



Differences in psychosocial factors of mental health in an ethnically diverse Black adult population

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Abstract

We conducted a cross-sectional analysis in a convenient sample of Black adults in the United States ($n=269$, ages 18–65) from diverse ethnic backgrounds (African-Americans, African immigrants, Afro-Caribbean immigrants). We examined mean differences in self-reported medical mistrust, use of mental health services, depression symptom severity, mental health knowledge and stigma behavior (or a desire for separation away from people living with a mental illness) according to ethnicity, citizenship status, age group, and gender. African Americans with moderate to severe depression symptoms had greater stigma behavior (mean=12.2, SD=3.2) than African Americans who screened in the minimal to mild depression range (mean=13.1, SD=3.5). Across the spectrum of depression, immigrants showed greater stigma than African Americans ($p=0.037$). This is a pilot study that explores heterogeneity in the Black population in depression symptom severity and psychosocial factors related to mental health. Understanding these differences may contribute to how we approach needs and health system practices and policies at the individual, systemic, and structural level of mental health care.

Keywords Mental health · Black adults · Social factors · Immigrants · African Americans

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Key messages

- Black people are not a monolithic group with homogenous psychosocial experiences.
- Black adults show differences in psychosocial factors and depression symptoms severity across the study cohort.
- A public health and public policy approach that considers the heterogeneity of the mental health needs and experiences of the population is likely to contribute to improved health system experiences.

Introduction

Studies that assess the mental health needs and psychosocial factors of Black people focus on comparisons across race with non-Hispanic white people; few consider the diversity within the Black population [1, 2]. The very few studies that do address the diversity within the Black population in the United States have focused predominantly on differences between African Americans and Afro-Caribbean immigrants, leaving out African immigrants [2–4]. The few studies that address differences within the Black population highlight differences in mental health outcomes (such as prevalence of depression) [2, 5], but do not report on differences in psychosocial factors such as medical mistrust related to mental health care or differences in depression disease severity. This is an exploratory study of the differences in psychosocial factors of mental health. In this study, psychosocial factors related to mental health refers to mental health literacy (such as mental health knowledge), and barriers to engagement in mental health services (such as stigma behavior, medical mistrust, and willingness to use mental health services) across socio-demographic characteristics (such as age, ethnicity, education, migration status, and gender) of study participants [6–8]. We also report on differences in depression disease severity across demographic factors [6–8].

Mental health knowledge refers to awareness on how to manage mental health conditions and the recognition of mental illness conditions [9]. Stigma behavior in mental health refers to separation from or a desire for separation or social distancing away from individuals who are considered to possess perceived stigmatizing characteristics (such as a mental illness) [10, 11]. Stigma can be held by both those who are stigmatized and those who perpetuate stigma. Stigma behavior may be directed towards one self (internalized stigma) or directed towards others (public or social stigma) [12]. This study focuses on social stigma (as a desire for social distance away from persons with a mental illness) for both those with or without a mental health condition. Medical mistrust refers to the belief that an entity is working against one's best interest and wellbeing, and stems from historical and present day social and economic inequities [13, 14]. Understanding



variations in these psychosocial factors and behaviors (such as stigma behavior, medical mistrust, willingness to use mental health services) may help in addressing mental health needs by taking into account the heterogeneity in the Black population. Variations within the Black adult population around psychosocial factors that affect mental health care engagement remain unclear and understudied [2, 3, 15].

A previous study by Williams and colleagues, a National Survey of American Life, showed that prevalence of Major Depressive Disorder (MDD) varied across race and ethnicity and laid a foundation for the importance of understanding the heterogeneity within the Black population [2]. While differences in MDD prevalence is relevant clinically, there remains a gap in the literature across differences in psychosocial factors that impact mental health care engagement. One study reported differences in severity of depression based on gender and migrant status for African immigrants; the authors found that second generation immigrants had lower depression among men compared to first generation immigrants [16]. Saasa and colleagues' study showed African male immigrants used mental health services less frequently than African female immigrants [17]. Most studies, however, relied largely on qualitative methods and the sample in Saasa and colleagues' study was predominantly female [17]. Psychosocial factors such as stigma behavior, the burden of medical mistrust, and stress related to racism are known contributors to psychological distress and depression symptoms for Black people [18]. Medical mistrust is a broad concept that includes a rational response to historic and current racism and injustice within healthcare systems [13, 19–21]. Medical mistrust and experiences of racism in health systems may contribute to delay in seeking mental health services and challenges of assessing depression and other mental illnesses among Black people. Medical mistrust of health systems and experiences of racism may lead to underreporting of mental illness symptoms for Black people [20, 21]. Most quantitative studies that address mistrust typically focus on African Americans and non-Hispanic or mixed raced individuals, or conflate mistrust with interpersonal distrust [21].

Considering past studies on these psychosocial factors that affect mental health care engagement, we conducted an exploratory descriptive study aiming to contribute to the literature by further exploring differences in depression symptom severity across ethnicity and other demographic factors as well as differences among Black adults across psychosocial factors. These include factors related to mental health knowledge, stigma behavior, willingness to use mental health services, and medical mistrust.

Methods

Procedure, participants, study design, and setting

The National Center for Advancing Translational Sciences (NCATS) and National Institute of Mental Health (NIMH) provided funding. We used convenience sampling to collect survey data. The survey included several domains including a



demographic questionnaire, assessment of mental health knowledge, self-report of willingness to use mental health services, medical mistrust, mental health stigma behavior, and depression symptoms. In this manuscript, we report on the diversity across African Americans and Black immigrants based on descriptive analysis of the data collected. The study participants were offered \$25 compensation for their time.

We recruited in partnership with community-based organizations (World Relief Chicago, the United African Organization, Refugee One) using online flyers and posters on social media (email, twitter and Facebook platforms). The eligibility criteria included the following: (1) identifying as Black, African American, African, or Afro-Caribbean; (2) aged 18–65; (3) currently residing in the United States; and (4) English speaking. Each participant completed an informed consent form prior to participation in study activities. A total of 296 Black adults responded to advertisement and 269 completed the full survey (90.9% completion rate).

Ethical review

We collected data after we obtained approval by the Institutional Review Board at Northwestern University (IRB ID #: STU00213136).

Measures

We collected self-report data using an online cross-sectional survey from Black adults ($n = 269$) residing in the United States during the COVID-19 pandemic from September 2020 to October 2020. Participants included Black adults who self-identified as African American, African immigrant, and Afro-Caribbean immigrant. We used validated and standardized instruments [9, 11, 22–24] and a demographic questionnaire.

Demographic Questionnaire contained information on age, gender, race, ethnicity, marital status, education, employment status, income, insurance status, birthplace, and residency status (length of stay in the United States (US)).

Mental Health Knowledge Schedule (MAKS) [9]: We used the first of two sections to assess general mental health knowledge based on six questions about knowledge, about help-seeking, recognition of illness, support methods, employment, treatment, and recovery related to mental illness. We scored these six items on an ordinal scale (1 to 5), with higher total scores representing greater knowledge. We then added each item together to generate a total score for MAKS. We reviewed differences in mental health knowledge among participants based on these six items. The overall test–retest reliability was moderate to substantial (0.71). The Cronbach’s alpha overall internal consistency for items 1 to 6 was 0.65 (moderate) [9]. The second section reviews specific knowledge about common mental health conditions (including depression, stress, schizophrenia, bipolar disorder, drug addiction, grief). Given our interest in general mental health knowledge, we only used the first section.

Reported and Intended Behavior Scale (RIBS) [11]: This measures reported social distance from people with a mental health problem in the past, current, and



future time; we used it to measure stigma behavior (desire for social distance). The RIBS measures intended future stigma behavior as a continuous variable, based on a total score across four questions with high scores representing less stigmatizing behavior. Responses to the stigma behavior measure include four items measured on a Likert scale (*agree strongly* to *disagree strongly* and the option to answer *don't know*). Each question begins with “in the future,” I would be willing to ‘live,’ ‘work,’ ‘be a neighbor to,’ or ‘have a close friendship’ *with someone with a mental health problem*. Numbers were assigned to each of the statements about agreement going from 1 to 5 with lower scores indicating higher levels of stigma. Scores for each of the four items were then summed to create a total score for RIBS. The Cronbach’s alpha was 0.85 for the subscale on stigma behavior. Overall test–retest reliability was 0.75 [11].

The General Help-Seeking Questionnaire (GHSQ) [25]: The GHSQ assesses intentions to seek help from several sources (family, friends, and mental health providers, among others) and for different problems (general personal/emotional problem and specifically help-seeking for suicidal ideation). The survey questions are phrased as: (1) “if you were having a personal or emotional problem, how likely is it that you would seek help from the following people?” (2) “If you were experiencing suicidal thoughts, how likely is it that you would seek help from the following people?” In this study, we focused specifically on the questions related to seeking help from a mental health professional in the event of a personal emotional problem and in the event of suicide ideation.) The measure includes items on a 7-point scale, which were assigned numeric values (from *1-extremely unlikely* to *7-extremely likely*) in reference to intentions to seek help from a mental health professional (the survey includes examples of mental health professional: “psychologist, social worker, counselor”). Hence higher scores indicate a higher probability of seeking care from a mental health professional in the event of 1. A personal or emotional problem and 2. Suicidal thoughts (a more specific psychiatric symptom). The Cronbach’s alpha for the overall scale is 0.85.

The depression screening questionnaire, patient health questionnaire (PHQ-9): This is a 9-item screening measure for depression. The questionnaire includes questions such as: “over the last 2 weeks, how often have you been bothered by the following problems?” Problems include “poor appetite, trouble falling or staying asleep,” among others. The score ranges from 0 to 27 with each of the 9 items scored from 0 (*not at all*) to 3 (*nearly every day*); higher scores represent greater symptoms of depression [24]. We used two different categorization for PHQ-9. When exploring demographic variables associations with depression symptoms, we categorized participants into these depression categories: minimal (0–4), mild (5–9), moderate (10–14), moderate to severe (15–19), and severe (20–27). When exploring the interaction between ethnicity and depression, we categorized participants as having low depression if their PHQ-9 score was defined as low depression and if their score was between 0 and 9 and high depression if their score was between 10 and 27.

The group based medical mistrust scale (GBMMS) [22]: This is a 12-item scale to assess mistrust of mainstream health care systems and health care professionals by respondents’ ethnic or racial group. We scored responses on a Likert scale (*1-strongly disagree* to *5-strongly agree*). Responses to each of the 12 items were



then averaged in order to generate an average medical mistrust score [22]. Sample statements include: “people of my ethnic group cannot trust doctors, people from my ethnic group should not confide in health care workers because it will be used against them, and I have personally been treated poorly or unfairly by doctors or health care workers because of my ethnicity.”

Data analysis

We provided summaries of depression severity, medical mistrust and mean outcomes in mental health knowledge, stigma behavior, and self-reported willingness to use mental health services for personal or emotional problems and suicidal ideation across to age, gender, marital status, education, and income, insurance, ethnicity, length of time in the US, birthplace and citizenship status.

We calculated mean values and corresponding standard deviations and compared mental health knowledge, stigma behavior, help-seeking behaviors scores according to ethnicity, and whether the participants had low (< 10) or high depression scores (> 10). We examined self-reported depression scores and medical mistrust scores by ethnicity, citizenship, age, and gender. We calculated p -values for differences in mean scores using ANOVA and Chi-square for categorical variables. All analysis was performed using SAS version 9.3 (SAS Institute).

Results

The demographic summary of the sample along with the general population data for age, gender, and ethnicity based on the United States census bureau report and the Pew research center data [26–28] are shown in Table 1. Among 269 participants, 59.8% were 34 or younger; 57.2% were males; 63.9% reported being married; 32.3% had no college education; 55.4% reported having public health insurance (or insurance supported by government funding); and 43.1% reported a personal income less than \$30,000 USD. Participants identified as African American (75.46%), African immigrant (19.33%), and Afro-Caribbean immigrant (4.83%). More than half of the participants (56.88%) reported living in the United States for more than 10 years and most (76.21%) participants had United States citizenship.

Table 2 describes the distribution of mental health knowledge based on MAKS scores, intended future stigma behavior based on RIBS scores, and willingness to use mental health services based on GHSQ scores. There were no differences in examined scores except for a score related to stigma behavior where higher social distance scores on the RIBS represent less stigmatizing behavior ($p=0.036$), indicating disproportionately lower score for Black immigrants as compared to African Americans. African Americans who scored in the moderate to severe depression range had, on average, lower social distance scores (higher stigma) (mean=12.2, SD=3.2), hence greater stigma than African Americans who scored minimal to mild depression (mean=13.1, SD=3.5). Black immigrants across the spectrum of depression scores had greater stigma behavior than African Americans. African



Table 1 Descriptive demographic summary among 269 participants and overall census information

	<i>n</i>	%	Population census data
Age			
18–34	161	59.85	37.8%
35–65	108	40.15	62.1%
Gender			
Male	154	57.25	49.2%
Female	115	42.75	50.8%
Marital status			
Married	172	63.94	
Unmarried, living with a romantic partner	45	16.73	
Never married	29	10.78	
Separated	7	2.60	
Divorced	15	5.58	
Widowed	1	0.37	
Education			
Less than high school	5	1.86	
High school diploma/GED	44	16.36	
Trade school/vocational school	38	14.13	
Some college, no degree	91	33.83	
2 year college	44	16.36	
4-year college degree	40	14.87	
Master's degree	4	1.49	
Doctoral degree	3	1.12	
Income			
\$9,999 or less	15	5.58	
\$10,000 to \$29,999	101	37.55	
\$30,000 to \$49,999	119	44.24	
\$50,000 or more	34	12.64	
Insurance			
None	60	22.30	
Public Insurance	149	55.39	
Private	60	22.30	
Ethnicity			
African	52	19.33	20%
Afro-Caribbean	13	4.83	
African American	203	75.46	80%
Other	1	0.37	
How long in US?			
Less than 2 years	6	2.23	
2 to 5 years	37	13.75	
6 to 10 years	73	27.14	
More than 10 years	154	56.88	



Table 1 (continued)

	<i>n</i>	%	Population census data
Citizenship status			
Citizen	205	76.21	
Non-citizen	64	23.79	

Americans with lower depression scores had the least amount of stigma across all four groups.

We compared depression symptom severity by gender: males reported experiencing mild depression (score: 5–9) 1.7 times more than females; females were 1.2 times and 4.7 times more often reported moderate to severe depression (score: 10–19), and severe depression (score: 20–27) compared to males ($p=0.021$) (see Table 3).

We found that non-United States citizens reported higher medical mistrust (mean value difference = 0.16) compared to United States citizens ($p=0.011$) and no difference in medical mistrust across ethnicity, age, education, and gender (see Table 4).

Discussion

This study addresses an understudied area in the mental health research literature; while exploratory, it helps illustrate the presence of heterogeneity in the cohort of Black participants. Public health initiatives often take an approach that assumes the needs and experiences of the Black population are similar or homogenous. Understanding heterogeneity in socio-demographic factors across several psychosocial factors may contribute to a more in depth assessment of social factors and needs among Black people [2, 29, 30]. Several studies in the literature consider differences in gender and differences across racial groups (white–Black differences), and we use our understanding of these differences to inform our approach to assessing risk factors, screening in health settings and improving health outcomes. For example, we understand that depression is more common in women than in men, and this helps inform our clinical screening practices based on gender as a risk factor for depressive disorders within our health systems [31, 32]. In this study, we found differences within the Black population in areas that are not often studied such as difference within the Black population in medical mistrust and depression severity. We considered socio-demographic factors that are not often taken into account when providing mental health care to Black people or assessing risk factors, such as migration status and ethnicity. While this is an exploratory pilot study, we identified areas that may be further pursued in understanding the heterogeneity within the Black population, possibly informing differences in public health needs and public policy recommendations.



Table 2 Distribution of averages of mental health knowledge, stigma behavior, willingness to seek help from mental health professional for personal and emotional problem and willingness to seek help from a mental health professional for suicidal ideation among 269 participants

Ethnicity and depression symptom scores	Mental health knowledge		Stigma behavior		Mental health service use for personal problems		Mental health service use for suicidal ideation	
	Average	SD	Average	SD	Average	SD	Average	SD
African American—high depression, <i>n</i> = 145	17.2	3.8	12.2	3.2	3.1	1.5	2.9	1.5
African American—low depression, <i>n</i> = 58	16.5	3.7	13.1	3.5	3.3	1.4	3.1	1.4
Black immigrant—high depression, <i>n</i> = 34	17.5	2.9	11.4	2.5	3.1	1.6	3.0	1.8
Black immigrant—low depression, <i>n</i> = 32	15.8	2.0	11.4	3.4	2.8	1.5	3.2	1.4

p-values for differences in mean scores using ANOVA and Chi-square for categorical variables. We defined Low depression as minimal to mild depression (0–9) and high depression as moderate to severe and severe depression (10–27). Statistically significant values ($p < 0.05$)*



Table 3 Self-reported depression symptom status by ethnicity, citizenship, age group, and gender among 269 participants

	Minimal	Mild	Moderate	Moderate to severe	Severe	Total	<i>p</i> -value
African American*							
Black immigrants	7 (10.61)	18 (27.27)	34 (51.52)	7 (10.61)	0 (0.00)	66	0.085
African American Citizen	18 (8.87)	27 (13.3)	118 (58.13)	31 (15.27)	9 (4.42)	203	
Age							
< 35	10 (6.21)	29 (18.01)	89 (55.28)	25 (15.53)	8 (4.97)	161	0.081
> 34	15 (13.89)	16 (14.81)	63 (58.33)	13 (12.04)	1 (0.93)	108	
Gender							
Male	19 (12.34)	31 (20.13)	82 (53.25)	20 (12.99)	2 (1.3)	154	0.021*
Female	6 (5.22)	14 (12.17)	70 (60.87)	18 (15.65)	7 (6.09)	115	
Total	25	45	152	38	9	269	

Number and percent reported depression symptom scores as: low 0–4, mild 5–9, moderate 10–14, moderate to severe 15–19, severe 20–27. P-values for differences in mean scores were calculated using ANOVA and Chi-square for categorical variables. Statistically significant values ($p < 0.05$)

Table 4 Self-reported medical mistrust score by ethnicity, citizenship status, age category, education, and gender

	Mean*	SD	Min	Max	<i>p</i> -value
Ethnicity					
Black immigrant	2.87	0.46	1.67	3.83	0.108
African American	2.97	0.43	2.08	4.67	
Citizen					
Yes	2.91	0.44	1.67	4.67	0.011*
No	3.07	0.43	2.00	3.83	
Age category					
< 35	2.92	0.41	1.92	3.83	0.206
> 34	2.99	0.49	1.67	4.67	
Education					
High school or less	3.00	0.41	2.00	3.83	0.366
Some college or more	2.92	0.46	1.67	4.67	
Gender					
Male	2.95	0.47	1.92	3.83	0.856
Female	2.94	0.41	1.67	4.67	

Higher scores indicate greater mistrust. P-values for differences in mean scores using ANOVA and Chi-square for categorical variables. Statistically significant values ($p < 0.05$)



In our study, rather than looking at differences in depression prevalence, we explored differences between male and females across different levels of depression severity (minimal, mild, moderate, moderate–severe, and severe). Males reported experiencing mild depression more than females; females more often reported by several fold severe depression compared to males. One study proposes that our current depression measurement methods may not adequately capture culturally relevant depression symptoms such as the burden and experience of social pressures among Black males [33]. Another previous study suggests Black females may have higher prevalence of depression due to hormonal changes in early life and through mid-life [34]; one possibility in this study for higher levels of depression severity in Black females is delay in help-seeking behavior. In addition, Black females are known to experience caregiver burden at a high rate [35].

Our study highlights the critical need to consider the multiple identities (such as ethnicity) among Black adults in addressing needs and mental health system experiences [2, 36, 37]. We found variations across ethnicity in this cohort. Specifically, African Americans reported twice the level of moderate to severe depressive symptoms compared to Black immigrants, whereas Black immigrants reported twice the level of minimal to mild depressive symptoms. Previous studies are more general in using prevalence data [2, 30], reporting on overall outcomes rather than differences in symptom severity. Male adults may have reported lower levels of severe depressive symptoms due to factors such as fear of being perceived as weak, or fears that they may be misunderstood or be less socially desirable [33, 38].

African Americans report marginally higher mistrust than Black immigrants; those who were not United States citizens reported higher mistrust than US citizens. It is possible that the variations in mistrust across ethnicity and citizenship may be influenced by the generational understanding of the history of racism in the United States [19–21]. Mistrust is not the opposite of trust and is an adaptive response to historic and contemporary injustices [21]. Differences in ethnicity for level of mistrust may be connected to how African Americans and Black immigrants may perceive historical and contemporary narratives in different ways. African Americans who have lived in the United States for several generations may perceive racism and medical mistrust differently than Black immigrants [39]. Variations in ethnicity, citizenship, age, and gender in experiences of medical mistrust could be indicative of the ways in which addressing mental health needs in a homogenous manner in the Black community leads to missing how various identities impact mental health experiences. For example, among non-United States citizens, stress of migration and acculturation may lead to greater mistrust of mainstream health systems [40, 41]. Previous studies reveal age and generational status to have influenced interpretation of discriminatory experiences [42, 43], and our study highlights the differences in medical mistrust based on specific characteristics among Black adults.

African Americans with higher levels of depressive symptoms reported greater stigma behavior (or desire for social distance away from people who have a mental illness) than African Americans with lower depressive symptoms. Black immigrants reported higher levels of stigma behavior than African Americans. Stigma behavior contributes to psychological distress, is a fundamental cause of health inequities, and is a known barrier to accessing mental health services; and it is critical to address



stigma [6, 10, 44], especially for those suffering more severe illness and the adverse effects of delay in seeking treatment. Our study shows there are variations in stigma behavior across ethnicity and illness severity in this sample. It will be important for health care professionals to consider these variations in their clinical encounters and assessments. In order to better understand health system experiences and Black adult mental health needs, this population should not be treated as a monolithic group.

Study limitations

This exploratory study uses a cross-sectional design that prevents causal analysis. We assessed the differences in self-reported mental health indicators using a convenient sample of 269 adults; as a result, we cannot generalize the findings in this sample to the general population. In future studies, quota sampling, rather than convenience sampling, would ensure the sample is representative of the general population. While our sample is moderately large, a larger sample size would have allowed us to assess differences in stratified categories—for example, differences in depression severity for a comparison between older, male, migrants compared to older, female, migrants. We conducted our study during the COVID-19 pandemic where a dual set of pressures, the pandemic of COVID-19 and racism, may have influenced the severity of depressive symptoms for Black females who experienced a high burden of the COVID-19 pandemic as essential workers [45]. As a descriptive study, we sought to show mean differences across demographic characteristics and depression severity; future studies would benefit from assessing objective behavior (such as actual use of mental health services within health system records).

Conclusion

In our health systems, Black people are often seen as homogeneous, and this results in clinical care and public health initiatives that may assume similarities and over-generalize needs in the population across psychosocial factors such as stigma behavior, medical mistrust, mental health knowledge and in mental health services. This assumption of homogeneity in the population may result in unmet mental health needs and, therefore, poor mental health system experiences. We lay a foundation for the need to consider variations across depression symptom severity and psychosocial factors related to mental health. Understanding the differences across psychosocial factors may improve our clinical practices and help us further explore and identify potential risk factors for depression in Black adults (such as migration status or ethnicity). We propose a more nuanced lens in research and clinical care for Black patients, as we seek to meet mental health needs at the individual, systemic, and structural level of mental health care. Ongoing research in this area will contribute to closing the public health gaps experienced by Black adults within our current mental health systems that tend to pay little attention to the variations in psychosocial factors in the population.



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Declarations

Conflict of interest The other authors have no conflict of interest to disclose.

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