



Research paper

Help-seeking at the intersection of race and age: Perceived need and treatment access for depression in the United States

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ARTICLE INFO

Keywords:

Help-seeking
Depression
Perceived need
Treatment access
Unmet need
Race and ethnicity
Age

ABSTRACT

Race/ethnicity and age are well-documented factors that influence help-seeking variables for adults with depression, yet the intersection of race/ethnicity and age on help-seeking is less known. The present study examined the intersection of race/ethnicity (comparing racial minority groups to White adults) and age on perceived need, treatment access, and unmet need for mental health services among adults with a past-year major depressive episode ($N = 35,033$) using data from the 2010–2019 waves of the National Survey on Drug Use and Health. After controlling for age, Black ($OR = 0.50$), Hispanic ($OR = 0.50$), Pacific Islander ($OR = 0.23$), and Asian ($OR = 0.39$) respondents had lower odds of perceiving need ($p's < .001$); Black ($OR = 0.62$), Asian ($OR = 0.62$), Hispanic ($OR = 0.77$), and multiracial respondents ($OR = 0.75$) had lower odds of accessing treatment ($p's < .05$); and Black ($OR = 1.38$) and Hispanic ($OR = 1.19$) respondents had higher odds of reporting an unmet need ($p's < .05$). After controlling for race, younger and older adults had lower odds of perceiving a need ($p's < .05$) compared to middle-aged adults. Younger adults had lower odds of accessing treatment and higher odds of experiencing an unmet need ($p's < .001$). An interaction revealed that Black adults were less likely to perceive need than White adults ($p < .001$), and this gap was especially large among younger members of both groups ($p = .020$). These results extend previous research by highlighting the intersection of race/ethnicity and age on help-seeking, with implications for culturally competent and age-appropriate interventions, while emphasizing the need for racial/age equity in the mental health care system.

1. Introduction

A large majority of adults in the United States experience mental health problems, with an estimated 21.9 million adults in the U.S. experiencing at least one major depressive episode (MDE) in 2023 (Substance Abuse and Mental Health Services Administration [SAMHSA], 2024). However, most people with mental illness remain either untreated or inadequately treated (Thornicroft, 2007; Wang et al., 2005). Recent data shows that approximately one-third (33.3 %) of adults in the U.S. who experienced a MDE in 2023 received no treatment (SAMHSA, 2024). From 2015 to 2020, there were widespread increases in depression accompanied by a widening of the already prominent treatment gap (Goodwin et al., 2022). Closing this treatment gap is a major priority for the mental health field (Kazdin, 2023).

Critically, this treatment gap is patterned along the lines of race/ethnicity (Mongelli et al., 2020) and age (National Institute of Mental Health, 2023). The racial-based disparities are effectively reflected in

racial and ethnic minorities perceiving less need, specifically among Black, Asian American, and Hispanic individuals (Breslau et al., 2017; Green et al., 2020; Prins et al., 2008; Villatoro et al., 2018). In addition, Black, Asian, Hispanic, and Latinx individuals tend to access mental health services less (Alegría et al., 2008; Harris et al., 2005; Lee et al., 2014), and Black, Latinx, Hispanic, and Asian individuals have higher levels of unmet need (Kim et al., 2017; U.S. Department of Health and Human Services [HHS], 2001; HHS, 2014; Wells et al., 2001). Moreover, help-seeking and mental health service use of younger adults relative to older adults greatly varies (Mojtabai, 2009). The literature has found that older adults perceive less need (Codony et al., 2009; Klap et al., 2003; Mackenzie et al., 2010; Prins et al., 2008) and are less likely to access treatment (Choi et al., 2014; Conner et al., 2010; Karlin et al., 2008; Urbanoski et al., 2017), in addition to variability in the literature regarding unmet needs of younger and older adults (Tran and Ponce, 2017; Mojtabai, 2009). However, despite these well-documented discrepancies, there is a dearth of research attempting to address the

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<https://doi.org/10.1016/j.jad.2025.119428>

Received 6 October 2024; Received in revised form 9 May 2025; Accepted 16 May 2025

Available online 19 May 2025

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potential intersection of race/ethnicity and age on perceived need for mental health services, treatment access, and unmet need.

1.1. Help-seeking processes

Several studies have been proposed to illustrate the process of how individuals seek and use mental health services. Prominent models describe three main stages of help-seeking. First, an individual must recognize that they have a mental health problem (Stage 1: Problem Recognition). Second, the individual decides whether to seek mental health services (Stage 2: Decision to Seek Help). Lastly, if the individual chooses to seek services, they'll decide what kind of services they'll select and subsequently use (Stage 3: Service Selection and Utilization) (Gurin et al., 1960; Veroff et al., 1981). A pivotal model developed by Andersen known as the Behavioral Model of Health Service Use suggests that people's use of health services is a function of their predisposing characteristics to use services (e.g., demographic and social structure), factors that enable or impede use (e.g., health insurance, income, education), and their need for care, both perceived and as evaluated by professional assessments (Andersen, 1995; Andersen and Newman, 1973). Various models of accessing services tend to follow the same general process of perceiving a need, then successfully accessing and using those services despite potential barriers. Andersen's model articulates specific variables that can be measured to assess help-seeking processes. This study will focus on the intersection of race/ethnicity and age and its effect on three of these variables: perceived need for services (among individuals who experience depressive episodes), treatment access (among those who perceive need), and unmet need (among those who perceive need).

1.2. Perceived need

Perceiving a need for mental health services is a crucial part of the help-seeking process. Previous studies have found that the perceived need for mental health care is a significant predictor of mental health service use (Andrade et al., 2014; Bonabi et al., 2016; Mojtabai et al., 2011). Additionally, research shows that perceived need varies across race/ethnicity and age. Differences in levels of perceived need have contributed to racial and ethnic discrepancies in service utilization (Green et al., 2020; Prins et al., 2008; Villatoro et al., 2018), where racial/ethnic minority groups report a lower perceived need relative to Whites (Breslau et al., 2017), specifically among Black, Asian American, and Hispanic individuals. Extensive research has also shown that older adults are less likely to perceive a need for mental health treatment compared to younger adults, even when controlling for depressive symptoms (Codony et al., 2009; Klap et al., 2003; Prins et al., 2008). While the literature consistently finds that perceived need patterns are conditional on both race/ethnicity and age (Prins et al., 2008; Villatoro et al., 2018), the way that age-based differences in perceived need may vary across racial and ethnic groups (and vice versa) is less clear.

1.3. Treatment access

According to the 2023 National Survey on Drug Use and Health (NSDUH), 66.6 % of adults with a past-year MDE received treatment for depression in the past-year, a percentage that remained consistent with the findings from the NSDUH conducted from 2009 through 2019 (SAMHSA, 2024). However, treatment access discrepancies also exist based on various demographic and sociocultural variables. It is well documented that among those who suffer from mental health problems, racial and ethnic minorities are more likely to underutilize mental health services and receive inadequate care (Alegria et al., 2008). In particular, previous studies have found persistent trends that Black, Asian, Hispanic, and Latinx individuals report less access to mental health care compared to non-Hispanic White individuals (Augsberger et al., 2015; Cook et al., 2017; Villamil Grest et al., 2022; Le Meyer et al.,

2009). Research suggests that some racial and ethnic groups, such as Hispanic and American Indian/Alaska Native individuals, face a greater magnitude of disparities in treatment access compared to others (Kaur et al., 2023). Despite increasing rates of mental health treatment use, research shows that there have been no reductions in racial and ethnic disparities in access to mental health care from 2004 to 2012 (Cook et al., 2017). Additionally, research has been conducted on the differences in age groups with regard to treatment access. The literature shows that older adults are less likely to use mental health services relative to younger adults, even when controlling for depressive symptoms (Karlin et al., 2008; Urbanoski et al., 2017). Despite the substantial amount of research demonstrating these well-recorded differences, little is known about the intersection of race/ethnicity and age as it pertains to treatment access. This research might inform the development and implementation of both culturally competent and age-appropriate interventions tailored to streamline treatment access efforts and reduce barriers for specific groups of all racial/ethnic groups across the lifespan.

1.4. Unmet need

Whether or not individuals access some treatment, they may still perceive unmet need, perhaps because they receive inconsistent or inadequate treatment. Mojtabai (2009) found that a large percentage of participants with MDE reported an unmet need for mental health treatment, whether they received treatment or not. Previous research on minority mental health reported that racial and ethnic minorities, Black, Latinx, Hispanic, and Asian individuals in particular, have significantly higher levels of unmet need for mental health care (HHS, 2001; HHS, 2014; Kim et al., 2017; Wells et al., 2001). Furthermore, there is a discrepancy between the reported levels of unmet need between younger and older adults. Prior studies found that younger adults perceive a higher level of unmet need (Fleury et al., 2016; Mojtabai, 2009; Nelson & Park, 2006; Urbanoski et al., 2017); however, some studies have found the opposite: that older adults perceive higher levels of unmet need (Tran and Ponce, 2017; Starkes et al., 2005). While previous research has consistently found that unmet need patterns are conditional on both race/ethnicity and age, how age-based differences in unmet need may vary across racial and ethnic groups (and vice versa) is less clear.

1.5. The present study

It is clear that perceived need, treatment access, and perceptions of unmet need vary considerably between different age groups and racial/ethnic groups. Although there is a moderate amount of research on the topics of perceived need, treatment access, and unmet need for mental health care across age and racial/ethnic groups, relatively little research has investigated the interaction of age and race/ethnicity on these variables. The results of this study may help inform policies aimed at reducing racial and age disparities in mental health care by making treatment more accessible, relevant based on intersecting identities, and allocated to underserved populations. The aim of this study is to assess the intersection of race/ethnicity and age on the perceived need for mental health services among adults who had a major depressive episode in the past year. The study has three primary research questions:

1. What is the effect of race/ethnicity (comparing racial minority groups to White non-Hispanic adults) and age on the perceived need for mental health services among adults who experienced a past-year depressive episode?
2. What is the effect of race/ethnicity (comparing racial minority groups to White non-Hispanic adults) and age on treatment access among those who experienced a past-year depressive episode and perceive need?
3. What is the effect of race/ethnicity (comparing racial minority groups to White non-Hispanic adults) and age on unmet need among

those who experienced a past-year depressive episode and perceive need?

2. Method

All methods were pre-registered at <https://osf.io/sxkyd/>. Where final methods diverged from the pre-registered plan, this is stated explicitly below.

2.1. Participants and procedures

This study utilizes data from the 2010–2019 waves of the National Survey on Drug Use and Health (NSDUH, (U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, n. d)). The NSDUH is a cross-sectional, nationally representative survey of the United States noninstitutionalized civilian population aged 12 and older. The Substance Abuse and Mental Health Services Administration (SAMHSA) conducts the NSDUH annually to collect data on the use of drugs, alcohol, tobacco, mental health, and other health-related issues among the general population. Surveys were administered through computer-assisted interviewing, conducted by an interviewer, and audio computer-assisted self-interviewing. Data were weighted to the United States population by SAMHSA. Our sample (N = 35,033) was limited to individuals aged 18 and older who have had a major depressive episode in the past year. We initially pre-registered the utilization of data from 2015 to 2019, but ultimately decided to expand to 2010–2019 to give us the statistical power to analyze our research questions. Data from 2020 to 2021 were excluded due to the exceptional circumstances of the COVID-19 pandemic, which may limit their generalizability. While 2022–2023 data is available, SAMHSA explicitly recommends against combining these data with data from 2020 or prior for methodological reasons.

The sample includes 23,540 (67.2 %) White non-Hispanic participants, 3315 (9.5 %) Black or African American non-Hispanic participants, 507 (1.4 %) Native American or Alaska Native non-Hispanic participants, 137 (0.4 %) Native Hawaiian or Other Pacific Islander non-Hispanic participants, 1039 (3.0 %) Asian non-Hispanic participants, 1666 (4.8 %) participants with more than one race non-Hispanic, and 4829 (13.8 %) Hispanic participants. Of these participants, 16,608 (47.4 %) were 18–25 years of age, 6453 (18.4 %) were 26–34 years of age, 7851 (22.4 %) were 35–49 years of age, 3178 (9.1 %) were 50–64 years of age, and 943 (2.7 %) were 65+ years of age. Table 1 shows the characteristics of the study sample and distribution of participants across age ranges by race/ethnicity.

2.2. Assessments and measures

2.2.1. Demographics

Focal demographic characteristics include race/ethnicity and age. Respondents self-identified their race and ethnicity, which was coded into one of seven racial/ethnic groups, including Hispanic, White non-Hispanic, Black or African American non-Hispanic, Native American or Alaska Native non-Hispanic, Native Hawaiian or Other Pacific Islander non-Hispanic, Asian non-Hispanic, and more than one race non-Hispanic. Respondents were asked if they were of Hispanic, Latino, or Spanish origin, with a “yes” response prompting them to specify all applicable groups. They were then asked to select all racial categories (e. g., Asian) that applied to them, specifying further groups (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or Other Asian). Respondents self-reported their age. For the purpose of descriptive statistics, age was analyzed in the ordinal categories of 18–25, 26–34, 35–49, 50–64, and 65+. For the purpose of logistic regressions, age was treated as a continuous predictor, where 18–25 was coded as 1, 26–34 was coded as 2, 35–49 was coded as 3, 50–64 was coded as 4, and 65+ was coded as 5.

Table 1
Sample characteristics.

Variable	n	Percent
Race/Ethnicity		
White non-Hispanic	23,540	67.2 %
Black or African American non-Hispanic	3315	9.5 %
Native American or Alaska Native non-Hispanic	507	1.4 %
Native Hawaiian or Other Pacific Islander non-Hispanic	137	0.4 %
Asian non-Hispanic	1039	3.0 %
More than one race non-Hispanic	1666	4.8 %
Hispanic	4829	13.8 %
Age		
18–25	16,608	47.4 %
26–34	6453	18.4 %
35–49	7851	22.4 %
50–64	3178	9.1 %
65+	943	2.7 %
Race x age		
White non-Hispanic 18–25	10,386	29.65 %
White non-Hispanic 26–34	4357	12.44 %
White non-Hispanic 35–49	5603	15.99 %
White non-Hispanic 50–64	2422	6.91 %
White non-Hispanic 65+	772	2.20 %
Black or African American non-Hispanic 18–25	1553	4.43 %
Black or African American non-Hispanic 26–34	626	1.79 %
Black or African American non-Hispanic 35–49	794	2.27 %
Black or African American non-Hispanic 50–64	290	0.83 %
Black or African American non-Hispanic 65+	52	0.15 %
Native American or Alaska Native non-Hispanic 18–25	208	0.59 %
Native American or Alaska Native non-Hispanic 26–34	102	0.29 %
Native American or Alaska Native non-Hispanic 35–49	137	0.39 %
Native American or Alaska Native non-Hispanic 50–64	54	0.15 %
Native American or Alaska Native non-Hispanic 65+	<10	0.02 %
Native Hawaiian or Other Pacific Islander non-Hispanic 18–25	66	0.19 %
Native Hawaiian or Other Pacific Islander non-Hispanic 26–34	27	0.08 %
Native Hawaiian or Other Pacific Islander non-Hispanic 35–49	28	0.08 %
Native Hawaiian or Other Pacific Islander non-Hispanic 50–64	12	0.03 %
Native Hawaiian or Other Pacific Islander non-Hispanic 65+	<10	0.01 %
Asian non-Hispanic 18–25	634	1.81 %
Asian non-Hispanic 26–34	210	0.60 %
Asian non-Hispanic 35–49	144	0.41 %
Asian non-Hispanic 50–64	39	0.11 %
Asian non-Hispanic 65+	12	0.03 %
More than one race non-Hispanic 18–25	930	2.65 %
More than one race non-Hispanic 26–34	305	0.87 %
More than one race non-Hispanic 35–49	292	0.83 %
More than one race non-Hispanic 50–64	103	0.29 %
More than one race non-Hispanic 65+	36	0.10 %
Hispanic 18–25	2831	8.08 %
Hispanic 26–34	826	2.36 %
Hispanic 35–49	853	2.43 %
Hispanic 50–64	258	0.74 %
Hispanic 65+	61	0.17 %

2.2.2. Past-year major depressive episode

The NSDUH assessed for MDE symptoms based on the criteria in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition. MDE questions were adapted from the depression section of the National Comorbidity Survey-Replication (NCS-R; Harvard School of Medicine, 2005). Respondents were classified as having past-year MDE if they met the criteria for MDE (experiencing at least five out of the nine criteria for MDE, with at least one of the criteria being depressed mood or loss of interest or pleasure) lasting two weeks or longer in the past 12 months.

2.2.3. Perceived need

Perceived need was derived from two questions: first, whether respondents had received mental health treatment in the past year, and second, whether there was a period in the past 12 months when respondents needed mental health treatment or counseling but didn't receive it. Those that responded “yes” to either of the two questions were classified as having a perceived need.

2.2.4. Treatment access

Treatment access was assessed by inquiring about the receipt of one of three treatment options in the past 12 months: inpatient mental health treatment, outpatient mental health treatment, and/or prescribed medication for mental health issues. Those that answered “yes” to having received any of these three treatments were classified as having accessed treatment.

2.2.5. Unmet need

Unmet need is defined as feeling a perceived need for mental health treatment/counseling that was not received. Someone can access treatment successfully and still report having an unmet need, meaning that this variable is distinct from a lack of treatment access. Respondents answered “yes” or “no” to a single question: “During the past 12 months, was there any time when you needed mental health treatment or counseling for yourself but didn’t get it?” Those that answered “yes” were classified as having an unmet need.

2.3. Analysis

First, we calculated the means, marginal means, and 95 % confidence intervals for perceived need, treatment access, and unmet need by race/ethnicity and age among U.S. adults with a past-year MDE. For treatment access and unmet need, this analysis was limited to adults who perceived need. Then, we conducted a series of logistic regressions predicting each binary outcome for perceived need, treatment access, and unmet need by age group, race/ethnicity, and their interaction. The odds ratios (ORs) with 95 % confidence intervals (CIs) were computed. The following cut-off values were used for the evaluation of the effect sizes: ‘very small’ < 1.44, ‘small’ from 1.44 to <2.48, ‘medium’ from 2.48 to <4.27, and ‘large’ ≤ 4.27 (Cohen, 1988). For perceived need by age, we used a quadratic term for age to better fit the pattern of the data. All analyses used complete cases. A significance level of α < 0.05 was used, where p-values were corrected using the false discovery rate correction (Benjamini and Hochberg, 1995). Lastly, to test whether the interaction term was significant, we performed a Wald chi-squared test¹ and to test whether the model with the interaction term fit the data significantly better than the model without the interaction, we conducted a likelihood ratio test.² All data processing and analysis were conducted in R (R Core Team, 2021) with the “survey” package version 4.4 (Lumley, 2004) using NSDUH-provided weights to reflect population-level characteristics.

Our primary goal was to examine population-level differences across groups exactly as they are, i.e., without adjusting for covariates. Our findings thus reflect real-world disparities, including those driven by structural and socioeconomic factors, which we do not adjust for.

3. Results

3.1. Perceived need

Among American adults reporting a past-year MDE, 68.9 % indicated perceived need (95 % CI: 68.1 %, 69.7 %). Mean levels of perceived need by both race/ethnicity and age are presented in Table 2 and Fig. 1.

3.1.1. Perceived need by race

The first column of Table 5 presents the results from the logistic regression of perceived need by race/ethnicity. After controlling for age, among those who reported having a past-year MDE, Black or African American non-Hispanic (OR = 0.50, 95 % CI: 0.45, 0.56, p_{adj} < 0.001)

¹ For the Wald chi-squared test, we used the function regTermTest(method = “Wald”) in the “survey” package.

² For the likelihood ratio test, we used the built-in function anova(method = “LRT”) using the “anova.svyglm method.”

Table 2

Means, marginal means, and 95 % confidence intervals of perceived need by race and age.

		18–25	26–34	35–49	50–64	65+
		62.9 % (61.9 %)	69.3 % (67.7 %)	71.3 % (69.9 %)	73.3 % (71.3 %)	62.9 % (58.9 %)
		63.9 % (63.3 %)	70.8 % (70.2 %)	72.6 % (72.0 %)	75.2 % (74.6 %)	66.7 % (66.1 %)
White non-Hispanic	73.3 % (72.4 %)	69.2 % (68.0 %)	75.8 % (74.1 %)	75.3 % (73.7 %)	75.2 % (73.1 %)	65.5 % (61.1 %)
Black or African American non-Hispanic	58.0 % (55.5 %)	48.1 % (44.9 %)	50.7 % (45.7 %)	65.6 % (61.2 %)	68.5 % (61.5 %)	42.7 % (27.0 %)
Native American or Alaska Native non-Hispanic	68.4 % (59.6 %)	62.4 % (52.2 %)	74.0 % (59.0 %)	63.5 % (45.3 %)	75.7 % (57.2 %)	49.9 % (9.3 %)
Native Hawaiian or Other Pacific Islander non-Hispanic	38.6 % (24.6 %)	46.1 % (29.9 %)	38.8 % (17.5 %)	40.6 % (18.6 %)	22.2 % (3.2 %)	56.1 % (3.4 %)
Asian non-Hispanic	50.7 % (45.8 %)	49.7 % (44.7 %)	45.8 % (37.0 %)	46.9 % (36.5 %)	67.3 % (46.6 %)	50.6 % (14.2 %)
More than one race non-Hispanic	69.8 % (65.6 %)	66.9 % (62.1 %)	63.7 % (55.5 %)	74.6 % (65.9 %)	79.9 % (68.1 %)	60.3 % (38.7 %)
Hispanic	57.3 % (54.9 %)	52.4 % (49.9 %)	59.3 % (54.5 %)	58.6 % (54.0 %)	62.6 % (54.2 %)	53.8 % (38.2 %)
		59.6 % (55.0 %)	55.0 % (50.4 %)	64.0 % (59.4 %)	63.0 % (58.4 %)	68.6 % (63.9 %)

Note: Marginal Means represent the average value for an age/race category independent of the other variable.

and Hispanic (OR = 0.50, 95 % CI: 0.45, 0.55, p_{adj} < 0.001) respondents had 50 % lower odds of perceiving a need for mental health treatment relative to White non-Hispanic respondents, reflecting small effect sizes. Similarly, Native Hawaiian or Other Pacific Islander non-Hispanic respondents had 77 % lower odds of reporting a perceived need (OR = 0.23, 95 % CI: 0.12, 0.44, p_{adj} < 0.001) and Asian non-Hispanic respondents had 61 % lower odds (OR = 0.39, 95 % CI: 0.31, 0.47, p_{adj} < 0.001), indicating a large and medium effect size, respectively. The results for Native American or Alaska Native non-Hispanic respondents (OR = 0.76, 95 % CI: 0.52, 1.13, p_{adj} = 0.179) and respondents of more than one race non-Hispanic (OR = 0.87, 95 % CI: 0.72, 1.06, p_{adj} = 0.179) did not yield statistically significant differences.

3.1.2. Perceived need by age

In Fig. 1, the relationship between perceived need and age appeared to be curvilinear, as there is an initial increase in perceived need within younger age groups, followed by a subsequent decrease in perceived need within older age groups. This relationship is supported by significant first-order (OR = 1.04, 95 % CI: 1.01, 1.08, p_{adj} = 0.006) and second-order (OR = 0.90, 95 % CI: 0.88, 0.93, p_{adj} < 0.001) regression terms, demonstrating very small effect sizes.

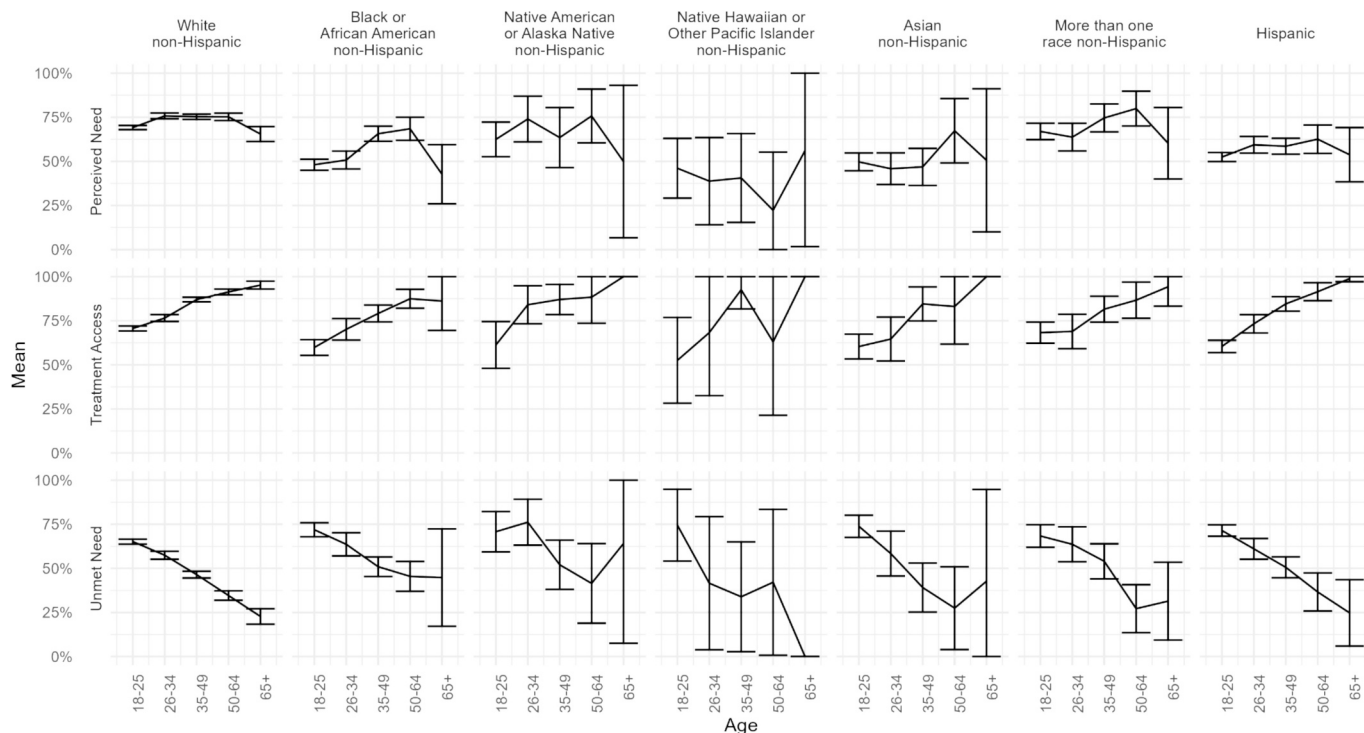


Fig. 1. All outcomes by race and age.

3.1.3. Intersection of race and age on perceived need

The relationship between age and perceived need was significantly different for Black or African American non-Hispanic respondents than for White non-Hispanic respondents. Among Black or African American non-Hispanic, the linear relationship between age and the log-odds of perceived need was stronger ($b = 1.16, p_{adj} = 0.020$), meaning that the positive relationship between age and perceived need was stronger for Black or African American non-Hispanic respondents. This is presented visually in Fig. 2.

3.1.4. Wald Chi-squared test and likelihood ratio test for perceived need

The Wald chi-squared test revealed that the interaction term was statistically significant, $F(12, 34,941) = 2.24, p = .008$; however, the likelihood ratio test did not find a significant improvement in model fit with the interaction term ($p = .064$).

3.2. Treatment access

Among American adults who experienced a past-year MDE and perceived need, 82.1 % accessed treatment (95 % CI: 81.4 %, 82.8 %). Mean levels of treatment access by both race/ethnicity and age are presented in Table 3 and Fig. 1.

3.2.1. Treatment access by race

The second column of Table 5 presents the results from the logistic regression of treatment access by race/ethnicity. After controlling for age, Black or African American non-Hispanic adults ($OR = 0.62, 95\% \text{ CI: } 0.53, 0.73, p_{adj} < 0.001$) and Asian non-Hispanic adults ($OR = 0.62, 95\% \text{ CI: } 0.44, 0.85, p_{adj} = 0.006$) who experienced a past-year MDE had 38 % lower odds of accessing mental health treatment relative to White non-Hispanic adults, revealing small effect sizes. Hispanic adults had 23 % lower odds ($OR = 0.77, 95\% \text{ CI: } 0.67, 0.89, p_{adj} = 0.001$) and respondents of more than one race non-Hispanic had 25 % lower odds of treatment access ($OR = 0.75, 95\% \text{ CI: } 0.59, 0.96, p_{adj} = 0.032$), indicating very small effect sizes. The results for Native American or Alaska Native non-Hispanic respondents ($OR = 0.91, 95\% \text{ CI: } 0.55, 1.51, p_{adj} =$

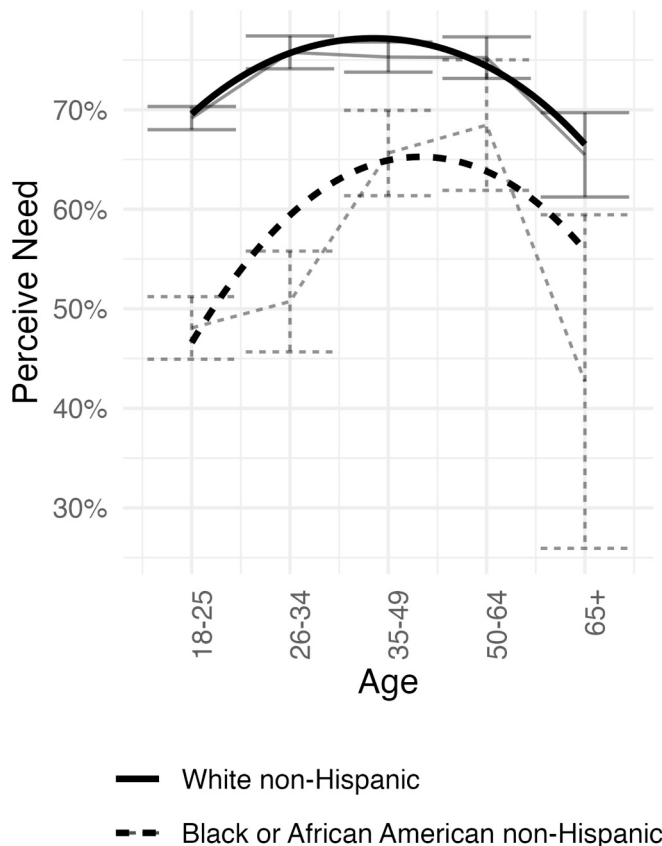


Fig. 2. Interaction of race and age on perceived need.

0.727) and Native Hawaiian or Other Pacific Islander non-Hispanic respondents ($OR = 0.63, 95\% \text{ CI: } 0.31, 1.3, p_{adj} = 0.242$) do not demonstrate significant differences in treatment access relative to White

Table 3
Means, marginal means, and 95 % confidence intervals of treatment access by race and age.

		18–25	26–34	35–49	50–64	65+
		67.7 % (66.5 ,)	75.2 % (73.4 ,)	85.9 % (84.6 ,)	90.8 % (89.2 ,)	95.1 % (92.6 ,)
		68.9 % (69.2 ,)	76.9 % (74.5 ,)	87.0 % (85.6 ,)	92.2 % (89.5 ,)	96.8 % (92.4 ,)
White non-Hispanic	83.9 % (83.1 ,)	70.6 % (69.2 ,)	76.5 % (74.5 ,)	87.0 % (85.6 ,)	91.3 % (89.5 ,)	95.2 % (92.4 ,)
	84.6 % (84.6 ,)	72.0 % (72.0 ,)	78.4 % (78.4 ,)	88.3 % (88.3 ,)	92.8 % (92.8 ,)	97.0 % (97.0 ,)
Black or African American non-Hispanic	76.2 % (73.4 ,)	59.8 % (55.3 ,)	70.1 % (63.7 ,)	79.1 % (73.9 ,)	87.5 % (81.0 ,)	86.2 % (58.4 ,)
	78.8 % (78.8 ,)	64.2 % (64.2 ,)	75.9 % (75.9 ,)	83.5 % (83.5 ,)	92.0 % (92.0 ,)	96.5 % (96.5 ,)
Native American or Alaska Native non-Hispanic	83.4 % (75.6 ,)	61.3 % (47.4 ,)	84.1 % (69.9 ,)	87.1 % (75.7 ,)	88.4 % (63.3 ,)	100 % (NA)
	89.0 % (89.0 ,)	73.5 % (73.5 ,)	92.3 % (92.3 ,)	93.5 % (93.5 ,)	97.1 % (97.1 ,)	
Native Hawaiian or Other Pacific Islander non-Hispanic	74.7 % (58.5 ,)	52.5 % (28.6 ,)	68.3 % (25.8 ,)	92.6 % (68.3 ,)	63.0 % (15.5 ,)	100 % (NA)
	86.1 % (86.1 ,)	75.4 % (75.4 ,)	93.0 % (93.0 ,)	98.6 % (98.6 ,)	94.1 % (94.1 ,)	
Asian non-Hispanic	71.3 % (64.7 ,)	60.4 % (53.1 ,)	64.6 % (51.3 ,)	84.5 % (72.1 ,)	83.1 % (49.6 ,)	100 % (NA)
	77.1 % (77.1 ,)	67.2 % (67.2 ,)	76.0 % (76.0 ,)	92.1 % (92.1 ,)	96.1 % (96.1 ,)	
More than one race non-Hispanic	77.6 % (73.2 ,)	68.3 % (62.0 ,)	68.9 % (58.4 ,)	81.6 % (73.0 ,)	86.7 % (72.5 ,)	94.3 % (65.4 ,)
	81.5 % (81.5 ,)	73.9 % (73.9 ,)	77.8 % (77.8 ,)	87.8 % (87.8 ,)	94.1 % (94.1 ,)	99.3 % (99.3 ,)
Hispanic	77.2 % (74.9 ,)	60.4 % (56.9 ,)	73.3 % (67.7 ,)	84.6 % (80.0 ,)	91.5 % (84.7 ,)	98.9 % (94.5 ,)
	79.4 % (79.4 ,)	63.9 % (63.9 ,)	78.1 % (78.1 ,)	88.2 % (88.2 ,)	95.4 % (95.4 ,)	99.8 % (99.8 ,)

Note: **Marginal Means** represent the average value for an age/race category independent of the other variable.

non-Hispanic adults.

3.2.2. Treatment access by age

After controlling for race/ethnicity, among adults who have experienced a past-year major depressive episode, the odds of accessing treatment increase by 70 % for every unit increase in age category (OR = 1.70, 95 % CI = 1.62, 1.78, $p_{adj} < 0.001$), signifying a small effect size and indicating a linear and significant relationship as shown in Fig. 1.

3.2.3. Intersection of race and age on treatment access

No interaction terms were statistically significant.

3.2.4. Wald Chi-squared test and likelihood ratio test for treatment access

The Wald chi-squared test yielded $F(6, 23,655) = 0.96, p = .454$, indicating that the interaction effect was not significant, and the likelihood ratio test was not statistically significant ($p = .448$), suggesting inclusion of the interaction term did not improve model fit.

3.3. Unmet need

Among American adults who experienced a past-year MDE and perceived need, 48.7 % reported an unmet need (95 % CI: 47.7 %, 49.7 %). Mean levels of unmet need by both race/ethnicity and age are

presented in Table 4 and Fig. 1.

3.3.1. Unmet need by race

The third column of Table 5 presents the results from the logistic regression of unmet need by race/ethnicity. After controlling for age, among those who reported having a past-year MDE, Black or African American non-Hispanic respondents had 38 % higher odds of having an unmet need for mental health treatment relative to White non-Hispanic respondents (OR = 1.38, 95 % CI: 1.19, 1.61, $p_{adj} < 0.001$) and Hispanic respondents had 19 % higher odds of experiencing an unmet need (OR = 1.19, 95 % CI: 1.03, 1.38, $p_{adj} = 0.036$), demonstrating very small effect sizes. Native American or Alaska Native non-Hispanic (OR = 1.49, 95 % CI: 0.98, 2.27, $p_{adj} = 0.103$), Native Hawaiian or Other Pacific Islander non-Hispanic (OR = 0.75, 95 % CI: 0.38, 1.49, $p_{adj} = 0.476$), Asian non-Hispanic (OR = 1.03, 95 % CI: 0.76, 1.39, $p_{adj} = 0.85$), and respondents of more than one race non-Hispanic (OR = 1.11, 95 % CI: 0.88, 1.4, $p_{adj} = 0.475$) did not yield statistically significant differences in unmet need relative to White non-Hispanic individuals.

3.3.2. Unmet need by age

After controlling for race/ethnicity, among adults who have experienced a past-year major depressive episode, the odds of having an unmet need for mental health treatment decrease by 36 % for every unit

Table 4

Means, marginal means, and 95 % confidence intervals of unmet need by race and age.

		18–25	26–34	35–49	50–64	65+
		67.1 % (65.9 ,)	58.6 % (56.6 ,)	47.3 % (45.7 ,)	35.3 % (32.9 ,)	24.2 % (20.2 ,)
		68.3 % (68.3 ,)	60.5 % (60.5 ,)	49.0 % (49.0 ,)	37.8 % (37.8 ,)	28.6 % (28.6 ,)
White non-Hispanic	46.8 % (45.7 ,)	65.1 % (63.7 ,)	57.4 % (55.2 ,)	46.4 % (44.5 ,)	34.6 % (31.9 ,)	22.7 % (18.6 ,)
	47.9 % (47.9 ,)	66.6 % (66.6 ,)	59.7 % (59.7 ,)	48.4 % (48.4 ,)	37.3 % (37.3 ,)	27.4 % (27.4 ,)
Black or African American non-Hispanic	55.6 % (52.2 ,)	71.9 % (67.7 ,)	63.6 % (56.8 ,)	50.9 % (45.4 ,)	45.5 % (37.1 ,)	44.8 % (19.8 ,)
	58.9 % (58.9 ,)	75.7 % (75.7 ,)	69.9 % (69.9 ,)	56.4 % (56.4 ,)	54.0 % (54.0 ,)	72.8 % (72.8 ,)
Native American or Alaska Native non-Hispanic	55.5 % (45.1 ,)	70.8 % (58.1 ,)	76.2 % (60.6 ,)	52.0 % (38.1 ,)	41.5 % (21.3 ,)	64.1 % (0.8 ,)
	65.4 % (65.4 ,)	80.9 % (80.9 ,)	86.9 % (86.9 ,)	65.7 % (65.7 ,)	64.9 % (64.9 ,)	99.7 % (99.7 ,)
Native Hawaiian or Other Pacific Islander non-Hispanic	43.1 % (27.2 ,)	74.5 % (48.9 ,)	41.6 % (11.4 ,)	33.9 % (9.9 ,)	42.1 % (8.0 ,)	58.2 % (0.0 ,)
	60.6 % (60.6 ,)	89.9 % (89.9 ,)	79.8 % (79.8 ,)	70.6 % (70.6 ,)	85.8 % (85.8 ,)	100 % (100 ,)
Asian non-Hispanic	53.7 % (46.2 ,)	73.8 % (67.1 ,)	58.4 % (45.2 ,)	39.1 % (26.2 ,)	27.4 % (9.8 ,)	42.7 % (4.4 ,)
	61.1 % (61.1 ,)	79.6 % (79.6 ,)	70.4 % (70.4 ,)	53.8 % (53.8 ,)	56.9 % (56.9 ,)	92.4 % (92.4 ,)
More than one race non-Hispanic	51.9 % (45.9 ,)	68.3 % (61.6 ,)	63.6 % (53.2 ,)	54.0 % (44.0 ,)	27.1 % (15.6 ,)	31.4 % (13.3 ,)
	57.8 % (57.8 ,)	74.4 % (74.4 ,)	72.9 % (72.9 ,)	63.7 % (63.7 ,)	42.8 % (42.8 ,)	57.7 % (57.7 ,)
Hispanic	54.9 % (51.7 ,)	71.5 % (68.1 ,)	61.1 % (55.0 ,)	50.6 % (44.7 ,)	36.6 % (26.6 ,)	24.8 % (10.3 ,)
	58.2 % (58.2 ,)	74.6 % (74.6 ,)	66.8 % (66.8 ,)	56.5 % (56.5 ,)	48.0 % (48.0 ,)	48.5 % (48.5 ,)

Note: **Marginal Means** represent the average value for an age/race category independent of the other variable.

Table 5
Logistic regression of race and age on all outcomes.

	Perceived need	Treatment access	Unmet need
White non-Hispanic	–	–	–
Black or African American non-Hispanic	0.50*** (0.45, 0.56)	0.62*** (0.53, 0.73)	1.38*** (1.19, 1.61)
	$p_{adj} < .001$	$p_{adj} < .001$	$p_{adj} < .001$
Native American or Alaska Native non-Hispanic	0.76 (0.52, 1.13)	0.91 (0.55, 1.51)	1.49 (0.98, 2.27)
	$p_{adj} = .179$	$p_{adj} = .727$	$p_{adj} = .103$
Native Hawaiian or other Pacific Islander non-Hispanic	0.23*** (0.12, 0.44)	0.63 (0.31, 1.3)	0.75 (0.38, 1.49)
	$p_{adj} < .001$	$p_{adj} = .242$	$p_{adj} = .476$
Asian non-Hispanic	0.39*** (0.31, 0.47)	0.62** (0.44, 0.85)	1.03 (0.76, 1.39)
	$p_{adj} < .001$	$p_{adj} = .006$	$p_{adj} = .85$
More than one race non-Hispanic	0.87 (0.72, 1.06)	0.75* (0.59, 0.96)	1.11 (0.88, 1.4)
	$p_{adj} = .179$	$p_{adj} = .032$	$p_{adj} = .475$
Hispanic	0.50*** (0.45, 0.55)	0.77** (0.67, 0.89)	1.19* (1.03, 1.38)
	$p_{adj} < .001$	$p_{adj} = .001$	$p_{adj} = .036$
Age ¹	1.04** (1.01, 1.08)	1.70*** (1.62, 1.78)	0.64*** (0.62, 0.66)
	$p_{adj} = .006$	$p_{adj} < .001$	$p_{adj} < .001$
Age squared	0.90*** (0.88, 0.93)	–	–
	$p_{adj} < .001$		

* $p_{adj} < .05$ ** $p_{adj} < .01$ *** $p_{adj} < .001$.

¹ Age was treated as a continuous predictor, where 18–25 was coded as 1, 26–34 was coded as 2, 35–49 was coded as 3, 50–64 was coded as 4, and 65+ was coded as 5.

increase in age category (OR = 0.64, 95 % CI = 0.62, 0.66, $p_{adj} < 0.001$), demonstrating a significant inverse relationship as shown in Fig. 1 and a small effect size.

3.3.3. Intersection of race and age on unmet need

No interaction terms were statistically significant.

3.3.4. Wald Chi-squared test and likelihood ratio test for unmet need

The Wald chi-squared test yielded $F(6, 23,654) = 0.76, p = .598$, indicating that the interaction effect was not significant, and the likelihood ratio test was not statistically significant ($p = .498$), suggesting inclusion of the interaction term did not improve model fit.

4. Discussion

The purpose of this study was to better understand the intersection of race/ethnicity and age on help-seeking among U.S. adults who experienced a major depressive episode in the past year. In line with the Behavioral Model of Health Service Use (Andersen, 1995), we focused on perceived need, treatment access, and unmet need. Although the research that investigates these processes in the help-seeking process is vast across racial/ethnic and age groups, the interaction between race/ethnicity and age is less known. This study aimed to examine the intersection of race/ethnicity and age and its effect on perceived need for services among adults who experienced a past-year MDE; among those who perceive a need, we explored differences in treatment access; and lastly, we examined discrepancies in perceptions of unmet need among those who perceive need.

We found large and statistically significant differences in each outcome across race/ethnicity and age. After controlling for age, Black, Hispanic, Pacific Islander, and Asian respondents had lower odds of perceiving a need compared to White respondents. Analyses revealed large and medium effect sizes for Pacific Islander and Asian adults, respectively, indicating substantial reductions in the odds of perceiving a need for mental health treatment compared to their White non-

Hispanic counterparts. Black, Asian, Hispanic, and multiracial respondents had lower odds of accessing treatment compared to White respondents, and Black and Hispanic respondents had higher odds of reporting an unmet need compared to White respondents. After controlling for race, younger and older adults had lower odds of perceiving a need compared to middle-aged adults. Younger adults had lower odds of accessing treatment and higher odds of experiencing an unmet need. While all other analyses revealed either very small or small effect sizes, it is important to recognize that even small differences can have significant implications, particularly at the population level (Funder and Ozer, 2019). When aggregated across large populations, small differences in perceived need, treatment access, or unmet need can translate into significant disparities in help-seeking across racial/ethnic and age groups, underscoring the importance of these findings. Moreover, we found a significant interaction between race and age regarding perceived need. Black adults were less likely to perceive need than White adults, with a pronounced gap among younger adults. However, while statistically significant, this interaction yielded a small effect size as indicated by the likelihood ratio test. Additionally, the Wald chi-squared test and the likelihood ratio test affirm that no such interaction effect was observed through examination of the intersection between race and age on treatment access and unmet need. Therefore, the interaction does not provide insight into rates of either outcome in the U.S. and its importance regarding perceived need should be interpreted as minor.

4.1. Perceived need

In our study, we found that among U.S. adults with a past-year MDE, two-thirds perceived a need for mental health services, while the remaining one-third did not perceive this need. Although past literature has examined perceived need among racial/ethnic minorities (Breslau et al., 2017), older populations (Mackenzie et al., 2010), veterans (Sareen et al., 2010), and with mental illnesses (Edlund et al., 2006; Narendorf and Palmer, 2016), relatively little up-to-date research has examined population-level averages of perceived need among adults with a past-year MDE. While a recent article by Thoits (2022) utilized data from 2001 to 2003 and found that only one-third of adults with a lifetime disorder perceive need, this is not an equivalent comparison because it is likely that those with lifetime disorders are less likely to perceive need due to not having experienced its onset recently. This study contributes to the literature by providing insight into the patterns of perceived need within this population of adults with a perceived need.

When examining these findings by race/ethnicity, the results revealed that Black or African American non-Hispanic, Hispanic, Native Hawaiian or Other Pacific Islander non-Hispanic, and Asian non-Hispanic adults with a past-year MDE perceive less need for mental health services relative to White non-Hispanic adults. This finding is consistent with previous literature showing that racial/ethnic minority groups tend to report a lower perceived need than majority groups (Breslau et al., 2017). This suggests that differences in perceived need by race/ethnicity may contribute to racial/ethnic disparities in mental health treatment utilization.

Interestingly, whereas past research has found that older adults are less likely to perceive a need for mental health treatment compared to younger adults, even when controlling for depressive symptoms (Codony et al., 2009; Klap et al., 2003; Prins et al., 2008), the present study has shown that the relationship is not linear. The results demonstrate that the youngest age group (18–25 age group) perceives less need. As adults age, perceived need increases, peaking among middle-aged adults (35–39 age group). However, among older adults (65+ age group), perceived need subsequently decreases. Older adults may perceive less need due to common missed diagnoses from normal life events such as loss of loved ones and retirement, which are radical changes that can be overlooked as contributors to depression when diagnosing and seeking care. Older adults might also be more likely to have received treatment in the past, which could decrease their

likelihood of seeking treatment again especially if the treatment was unsuccessful. Younger adults may also perceive less need due to a number of factors, such as stigma from showing weakness or embarrassment or feeling that life changes during this time that cause distress are normal and should be handled alone.

Regarding the interaction, the present study revealed significant, but small, differences in the relationship between age and perceived need among racial/ethnic groups. The positive relationship between age and perceived need was stronger for Black or African American non-Hispanic adults relative to the relationship observed among White non-Hispanic adults. This finding could be explained by various types of factors. For instance, barriers to mental health help-seeking for Black or African American younger adults proposed by past literature include cultural factors such as racial stigma and self-stigma (Hingwe, 2021; Yu et al., 2022) and mistrust in the health care system due to historical mistreatment (Burkett, 2017; Castro-Ramirez et al., 2021). Additionally, systemic factors such as racial and economic inequity are barriers to help-seeking and treatment among younger people (Castro-Ramirez et al., 2021). Future research should further examine the more pronounced barriers that younger Black or African American adults face that may better explain the greater difference in perceived need. While this difference may reflect such barriers, the small effect size warrants cautious interpretation. Moreover, this interaction was not observed for other outcomes such as treatment access or unmet need, and our statistical tests confirmed that examining this interaction added little explanatory value. Taken together, our findings suggest that while the intersection of race and age may inform the understanding of perceived need, it is not a key factor in population-level rates of treatment access or unmet need among U.S. adults.

4.2. Treatment access

Regarding treatment access, among those who perceive need, we found that 82 % of adults successfully accessed treatment. According to the 2019 NSDUH, 66.3 % of adults with a past-year MDE received mental health treatment in the past year, a percentage that remained consistent with the findings from the NSDUH conducted from 2009 through 2018 (SAMHSA, 2020). While the same data was used, we limited our sample to those who perceived need and found that more adults had accessed treatment compared to the broader data, where the sample encompassed all adults with a past-year MDE (82 % vs. 66.3 %). This discrepancy underscores the importance of perceiving a need as a crucial factor in the help-seeking process. The present study's findings indicate that when individuals perceive a need for mental health services, most are able to successfully access the care that they seek at high rates.

In the context of race/ethnicity, we found that Black or African American non-Hispanic, Asian non-Hispanic, and Hispanic adults, and those with more than one race non-Hispanic, accessed treatment less than White non-Hispanic adults. This pattern of results is in line with the previous literature that racial and ethnic minorities are more likely to underutilize mental health services (Alegría et al., 2008). Specifically, this finding supports the trend that Black or African American non-Hispanic, Asian non-Hispanic, Hispanic, and Latinx individuals access treatment less relative to non-Hispanic White individuals (Augsberger et al., 2015; Cook et al., 2017; Villamil Grest et al., 2022; Le Meyer et al., 2009). These results reinforce the well-documented disparities in mental health service utilization among racial/ethnic groups, particularly Black or African American non-Hispanic, Asian non-Hispanic, Hispanic, and multiracial individuals.

Surprisingly, we found that individuals are more likely to access treatment as their age increases. Whereas previous studies found that older adults utilize mental health services at much lower rates compared to younger adults, even when controlling for depressive symptoms (Karlin et al., 2008; Urbanoski et al., 2017), the present study finds that older adults are more likely to use mental health services. This

discrepancy may be explained by the present study limiting analysis to only those who perceive need. While older adults are less likely to perceive need, they may be more likely to access care once need is perceived. Previous studies (i.e., Karlin et al., 2008; Urbanoski et al., 2017) did not limit to those who perceived need but instead looked at all adults. Additionally, older adults may be more likely to access care due to their access to Medicare, a federal health insurance program for people who are 65 or older, which covers outpatient and inpatient mental health care as well as prescription drugs. Older adults may also be more likely to get mental health support from their primary care provider or other non-mental health professionals, even without the intention of seeking mental health care.

4.3. Unmet need

However, while 82 % accessed treatment, 48.7 % of adults still reported an unmet need. Thus, approximately 30 % feel underserved despite receiving some treatment. These results are consistent with Mojtabai's (2009) study that found a large percentage of participants with MDE reported an unmet need for mental health treatment, whether they received treatment or not.

Regarding unmet need by race/ethnicity, among those who perceived a need for treatment, Black or African American non-Hispanic and Hispanic adults were more likely to report an unmet need. This reflects previous research that shows racial and ethnic minorities have significantly higher levels of unmet need for mental health care (HHS, 2001; HHS, 2014; Kim et al., 2017; Wells et al., 2001). This finding speaks to the importance of recognizing disparities in mental health care among racial and ethnic minority groups, especially Black or African American non-Hispanic and Hispanic folks who disproportionately perceive an unmet need compared to other racial groups.

Furthermore, our results show that adults are less likely to report an unmet need as age increases, meaning older adults are less likely to report an unmet need. There is a discrepancy in the literature with this finding, such that prior studies have found that younger adults are more likely to report unmet need (Fleury et al., 2016; Mojtabai, 2009; Nelson & Park, 2006; Urbanoski et al., 2017), whereas other studies found that older adults perceive high levels of unmet need (Tran and Ponce, 2017; Starkes et al., 2005). Our findings may be explained by differences in resources among the cohorts, such that older people tend to have better health insurance (e.g., Medicare) and are more likely to be able to afford the cost of treatment compared to younger adults.

4.4. Limitations

Our study is not without limitations. First, while the overall sample size is large, some interactions continued to result in small sample sizes for certain groups, particularly older, underrepresented racial/ethnic groups, despite using 10 years (2010–2019) of NSDUH data. Moreover, the significant differences between the years 2010 and 2019 limit the generalizability of our study due to substantial transformations in societal dynamics and cultural shifts. Additionally, we chose not to include data collected during the COVID-19 pandemic (i.e., 2020 and 2021), given the unique circumstances of the pandemic that may have limited generalizability to other years. The pandemic had profound effects on various aspects of individuals' lives, especially mental health. While mental health services were disrupted, demand for treatment increased, creating an exacerbated gap between demand for services and supply. These unique dynamics limit generalizability to non-pandemic years. We also did not adjust for covariates in our analysis because our goal was to examine population-level differences across groups as they naturally occur to consider real-world disparities. Because of this, our results should not be interpreted as the unique (i.e., not confounded) effects of age and race on outcomes. Another limitation pertains to the perceived need variable, which includes individuals who receive mental health treatment involuntarily (i.e., legal requirement) and may not necessarily

perceive need themselves. While such cases are rare, these circumstances do occur, particularly for those with depression, and the inclusion of these cases in our operationalization of the variable may impact the study's findings. The interpretation of the results should consider these caveats.

4.5. Future research

Further research into mental health disparities among diverse racial and ethnic groups representing various ages is needed to better understand the complex factors influencing perceptions of and access to mental health treatment. For instance, qualitative exploration can be used for an in-depth analysis of the factors that impact perceived need, treatment access, and unmet need to better understand individuals' experiences in the help-seeking process. It is also necessary to dive deeper into specific racial groups, specifically underrepresented ones, and to employ larger sample sizes in studying them. This study was limited by small sample sizes of older age individuals among racial/ethnic minority groups, which may have impacted our results. By focusing on certain racial/ethnic groups, it enables a more profound understanding of the nuances within these populations that we may not see in a more heterogeneous sample. Furthermore, future research should explore various combinations of interactions, encompassing variables such as gender and socioeconomic status. We investigated only one interaction, but an examination of how other variables may intersect, and influence perceptions of need and unmet need may allow for a more comprehensive understanding of help-seeking.

4.6. Implications

The findings suggest that both race/ethnicity and age significantly influence perceived need for mental health care, access to care, and the extent to which the needs of these individuals are met. Given the racial/ethnic disparities in perceived need, treatment access, and unmet need, the development and implementation of culturally competent mental health care is imperative to meeting the needs of these populations. By making these appropriate services available to suit the needs of vulnerable groups, we can significantly enhance accessibility and foster a more inclusive system. Moreover, age-appropriate interventions are necessary to address the variations in perceived need, treatment access, and unmet need across age groups. Tailored interventions that address specific challenges and needs faced by individuals at different life stages are essential. Implementing targeted mental health programs for various age groups ensures that interventions reflect the unique experiences of individuals, ultimately promoting more effective mental health care across the lifespan. Furthermore, the present study emphasizes the need for racial and age equity in the healthcare system. By developing and enforcing policies that aim to reduce disparities in mental health care based on race/ethnicity and age, we can ensure that resources are allocated to those who may be underrepresented or vulnerable. This research contributes to the goal of making mental health care more accessible to underserved populations.

CRedit authorship contribution statement

Kelly Kwong: Writing – original draft, Conceptualization. **Isaac L. Ahuvia:** Writing – review & editing, Methodology, Formal analysis, Conceptualization. **Jessica L. Schleider:** Writing – review & editing, Supervision.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of competing interest

The authors declare that they have no conflict of interest.

Acknowledgments

The authors would like to thank the support of Substance Abuse and Mental Health Services Administration (SAMHSA) data from the 2010–2019 National Surveys on Drug Use and Health (NSDUH) data.

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