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Disparities in adult mental health service utilization in the United States: A cross-sectional study

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ABSTRACT

Background: Common mental disorders (CMDs), such as anxiety and depression, affect millions of adults in the United States; however, disparities in service utilization persist.

Objective: This study examined factors associated with the utilization of mental health services among adults in the United States.

Methods: A cross-sectional analysis of the 2023 national health interview survey data was conducted among US adults aged 18 and older. Multivariate logistic regression based on the Andersen behavioral model was employed to analyze predisposing, enabling, and need-based factors.

Findings: White adults had the highest service use, at 28.3%, compared to Black adults (17.6%), Hispanic individuals (16.1%), and Asian adults (10.3%). Multivariable logistic regression showed that the odds of using mental-health services were significantly higher for females (odds ration [OR] = 1.89, 95% confidence interval [CI] 1.75-2.02), younger adults (OR = 1.87, 95% CI 1.57-2.22), respondents with a master's degree or higher (OR = 2.19, 95% CI 1.83-2.61), insured individuals (OR = 2.27, 95% CI 1.88-2.68), those reporting limitations in social activities (OR = 2.34, 95% CI 1.98-2.76), and participants with a diagnosed CMD (OR = 4.29, 95% CI 3.86-4.76) compared with their respective reference groups. In contrast, being married was associated with lower odds of service use (OR = 0.75, 95% CI 0.68-0.82) compared to being single.

Conclusions: Despite overall improvements in access, significant disparities in mental health service utilization persist, particularly among racial and ethnic minorities and the uninsured. These findings underscore the need for targeted and integrated policy responses, including expanding insurance coverage through targeted outreach in underserved communities, integrating culturally responsive care models, and incorporating routine functional assessments in mental health screening can help bridge these gaps and promote equitable access to services across the US adult population.

Keywords: mental health services, common mental disorders, cross-sectional studies, healthcare disparities, United States, NHIS

INTRODUCTION

Common mental disorders (CMDs), such as anxiety, depression, and unexplained physical symptoms, are prevalent psychological conditions worldwide [1]. Anxiety and depressive disorders affect over 301.4 million and 279.6 million people, respectively, making them the leading causes of disability worldwide [2]. Although distinct, these conditions often co-occur [3]. CMDs disrupt daily functioning, impairing academic performance, work productivity, and overall well-being while also increasing the risk of substance abuse, violent behavior, and chronic health conditions like heart disease and diabetes [4]. Additionally, they are linked to higher mortality rates, including suicide [5, 6]. In the United States, nearly 20% of adults experience CMDs annually, with women, young adults, and racial or ethnic minorities being most affected [7]. Despite extensive research on mental health, limited studies have examined barriers and facilitators of mental health service utilization in the aftermath of the COVID-19 pandemic.

Over the past decade, service utilization has risen but has not kept pace with growing need. National survey on drug use and health data show that the share of US adults receiving any mental-health treatment increased from 13% in 2008 to 22.8% in 2023–an 70% relative rise–yet more than half of those reporting severe psychological distress still did not obtain care [8]. Utilization accelerated sharply in 2020 as the COVID-19 pandemic both heightened CMD prevalence and triggered an unprecedented expansion of telehealth services. Commercial-insurance claims indicate a 39% jump in total mental-health

Table 1. Andersen's behavioral model of health services use

Factors	Subcomponents	Examples
Predisposing characteristics	Demographic characteristics	Age, gender, marital status
	Social structure	Education level, occupation, ethnicity
	Health beliefs and attitudes	Beliefs about illness, attitudes toward health services
Enabling resources	Personal/family resources	Income, health insurance, transportation
	Community resources	Availability of healthcare facilities, providers, and geographic location
Need factors	Perceived need	Individual's subjective assessment of health, health-seeking behaviors
	Evaluated need	Clinical assessments, medical diagnosis
Health service utilization	Type of health service used	Preventive, outpatient, inpatient, emergency
	Frequency and timing of utilization	Number of visits, duration of hospital stays
Outcomes	Perceived health status	Patient's assessment of their health
	Evaluated health status	Clinical measurements, health outcomes
	Consumer satisfaction	Patient's satisfaction with received care

visits from 2019 to 2022, with telehealth offsetting most in-person declines [9]. Racial and ethnic disparities also persist; for example, treatment uptake among Asian adults rose only modestly from 18% in 2008 to 20 % in 2020, compared with a jump from 20% to 28% among White adults [10]. These trends highlight the dynamic relationship between increasing CMD prevalence, evolving delivery modalities, and persistent structural barriers that continue to influence who ultimately receives care.

The US mental health system depends on a multitiered workforce of approximately 48,000 psychiatrists, 39,000 psychiatric nurse practitioners (NPs), 99,000 psychologists, 135,000 licensed counselors, and over 530,000 clinical social workers. Despite this, 122 million residents still live in Mental Health Professional Shortage Areas, and 43 out of 44 state agencies report shortages across hospitals, community programs, and crisis services [11]. Psychiatrists and psychiatric NPs provide the majority of medication management, while psychologists, social workers, and professional counselors handle the majority of psychotherapy. Primary care clinicians continue to account for about one-third of all mental health office visits, particularly in areas where access to specialty care is limited [11].

Patients receive treatment across a patchwork of private practices, community mental health centers, federally qualified health centers, hospital inpatient or emergency units, and–since the pandemic–rapidly expanding telehealth platforms that now manage a significant portion of routine counseling and medication management sessions. Access remains highly uneven: approximately 65% of non-metropolitan counties have no psychiatrist at all, meaning rural Americans rely much more on integrated primary care teams and telepsychiatry than their urban counterparts [12].

Understanding the factors associated with mental health service utilization is essential for designing effective interventions. The Andersen Behavioral Model provides a valuable framework for analyzing these influences [13]. It categorizes these factors into three domains: predisposing, enabling, and need-based. Predisposing factors include demographic characteristics such as age, gender, and cultural beliefs. Enabling factors encompass socioeconomic status, geographic location, healthcare policies, and the availability of healthcare providers. Need-based factors, such as symptom severity and comorbid conditions, ultimately drive healthcare-seeking behavior. **Table 1** presents Andersen's behavioral model of health services use.

The recent literature on barriers to mental health service utilization reveals a complex interplay of systemic, geographic, cultural, individual, and illness-related factors collectively contributing to treatment gaps worldwide [14, 15]. Regarding systemic and structural barriers, deficiencies in the healthcare system represent significant obstacles to accessing mental health services. In the United States, wait times for mental health professionals often exceed two months, leading to an increase in emergency department visits for mental health crises [16]. Financial constraints significantly restrict access to care, as governments allocate only about 2% of health budgets to mental health services globally, with low and middle-income countries spending less than 1% [16]. The affordability barrier is particularly pronounced in countries like India, where inadequate insurance coverage compounds access difficulties [14].

It is estimated that between 76% and 85% of individuals with severe mental disorders do not receive treatment for their condition in low-income and middle-income countries. For high-income nations, the corresponding estimates range between 35% and 50% [17]. While Medicaid expansion under the Affordable Care Act improved insurance coverage for low-income adults, enhancing access to mental health services and medications, it may have also widened racial and ethnic disparities in service utilization [18]. Health-insurance status itself is a decisive gatekeeper. In 2023 only 37% of uninsured US adults with any mental illness obtained treatment, compared with 55% of privately insured adults and 59% of Medicaid enrollees [19]. Even among the insured, parity gaps persist: commercial plans reimburse behavioral health visits about 22% less than comparable medical visits, and patients use out-of-network mental health providers 3.5 times more often than for medical care, inflating out-of-pocket costs and discouraging continuity [20]. Concerns have deepened since federal agencies announced they will not enforce key provisions of the 2024 mental health parity and addiction equity act final rule, potentially prolonging longstanding coverage inequities [21].

Regarding geographic and accessibility barriers, the physical distance between individuals and mental health services creates substantial access barriers, particularly in non-urban settings. In a study conducted in rural Australia [22], it was found that geographical distance to services was a significant obstacle to mental health care utilization. The unequal distribution of mental health services and the shortage of qualified professionals compound this issue. The Health Resources and Services Administration predicts a 20% decline in the number of psychiatrists by 2030 in the United States [16].

With regards to sociocultural and attitudinal barriers, stigma and discrimination consistently emerge as significant barriers to health services use across diverse populations. Personal stigma, where individuals internalize negative societal attitudes about mental illness, may lead to shame and reluctance to seek treatment [23]. In a scoping review on barriers to mental health treatment among medical students and residents in India, the study in [24] revealed that stigmatization was a key obstacle to seeking care, along with the belief that mental health issues signify personal weakness. Lack of social support further complicates access to health services [14]. Cultural sensitivity issues also impact service utilization, as inadequate culturally appropriate practices created barriers for Indigenous and minority populations in Australia [22]. A study conducted among Black Canadians in 2025 reported that language barriers mainly affected immigrant communities [25].

Regarding knowledge and awareness barriers, poor mental health literacy is a significant consumer-level obstacle to service integration. This knowledge gap affects both the recognition of mental health problems and awareness of available services [26]. The complexity of mental health systems creates navigation challenges that deter individuals from seeking care, with research on rural Australian populations specifically identifying system complexity as a substantial barrier [22].

Finally, individual and illness-related barriers to mental health utilization often impede individuals from seeking necessary care. Demographic variables, including young adults, men, and lack of health insurance affect decision to access mental health services [27]. Time constraints and confidentiality concerns also significantly impact help-seeking behavior [24]. Additionally, individuals may lack awareness or understanding of their mental health condition, contributing to delays in help-seeking behavior [28]. Illness-related factors such as the severity of symptoms, cognitive impairments, or co-occurring physical health issues may further complicate the decision to access mental health services [29]. Additionally, diagnostic challenges delay access to care. Accurate diagnosis requires an understanding of subjective symptoms, cultural influences, and comorbid conditions [30].

The COVID-19 pandemic intensified mental health challenges while also disrupting healthcare services. Social isolation, economic instability, and heightened stress led to rising rates of anxiety and depression. Simultaneously, pandemic-related healthcare disruptions, including provider shortages, shifts to telehealth, and overwhelmed health systems, further restricted access to mental health services [31].

Analyses of national health interview survey (NHIS) data show that the uptake of mental health treatment among US adults increased only slightly from 19% in 2019 to 20% in 2020, 22% in 2021, and 23% in 2022. Utilization remains disproportionately concentrated among White adults, women, and urban residents, leaving substantial gaps for racial and ethnic minorities and the uninsured, who are less than half as likely to receive care as their insured counterparts (11% vs 25%) [7, 32]. Most of these NHIS studies have been primarily descriptive: they have not quantified how enabling barriers–including cost-related delays, transportation limitations, and concerns about medical bills–influence service uptake, nor have they employed Andersen's behavioral model to separate enabling effects from underlying need. Using the 2023 NHIS data, this analysis embeds these overlooked cost and access constraints within Andersen's predisposing-enabling-need framework, advancing the literature from simple prevalence tracking to a theory-driven evaluation of modifiable determinants of mental health service utilization.

The study examined disparities in mental health service utilization among different demographic and socioeconomic groups in the US using NHIS cross-sectional data. A good understanding of these factors will enable the design of effective interventions and the development of policies to improve equitable access to mental health services.

METHODS

Data Source

This cross-sectional study analyzed data from the 2023 NHIS. The NHIS, an annual national survey, employs a multistage sampling design to produce estimates representative of the noninstitutionalized US population. Detailed descriptions of the NHIS sampling and data collection procedures have been described elsewhere [33]. Data were extracted from the sample adult files, which included participants aged 18 years and older. The dataset incorporated sampling weights for the survey's complex design, nonresponse, and intentional oversampling of specific demographic groups. The study relied on publicly available, deidentified data exempt from Institutional Review Board review.

Variable Measurement

Dependent variable

Mental health service utilization was our outcome of interest. The participants' responses to the following three questions were used to assess mental health service utilization:

(1) Do you take prescription medication for these feelings?

(2) Do you use prescription medications for depression?

(3) Are you currently receiving counseling or therapy from a mental health professional?

Participants were considered to have received mental health treatment if they reported

(a) taking medication for anxiety or depression, or

(b) having taken medication for emotions, concentration, behavior, or mental health during the past 12 months, or had received mental health therapy from a mental health professional [34].

Independent variables

Andersen and Davidson's seminal article on access to care in America guided the selection of independent variables [13].

Common mental disorders: The patient health questionnaire-2 (PHQ-2) and the generalized anxiety disorder-2 (GAD-2) are highly efficient evidence-based tools designed to streamline the identification of individuals at risk of depression and anxiety, thereby facilitating early diagnosis and timely intervention [35]. The PHQ-2 is a brief yet effective instrument derived from the first two items of the more comprehensive patient health questionnaire-9 [36]. It targets two hallmark

symptoms of depression: depressed mood or feelings of hopelessness, and loss of interest or pleasure in most activities [37]. Similarly, the GAD-2, adapted from the initial two items of the generalized anxiety disorder-7 (GAD-7) [38], is a concise screening tool for anxiety. It evaluates two fundamental characteristics of anxiety disorders: persistent nervousness or anxiety and an inability to control worry [39]. These brief measures enhance accessibility and usability in diverse clinical and community settings, enabling healthcare providers to identify individuals at risk and prioritize their care more effectively.

Predisposing factors: Predisposing factors are the characteristics that exist before illness and shape a person's general inclination to seek care [13]. For this research, Predisposing factors included demographic characteristics ([age less than 25, 26-49, 50-64, 65 years and older], sex, race [Hispanic, White, Black, and Asian], marital status [single, married/living with partner, or separated/divorced/widow]), and educational attainment (up to high school, high school, associate with bachelor's and master's degrees, and higher).

Enabling factors: Enabling factors refer to the practical resources that make care possible once the desire exists, including individual assets (income, insurance, regular source of care, transportation) and contextual resources (provider supply, community facilities, health system organization) [13]. In this study, enabling factors related to access and service-facilitating resources were included in the analysis. Variables assessed included countries of birth (United States or non-United States) and the US region of residence (Northeast, Midwest, South, and West). The participants were asked to report whether they had health insurance coverage or a place to visit for healthcare. They were also asked whether they had delayed care due to costs, lack of reliable transportation, or worried about paying the bill.

Need-based factors: Need based factors capture the individual's level of illness and perceived urgency–both perceived need (how sick the person feels) and evaluated need (clinical assessments) [13]. Limitations in social functioning and CMDs were the most important factors in this category. CMDs were identified using PHQ-2 and GAD-2 screening instruments. A composite binary variable was constructed: respondents screening positive on either were coded as having a CMD. Social functioning limitation was assessed, capturing whether a physical, mental, or emotional condition limited social participation. Responses were recorded into two categories: no/mild difficulty vs. extreme difficulty/unable (binary). Health and behavioral indicators (ever smoked 1000 cigarettes [yes/no]) were also included. CMDs and functional limitations have been previously validated as strong predictors of psychiatric service utilization [40]

Data Analysis

We summarized participant characteristics with descriptive statistics. The raw (unweighted) data provided the sample size, while the weighted data were used to calculate the percentage distributions. Bivariate and multivariate logistic regression analyses were used to assess the associations among individual characteristics, mental health, and health service utilization. Statistical analyses were performed using IBM SPSS statistics for Windows, version 29.0.2.0 (Armonk, NY: IBM Corp) [41], which was chosen for its ability to accommodate complex sampling designs and provide unbiased standard error estimates. Multivariate adjusted odds ratios (ORs) and 95% confidence intervals (CIs) were calculated. Due to the small sample size, which fell below the threshold recommended for reliable national estimates, Native Americans, Pacific Islanders, and multiple racial groups were excluded from the analysis. Cases with missing data were handled using listwise deletion. The proportion of missing data across variables was <5%, which supports complete case analysis. No imputation methods were applied.

RESULTS

Table 2 details the socio-demographic and clinical characteristics of 28,797 US adults categorized by race and ethnicity into four groups: White, Hispanic, Black, and Asian. Overall, these findings underscore the substantial racial and ethnic disparities in mental health service utilization. The proportion of CMDs was the highest among black respondents

Table 2. Socio-demographic and clinical characteristics of participants by race/ethnicity (unweighted N = 28,797)

Variable		Race/ethnicity			
		White: N = 19,495	Hispanic: N = 4,418	Black: N = 3,216 (SD)	Asian: N = 1,668 (SD)
Sex: N (%, SD)	Male	9,056 (49.9, 0.4)	1,995 (47.9, 0.8)	1,349 (46.4, 1.0)	769 (48.2, 1.5)
	Female	10,437 (50.1, 0.4)	2,422 (52.1, 0.8)	1,866 (53.6, 1.0)	902 (51.8, 1.5)
Age group	Up to 25	1,134 (11.6, 0.4)	600 (18.7, 0.8)	225 (14.5, 1.0)	157 (12.3, 1.0)
	26-49	5,918 (36.0, 0.4)	2,115 (47.9, 0.9)	1,181 (42.8, 1.2)	844 (47.5, 1.6)
	50-64	4,876 (25.1, 0.3)	960 (21.2, 0.7)	847 (24.3, 0.9)	335 (21.5, 1.1)
	65+	7,567 (27.3, 0.4)	743 (12.2, 0.6)	963 (18.4, 0.7)	332 (18.7, 1.1)
Education	Less than high school	992 (6.1, 0.3)	1029 (27.2, 1.0)	378 (11.3, 0.8)	73 (7.5, 0.7)
	High school	7,758 (42.7, 0.5)	1,864 (44.0, 0.9)	1,535 (52.0, 1.1)	382 (28.7, 1.5)
	Associate and bachelor	7,469 (34.9, 0.5)	1,206 (23.7, 0.8)	944 (27.3, 1.0)	710 (40.0, 1.4)
	Master or higher	3,192 (14.2, 0.3)	290 (5.0, 0.3)	341 (9.3, 0.6)	491 (24.8, 1.3)
Marital status	Single/never married	3,268 (19.3, 0.4)	1,143 (29.3, 0.8)	1,074 (40.3, 1.2)	371 (23.1, 1.3)
	Married/living with a partner	10,264 (64.0, 0.4)	2,256 (58.4, 1.0)	990 (40.4, 1.1)	1,022 (68.1, 1.5)
	Widowed/divorced/separated	5,291 (16.7, 0.3)	795 (12.3, 0.5)	898 (19.3, 0.8)	176 (8.8, 0.8)
Health insurance	None	909 (5.4, 0.2)	849 (22.1, 1.0)	256 (9.9, 0.7)	69 (3.7, 0.5)
	Private	9,126 (54.6, 0.6)	1,867 (41.6, 1.0)	1,271 (44.5, 1.1)	1,106 (65.0, 1.6)
	Public	9,460 (40.1, 0.5)	1,702 (36.2, 1.1)	1,689 (45.6, 1.2)	493 (31.2, 1.6)
Region	Northeast	3,338 (18.8, 0.7)	548 (14.4, 1.2)	390 (14.3, 1.3)	295 (22.0, 2.0)
	Midwest	5,317 (26.8, 0.7)	382 (7.7, 0.8)	479 (13.3, 1.0)	169 (10.0, 1.0)
	South	6,551 (34.6, 0.9)	1,705 (39.2, 2.1)	2,041 (64.2, 1.7)	397 (24.7, 1.9)
	West	4,289 (19.9, 0.8)	1,783 (38.7, 1.9)	306 (8.1, 0.7)	807 (43.2, 2.4)

Table 2 (Continued). Socio-demographic and clinical characteristics of participants by race/ethnicity (unweighted N = 28,797)

Variable		Race/ethnicity			
		White: N = 19,495	Hispanic: N = 4,418	Black: N = 3,216 (SD)	Asian: N = 1,668 (SD)
Urban-rural	Urban	15,783 (82.1, 0.5)	4,152 (94.6, 1.0)	2,887 (91.4, 1.3)	1,629 (98.1, 0.4)
	Rural	3,712 (17.9, 0.6)	266 (5.4, 1.0)	329 (8.6, 1.3)	39 (1.9, 0.4)
DMC due to cost in the past 12 months	Yes	1,151 (6.5, 0.2)	411 (9.6, 0.6)	238 (8.7, 0.6)	56 (3.2, 0.5)
	No	18,219 (93.5, 0.2)	396 (90.4, 0.6)	2,928 (91.3, 0.6)	1,589 (96.8, 0.5)
DMC in the past 12 months due to a lack of RT	Yes	1,107 (5.8, 0.3)	331 (7.4, 0.5)	336 (11.2, 0.8)	75 (5.0, 0.7)
	No	17,649 (94.2, 0.3)	3,823 (92.6, 0.5)	2,613 (88.8, 0.8)	1,486 (95.0, 0.7)
Worried about paying bills if he got sick/had accident	Worried	7,440 (40.2, 0.5)	2,527 (59.7, 0.9)	1,389 (46.1, 1.2)	738 (45.3, 1.5)
	Not worried	11,967 (59.8, 0.5)	1,868 (40.3, 0.9)	1,785 (53.9, 1.2)	911 (54.7, 1.5)
Has a place of care	Yes	17,857 (91.2, 0.3)	3,743 (83.9, 0.8)	2,900 (89.6, 0.8)	1,445 (88.6, 0.9)
	No	1,520 (8.8, 0.3)	644 (16.1, 0.8)	273 (10.4, 0.8)	203 (11.4, 0.9)
Country of citizenship	US citizen	18,606 (98.6, 0.1)	3,042 (68.4, 1.0)	2,868 (95.5, 0.6)	1,148 (75.6, 1.5)
	Not citizen	240 (1.4, 0.1)	1,135 (31.6, 1.0)	108 (4.5, 0.6)	41 (8.6, 0.3)
Social activities	No/mild difficulty	18,590 (95.6, 0.2)	4,221 (95.9, 0.4)	3,013 (93.9, 0.5)	1,623 (97.4, 0.4)
	ED/impossible	894 (4.4, 0.2)	196 (4.1, 0.4)	199 (6.1 90.5)	44 (2.6, 0.4)
Ever smoked more 1,000 cigarettes	Yes	7,899 (39.4, 0.5)	1,020 (22.0, 0.8)	908 (26.0, 1.1)	28 (17.7, 1.1)
	No	11,044 (60.6, 0.5)	3,222 (78.0, 0.8)	2,109 (74.0, 7.1)	1,298 (82.3, 1.1)
CMDs	None	16,722 (87.4, 0.3)	3,815 (89.9, 0.5)	2,651 (86.4, 0.8)	1,485 (93.9, 0.7)
	Yes	2,263 (12.6, 0.3)	452 (10.2, 0.5)	38 (13.6, 0.8)	110 (6.1, 0.7)
Mental health services utilization	None	13,678 (71.7, 0.4)	3,523 (83.9, 0.6)	2,541 (82.4, 0.9)	1,411 (89.7, 0.8)
	Yes	5,404 (28.3, 0.4)	768 (16.1, 0.6)	529 (17.6, 0.9)	192 (10.3, 0.8)

Note. SD: Standard deviation; RT: Reliable transportation; DMC: Delayed medical care; & ED: Extreme difficulty

(13.6%), with the lowest proportion found among Asians (6.1%). A high proportion of Whites (28.3%) accessed mental health services, in contrast to only 10.3% of Asians who reported using mental health services. However, both Hispanics (16.1%) and Blacks (17.6%) reported a lower proportion of mental health service utilization compared to their white counterparts.

Concerning sociodemographic characteristics, Whites tended to be older; 27.3% were aged 65 years. In contrast, the Hispanic and Asian groups had a higher proportion of individuals aged 26-49 (47.9% and 47.5%, respectively), as shown in **Table 1**. Moreover, educational attainment was higher among Whites and Asians, with 14.2% of Whites and 24.8% of Asians holding a master's degree or higher. However, a substantial proportion of Hispanics (27%) had not completed high school. Marital status further illustrates these differences, with black participants exhibiting the highest percentage of individuals who were single or never married at 40.3%. In comparison, most Asian respondents were married or cohabiting at 68.1%, as shown in **Table 2**.

Regarding socioeconomic factors and healthcare access, **Table 2** also shows a significantly higher percentage of Hispanics (22.1%) lacking health insurance than their counterparts, while most Whites (54.6%) and Asians (65.0%) reported having private insurance coverage. Hispanics (9.6%) and Blacks (8.7%) were more likely to report postponing medical care due to cost compared to Whites (6.5%) and Asians (3.2%). Black participants (11.2%) were likely to delay care due to unreliable transportation. A significant proportion of Hispanic participants (59.7%) expressed considerable anxiety regarding their ability to cover medical expenses in the event of an illness or injury. Regarding the region of residence, black participants lived predominantly in the South (64.2%), whereas Hispanics (38.7%) and Asians (43.2%) lived in the West.

Furthermore, urban residency is nearly ubiquitous among Asians (98.1%) and Hispanics (94.6%), starkly contrasting with 17.9% of Whites residing in rural areas. Additionally, citizenship status varies considerably within this demographic, with non-citizens representing 31.6% of the Hispanic population, compared to just 1.4% among Whites, 4.5% among Blacks, and 8.6% among Asians. Health and behavioral characteristics further illustrate differences between racial and ethnic groups. Whites reported the highest prevalence of a history of smoking more than 1,000 cigarettes (39.4%), whereas Asians displayed the lowest prevalence at 17.7% (**Table 2**).

Bivariate Analysis

Table 3 summarizes the results of the bivariate analysis. Most independent variables, including sex, age group, race/ethnicity, education level, marital status, health insurance, region of residence, cost-related delays in medical care, lack of reliable transportation, financial concerns

Table 3. Bivariate analysis–Association between mental health service utilization and independent variables

Variable		Mental health services utilization		Chi-square	df	p
		Yes (N = 7,102, %)	No (N = 22,420, %)			
Sex	Male	2,390 (36.2)	11,067 (52.6)	571.24	1	< 0.001
	Female	4,708 (63.8)	11,351 (47.4)			
Age group	Up to 25	611 (15.2)	1,605 (13.0)	95.32	3	< 0.001
	26-49	2,820 (43.0)	7,562 (39.0)			
	50-64	1,728 (22.7)	5,455 (24.3)			
	65+	1,943 (19.1)	7,798 (0.3)			
Race	Non-Hispanic Whites	5,404 (76.2)	13,678 (59.9)	615.22	4	< 0.001
	Hispanics	768 (12.2)	3,523 (19.7)			
	Non-Hispanic Blacks	529 (8.9)	2,541 (12.9)			
	Asians	192 (2.8)	1,413 (7.5)			

Table 3 (Continued). Bivariate analysis–Association between mental health service utilization and independent variables

Variable		Mental health services utilization		Chi-square	df	p
		Yes (N = 7,102, %)	No (N = 22,420, %)			
Level of education	Up to high school	463 (7.6)	1,985 (11.4)	108.54	2	<0.001
	High school	2,702 (42.2)	8,823 (43.5)			
	Associate/bachelor	2,717 (36.0)	7,650 (33.0)			
	Master and professional	1,185 (14.2	3,102 (12.1)			
Marital status	Single	1,694 (27.1)	4,367 (23.1)	132.74	2	< 0.001
	Married/partner	3,263 (54.4)	11,550 (62.2)			
	Widowed/divorced/separated	2,008 (18.5)	5,286 (14.7)			
Health insurance	Yes	6,877 (96.5)	20,100 (91.3)	201.40	1	< 0.001
	No	222 (3.5)	1,525 (8.7)			
Region of residence	Northeast	1,126 (17.1)	3,329 (17.3)	61.20	3	< 0.001
	Midwest	1,769 (24.0)	4,571 (19.7)			
	South	2,483 (36.1)	8,197 (39.2)			
	West	1,724 (22.9)	5,558 (23.8)			
Urban-rural	Urban	6,005 (85.6)	18,308 (86.3)	2.49	1	0.195
	Rural	1,097 (14.4)	3,347 (13.7)			
DMC due to cost in the past 12 months	Yes (1)	690 (10.2)	1,205 (6.2)	124.44	1	< 0.001
	No (2)	6,406 (89.8)	20,444 (93.8)			
Delayed care in the past 12 months due to a lack of RT	Yes (1)	687 (9.6)	1,244 (5.9)	110.39	1	< 0.001
	No (2)	6,250 (90.4)	19,862 (94.1)			
Worried about paying bills if he got sick or had an accident	Yes (1)	3,443 (49.9)	8,719 (43.3)	92.84	1	< 0.001
	No (2)	3,650 (50.1)	12,885 (56.7)			
Has a place of care	Yes (1)	6,727 (94.4)	19,851 (87.9)	239.42	1	< 0.001
	No (2)	375 (5.6)	2,353 (12.1)			
Able to do social activities	Not difficult (1)	5,234 (72.5)	20,711 (92.9)	2,105.99	1	< 0.001
	Impossible (2)	1,865 (27.5)	1,695 (7.1)			
Country of citizenship	US Citizen	6,788 (96.9)	19,489 (89.9)	327.99	1	< 0.001
	Not citizen	184 (3.1)	1,720 (10.1)			
Social activities	No/mild difficulty	3,090 (90.1)	10,992 (98.0	1,013.2	1	< 0.001
	ED/impossible	347 (9.9)	253 (2.0)			
Ever smoked 1,000 cigarettes	Yes (1)	2,945 (39.5)	7,401 (31.4)	153.29	1	< 0.001
	No (2)	4,072 (60.5)	13,998 (68.6)			
CMDs	None	5,080 (71.4)	20,140 (93.3)	2,330.12	1	< 0.001
	Yes	1,957 (28.3)	1365 (6.5)			

Note. SD: Standard deviation; RT: Reliable transportation; DMC: Delayed medical care; & ED: Extreme difficulty

regarding illness, usual place of care, challenges with social activities, citizenship status, presence of common health disorders, and smoking history were associated with mental health service utilization among US adults. These variables have p-values below 0.001, indicating a statistically significant association with mental health service use. Urban-rural residence was the only variable that did not achieve statistical significance (p = 0.195), indicating no meaningful difference in mental health service use based on geographic classification in this dataset.

Multivariate Analysis

Table 4 summarizes the results of the multivariate associations between various sociodemographic, health, and behavioral factors and the likelihood of receiving mental health services among US adults. In this model, the adjusted odds ratios (AORs) and their corresponding 95% CIs provided insight into the strength of the association after controlling all other variables in the model.

Predisposing factors

Compared with Whites, Hispanics, Blacks, and Asians had significantly lower odds of receiving mental health treatment, with AORs of 0.586 (95% CI: 0.517-0.665), 0.463 (95% CI: 0.398-0.539), and 0.326 (95% CI: 0.266-0.399), respectively. This pattern indicates that minority groups, particularly Asians and Blacks, were considerably less likely to access mental health services than Whites.

Sex was a strong predictor of mental health services utilization. Females were nearly twice as likely to receive mental health services as males (AOR of 1.880 [95% CI: 1.746-2.024]). This finding suggests that after adjusting for other factors, sex played a critical role in mental health service engagement.

Regarding age, younger adults were significantly more likely to receive treatment than individuals aged 65 and older. Specifically, individuals aged ≤ 25 years had an AOR of 2.114 (95% CI: 1.785-2.504), those aged 26-49 years had an AOR of 1.854 (95% CI: 1.664-2.074), and those aged 50-64 years had an AOR of 1.404 (95% CI: 1.254-1.572). These results imply that mental health service utilization decreases with advancing age.

Educational attainment was positively associated with the utilization of mental health services. Compared with individuals with less than a high school education, those with a high school diploma (AOR = 1.311, 95% CI: 1.113-1.545), an associate or bachelor's degree (AOR = 1.685, 95% CI: 1.435-1.979), and a master's or professional degree (AOR = 2.187, 95% CI: 1.832-2.612) showed progressively higher odds of receiving mental health treatment.

Marital status also differentiates treatment utilization. When single individuals served as the reference group, married individuals (AOR = 0.801, 95% CI: 0.682-0.939) were less likely to receive treatment and those who were divorced/widowed (AOR = 1.089, 95% CI: 0.919-1.291) were slightly more likely to

Table 4. Multivariate associations of race/ethnicity with mental health treatment using logistic regression analysis

Variable		AOR	95% CI
Race/ethnicity	Whites	1	
	Hispanics	0.586	0.517-0.665
	Blacks	0.463	0.398-0.539
	Asians	0.326	0.266-0.399
Sex	Male	1	
	Female	1.880	1.746-2.024
Age group	Up to 25 years	2.114	1.785-2.504
	26-49 years	1.854	1.664-2.074
	50-64 years	1.404	1.254-1.572
	65+ years	1	
Education attainment	Less than high school	1	
	High school	1.311	1.113-1.545
	Associate/bachelor	1.685	1.435-1.979
	Master/professional	2.187	1.832-2.612
Marital status	Single	1	
	Married/divorced	0.801	0.682-0.939
	Divorced/widowed	1.089	0.919-1.291
Health insurance	No	1	
	Private	1.983	1.655-2.375
	Public	2.272	1.877-2.750
Region of residence	Northeast	1.006	0.891-1.135
	Midwest	1.202	1.078-1.341
	South	0.965	0.875-1.064
	West	1	
Urban-rural	Urban	1	
	Rural	0.988	0.893-1.094
DMC due to cost in the past 12 months	Yes	1.321	1.133-1.539
	No	1	
Delayed care in the past 12 months due to lack of RT	Yes	1.149	0.989-1.336
	No	1	
Worried about paying bills if he got sick or had an accident	Yes	1.210	1.124-1.303
	No	1	
Has a place of care	Yes	2.197	1.875-2.575
	No	1	
Country of citizenship	US citizen	2.624	2.157-3.191
	Not citizen	1	
Social activities	Not difficult	1	
	ED/impossible	2.337	1.977-2.763
Ever smoked 1,000 cigarettes	Yes	1.530	1.419-1.650
	No	1	
CMDs	Yes	4.287	3.861-4.760
	None	1	

Note. RT: Reliable transportation; DMC: Delayed medical care; & ED: Extreme difficulty

receive treatment, but the difference was not statistically significant.

Enabling resources

Individuals with private insurance (AOR = 1.983, 95% CI: 1.655-2.375) and public insurance (AOR = 2.272, 95% CI: 1.877-2.750) were significantly more likely to access mental health treatment than those without insurance. Regarding geographic variation, participants residing in the Midwest had slightly higher odds of accessing mental services (AOR = 1.202, 95% CI: 1.078-1.341) than those residing in the West. However, individuals who reported delaying medical care due to costs in the past 12 months had increased odds of accessing mental health treatment (AOR = 1.321, 95% CI: 1.133-1.539). Similarly, individuals worried about paying bills if they became sick or injured were more likely to access mental health services (AOR = 1.210, 95% CI: 1.124-1.303) than those who were not worried. Furthermore, having a usual place of care markedly increases the likelihood of receiving treatment (AOR = 2.197, 95% CI: 1.875-2.575), as does being a U.S. citizen (AOR = 2.624, 95% CI: 2.157-3.191), compared to non-citizens.

Need factors

The presence of CMDs emerged as the most critical need factor; individuals with CMDs had over four times the odds of accessing mental health services (AOR=4.287; 95% CI: 3.861-4.760) compared to those without such disorders. Additionally, behavioral factors, such as a history of smoking (ever smoked 1,000 cigarettes; AOR=1.530; 95% CI: 1.419-1.650) and difficulties in engaging in social activities, had more than double the odds (AOR = 2.337, 95% CI: 1.977-2.763) of receiving mental health treatment compared to those who experienced no difficulty.

DISCUSSION

The study examined factors associated with mental health service utilization among US adults. Our analysis revealed

several significant predictors of mental health service use. Notably, racial/ethnic minority groups, specifically Hispanics, Blacks, and Asians, had considerably lower odds of receiving treatment compared to Whites. In addition, predisposing factors such as females, younger adults, and those with higher levels of education were more likely to utilize mental health services. Enabling resources such as insurance coverage, having a usual place of care, and US citizenship substantially increased the likelihood of service use. Finally, need factors, particularly the presence of CMDs and difficulties in engaging in social activities, were strongly associated with increased treatment utilization.

Consistent with prior studies [42-44], we reported racial/ethnic disparities in the utilization of mental health services among adults. Whites demonstrated higher utilization rates than minority participants, partly because of reduced cultural stigma, fewer systemic barriers, and greater access to resources [45]. However, despite having high educational attainment and high rates of health insurance coverage on average, adults of Asian background consistently use mental health services at much lower rates than other racial and ethnic groups [46]. National survey data indicate that, in 2023, for instance, Asian American adults were about 50% less likely to have received any mental health treatment (such as counseling or psychiatric medication) compared to non-Hispanic White adults [47].

The low utilization of mental health services among Asians in the United States is driven by a combination of cultural, familial, systemic, and linguistic barriers. Culturally, stigma around mental illness and the desire to “save face” discourage individuals from seeking help, as admitting to psychological distress is often viewed as a personal and familial failure that brings shame [48]. Within families, mental health issues are often dismissed due to a focus on physical symptoms and a cultural emphasis on emotional restraint and self-reliance, which makes open discussions about mental health taboo [49]. Systemically, Asian Americans often encounter a lack of culturally competent care, with a limited number of providers who understand their linguistic and cultural backgrounds. This situation leads to miscommunication, feelings of invalidation, and mistrust in therapy [50]. Even among educated and insured individuals, language remains a significant barrier, as many do not have access to providers who speak their native languages or understand culturally specific ways of expressing distress [48]. Together, these factors create a landscape in which Asian Americans are less likely to seek or benefit from available mental health services.

Females were nearly twice as likely as males to seek treatment. Several factors may explain the increased use of mental health services among women. Differences in brain structure, stress responses, and societal norms surrounding help-seeking behaviors account for this difference [51]. Men are less likely to seek help because of stigma and fear of being perceived as weak [52].

Younger adults reported a higher usage of mental health services compared to those aged 65 years and older. Younger individuals, particularly adolescents and young adults, are more inclined to seek mental health care due to increased vulnerability during critical developmental stages, as well as unique stressors such as peer and academic pressures and the influence of social media [53]. Educational attainment also played a significant role, as higher levels of education are linked to increased health literacy, enhanced socioeconomic status, and improved navigation of healthcare systems, all of which encourage service use [54]. Consistent with previous research [55, 56], individuals with either private or public insurance were substantially more likely to receive mental health treatment compared to the uninsured. Health insurance was associated with increased accessibility to mental health care, thereby enabling its utilization [57].

The relationship between marital status and health service utilization has been the subject of considerable debate, with divergent findings. Our study revealed that married individuals were significantly less likely to use mental health services than those who were single. Research indicates that individuals who are separated, divorced, or never married exhibit poorer health status than married individuals do and tend to access mental health services more frequently than their married counterparts [58]. Marriage often offers social and emotional support for mental health. As a result, married individuals may utilize mental health services less frequently [59]. However, the protective effects of marriage may vary based on the quality of the marital relationship and other contextual factors [60]. These divergent findings underscore the complex relationships between marital status, social support, the presence of children, and healthcare utilization, highlighting the need for further research in this area.

Our finding, showing a lack of significant difference in mental health service utilization between urban and rural areas (OR = 0.988; 95% CI 0.893-1.094) stands in contrast to a large body of evidence documenting consistent urban-rural gaps in specialty care. The study in [22] summarized 53 studies showing that people living outside major metropolitan centers are less likely to initiate and complete treatment, face markedly higher suicide burdens, and contend with much lower clinician supply–approximately one third to one sixth the density of mental health nurses, psychiatrists, and psychologists observed in cities. Similar utilization deficits have been demonstrated in population surveys [61].

The literature attributes these disparities to an interconnected set of structural and attitudinal barriers: fewer providers and frequent staff turnover, longer travel distances and higher transport costs, limited broadband capacity that constrains tele-mental-health, complex and fragmented referral pathways, and culturally rooted factors such as stoicism, stigma, confidentiality concerns in small communities, and lower mental-health literacy. The lack of a significant effect reported in our study may reflect methodological differences, such as broader service definitions, recent telehealth expansions that reduce distance barriers, or insufficient statistical power to detect slight rural-urban contrasts, rather than an absence of inequity. Further longitudinal analyses incorporating service modality (in-person versus virtual) and detailed measures of geographic accessibility are needed to clarify whether the traditional urban-rural differential is narrowing or simply undetected in our sample.

Contrary to the prevailing literature [62, 63], which shows that cost - related delays, transportation problems, and financial anxiety depress mental-health service use, our data indicate that respondents reporting these barriers were more likely to have obtained mental health care in the past year. Several mechanisms may account for this counterintuitive pattern. First, reverse causality or reverse temporal ordering is plausible: individuals who eventually secure treatment often confront new out-of-pocket expenses, missed work time, or

logistical hurdles, and consequently, retrospectively endorse cost or transport barriers even though those barriers did not ultimately prevent care [64]. Second, our barrier items pertain to any medical care, whereas our outcome focuses specifically on mental health services; people with high psychological distress are heavy users of general health services and thus have more opportunity both to experience obstacles and to seek mental health care once need becomes acute. Finally, residual confounding by severity of illness may persist: financial strain and transportation insecurity are themselves social determinants that heighten psychological distress [65]. Respondents experiencing both elevated need and structural adversity may therefore be more motivated to overcome obstacles and engage with care, yielding the positive associations we observed. Longitudinal designs that can establish the sequence of barrier onset, perceived need, and service use, as well as models that adjust for illness severity, will be essential to disentangle these dynamics in future research.

The presence of CMDs emerged as the most critical need factor; individuals with these disorders were over four times more likely to access mental health services (AOR = 4.287; 95% CI: 3.861-4.760) compared to those without such disorders. Additionally, behavioral factors, such as a history of smoking (ever smoked 1,000 cigarettes; AOR = 1.530; 95% CI: 1.419-1.650) and difficulties in engaging in social activities, were more than twice as likely (AOR = 2.337, 95% CI: 1.977-2.763) to receive mental health treatment compared to those who experienced no difficulty.

The findings underscore the critical role of need factors in predicting mental health service utilization, with significant implications for clinical practice and public health policy. The strong association between CMDs and service access (AOR = 4.287) aligns with recent evidence demonstrating that symptom severity remains the primary driver of help-seeking behavior [66, 67]. This pattern persists despite systemic improvements in general medical care for moderate CMD cases observed in Dutch cohort studies [67], suggesting ongoing treatment gaps for subclinical populations.

Notably, the elevated odds of service use among smokers (AOR = 1.530) reflect the well-documented comorbidity between mental health conditions and nicotine dependence. Current data indicate that adults with behavioral health conditions smoke at rates 2-3 times higher than the general population [68, 69], creating complex treatment challenges where nicotine addiction may both exacerbate psychiatric symptoms and serve as a coping mechanism. This dual relationship underscores the need for integrated treatment models that address substance use concurrently with mental health interventions [69].

The elevated odds ratio for social participation difficulties (AOR = 2.337) highlights the significant relationship between functional impairment and service utilization. Recent qualitative research identifies social alienation and skill deficits as substantial barriers to community reintegration [70], indicating that impaired social functioning may serve as both a predictor of help-seeking and a target for psychosocial interventions. This finding supports the WHO's emphasis on functional outcomes in mental health care, particularly given evidence that social participation mediates long-term recovery trajectories [71].

These results should be interpreted within the context of ongoing systemic barriers identified in recent literature. While need factors dominate individual-level predictors, structural obstacles such as financial constraints, service availability, and stigma continue to impact marginalized populations disproportionately [66]. The observed patterns may indicate residual confounding from these systemic factors, as evidenced by persistent disparities in treatment access across socioeconomic groups [71].

Behavioral factors, including a history of smoking and difficulties in social engagement, further emphasized the role of underlying health needs in driving service use. These findings align with studies by Biener and Zuvekas, who documented that the severity of mental health conditions markedly influences the demand for care [72].

CONCLUSION

Limitations

Our analysis is subject to several limitations. First, the cross-sectional design precludes establishing causality. Second, while our model accounts for many confounding variables, residual confounding from unmeasured factors, such as cultural attitudes toward mental health or regional variations in mental health resources, may persist. Finally, while our sample is large, the generalizability to all U.S. adults, especially those with severe mental illnesses or from underrepresented regions, may be limited. Relying on self-reported data may introduce recall or social desirability bias. While the NHIS data are nationally representative, they exclude institutionalized populations, such as those in prisons or long-term care facilities, which may lead to an underestimation of the true prevalence of CMDs and service utilization. The study did not account for stigma, health literacy, specific cultural, environmental, or contextual factors that may influence access to mental health services.

Implications and Future Directions

The observed disparities have significant implications for policy and practice. Our findings suggest that mental health service utilization interventions should target multiple domains. Policy initiatives that expand insurance coverage, enhance access to primary care, and reduce financial barriers could help mitigate some of the observed disparities. Additionally, culturally tailored outreach programs may help bridge the gap in treatment use among racial/ethnic minority groups minorities [73, 74]. To expand insurance coverage, the Centers for Medicare & Medicaid Services recently restored record-level grants for affordable care act "navigator" programs and directed awardees to place bilingual assisters in Black, Hispanic, and Asian neighborhoods with high uninsured rates, a policy move that boosted Marketplace enrollment among Black adults by 95% within one year [75]. Develop targeted outreach programs for smokers with mental health conditions using mobile health technologies and train primary care providers in stepped-care models that address subclinical CMD presentations. Implement routine functional assessments (including social participation metrics) in mental health screening protocols. Future research should explore longitudinal designs to assess causal pathways and investigate the impact of emerging policies, such as Medicaid expansion, on reducing disparities. Moreover, qualitative studies could provide deeper insights into the cultural and attitudinal

barriers that persist even after adjusting for enabling and need factors.

Conclusion

In conclusion, this study emphasizes the complex interplay of predisposing, enabling, and need factors in shaping mental health service utilization among US adults. Minority groups, particularly Asians and Blacks, along with other factors such as gender, age, education, insurance status, and the presence of mental disorders, contribute to significant disparities in access to mental health care. These findings, consistent with and extending previous research, highlight the urgent need for multifaceted interventions and policies to reduce these disparities and improve equitable access to mental health services. Continued research and targeted policy actions are crucial to addressing these persistent gaps and promoting mental health equity across diverse populations.

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