style-type: none"> Any mood disorder: 6.33% MDD: 5.81% Dysthymia: 1.37% Specific 12-month disorder: <ul style="list-style-type: none"> Anymood disorder: 2.50% MDD: 2.44% Dysthymia: 1.08% 	<ul style="list-style-type: none"> Young-old (age 55–64) Lower educational attainment Geographic region (i.e., West and Northeast)
Health and Retirement Study - Aging, Demographics, and Memory Study (ADAMS) (Steffens et al., 2009)	N= 851 (Whites: 87%; African-American: 7.6%; Hispanics: 5%) Age 71 Nationally representative sample/Community	Composite International Diagnostic Interview-Short Form (CIDI-SF) <ul style="list-style-type: none"> Probable depression: 4.12% 	<ul style="list-style-type: none"> White Hispanic ethnicity Pain Dementia diagnosis
(Fyffe et al., 2004)	N= 514 (Whites: 89%; Blacks: 11%) Home-Care Setting Age 65	SCID Diagnosis <ul style="list-style-type: none"> MDD: 10.7% Hamilton Rating for Depression, Geriatric Depression Scale Gateway symptoms Depressed Mood: 12.5% Anhedonia: 8.9%	
Clinically Depressive Symptoms			
Piedmont Health Survey (ECA-Duke) (Blazer et al., 1987)	N = 1,304 (White: 64%; Non-White: 36%) Community-dwelling in South Age 60 Black Depressed Elderly: 138/349 (39.5%)	DIS/DSM-III <ul style="list-style-type: none"> Dysphoria : 99/244 Symptomatic Depression : 24/52 Depression/Anxiety :8/16 Major Depression :2/10 Dysthymia: 5/27 	<ul style="list-style-type: none"> White Female Lower SES

Study	Sample	Prevalence	Correlates (Higher rates)
(Smallegan, 1989)	N= 181 (Whites: 52%; Blacks: 48%) Age 65 Community-dwelling	Hopkins Symptom Checklist Geriatric Depression Scale <ul style="list-style-type: none"> Dysphoria : 14/181 Mild Depression: 73/181 	<ul style="list-style-type: none"> Caucasian Lower SES
ECA Study (Somervell et al., 1989)	N = 16,436 5 Communities in US. Community-dwelling Age:18 and older For Age 65 Blacks: N=907 Whites: N= 4338	DIS/DSM-III <ul style="list-style-type: none"> 6-month prevalence of MDD among older Blacks: 7.6% Lifetime prevalence of MDD: 10.6% 	<ul style="list-style-type: none"> Caucasian Men Younger Age (18–24)
(Baker et al., 1995)	N= 66 African Americans Medical clinic Age: 50	CES-D/DSM-III-R Checklist <ul style="list-style-type: none"> Depressive Symptoms :32% Probable MDD: 11% 	<ul style="list-style-type: none"> Medical Comorbidity
(Murrell et al., 1983)	N= 2517 (Blacks: 6%; Whites: 90.5%) Community-dwelling Age 55	CES-D <ul style="list-style-type: none"> Depressive Symptoms: 12.8% (Male) and 23.4% (Female) 	<ul style="list-style-type: none"> Female Medical Comorbidity
Epidemiologic Studies of the Elderly (EPPESE) (Blazer et al., 1998)	N= 3401 (African Americans: 54%, Whites: 46%) Age 65	CES-D <ul style="list-style-type: none"> Depressive Symptoms: 9.5% 	
(Rosenthal et al., 1987)	N=123 Adult Outpatient Setting	Beck Depression Inventory, Zung Self-Rating Depression Scale <ul style="list-style-type: none"> Depressive symptoms: 21–38% 	
Subsyndromal Depression			
(Cohen et al., 2005)	N= 1074 (Blacks =80%, Whites: 19.9%) Age 55 Community-dwelling	CES-D <ul style="list-style-type: none"> Syndromal: 8% Subsyndromal: 13% 	<ul style="list-style-type: none"> Whites Subsyndromal –African American and English-speaking Caribbean
(Adams and Moon, 2009)	N = 166 (African American 22.9%; Whites: 77.1%) Age 65	Mini International Neuropsychiatric Interview (MINI); GDS <ul style="list-style-type: none"> Subthreshold Depression: N=13/46 	<ul style="list-style-type: none"> Less education Lower SES African American Grief Social loneliness

Table 2
Outcomes of Late-Life Depression Intervention Research for African Americans

Study	Sample	Depression Criteria	Intervention	Outcomes
IMPACT (Arean et al., 2005)	Prospective, randomized sample of patients from 18 primary care clinics in 5 states; aged 60+; (Total N=1748, AA N=222)	Structured Clinical Interview for DSM-IV (SCID) for diagnosis; Hopkins Symptom Checklist (HSC)-20 for depression severity	Collaborative care model using a depression clinical specialist within primary care.	<ul style="list-style-type: none"> Improved rates of depression care and depression severity in minorities in CC over controls (64%, 95% confidence interval [CI] 55–72 versus 45%, CI 36–55, $P=0.003$ for antidepressant medication; 37%, CI 28–47 versus 13%, CI 6–19, $P=0.002$ for psychotherapy; mean = 0.9, CI 0.8–1.1 versus mean = 1.4, CI 1.3–1.5, $P<0.001$ for depression severity, range 0–4) Blacks specifically used more psychotherapy and had less depression severity than controls at 12 months.
PROSPECT (Bao et al., 2011)	Retrospective analysis of a randomized sample of patients from 20 primary care sites in 2 states; aged 60+; (N=396 with N=134 minorities)	Hamilton Depression Rating Scale	Collaborative Depression Care Management within primary care	<ul style="list-style-type: none"> The intervention provided greater long-term benefit to whites compared to blacks, resulting in 4.0 pps less in African American patients compared with in non-Hispanic white patients (95% CI, 0.2 to 7.4 pps). At 24 months, minority intervention patients lagged behind white patients in antidepressant use (about 45% vs. 55%).
PRISM-E (Ayalon et al., 2007)	Prospective randomized sample of patients from 1 of 10 primary care sites; aged 65+; (N=183 with 49% African American)	Center of Epidemiological Studies Depression Scale (CES-D)	Integrated model of mental health and substance abuse services within primary care sites compared to enhanced referral methods within designated mental health centers.	<ul style="list-style-type: none"> Blacks in integrated care had more MH/SA visits and a shorter time to initiate the visit than those with enhanced referral
(Areán et al., 2008)	Retrospective data analysis of patients from 10 primary care sites; aged 65+; (N=2022 with 24.8% African American) over 6 months	Center of Epidemiological Studies Depression Scale (CES-D)	Integrated model of mental health and substance abuse services within primary care sites compared to enhanced referral methods within designated mental health centers.	<ul style="list-style-type: none"> Older minorities failed to show clinically significant improvement in symptoms or physical functioning at 6 months in either the integrated model group or the enhanced referral group.
TRIAD (Bruce et al., 2007)	Prospective randomized sample of newly enrolled patients from 3 home healthcare sites; aged 65+; (N=256 with 10.3% minority)	SCID Gateway symptoms (mood and anhedonia)	Training home healthcare nurses in the assessment and appropriate referral of depression.	<ul style="list-style-type: none"> No reduction in racial disparities in associated with recognition of depression in older homebound adults.