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ORIGINAL PAPER

# Mental Health Service Use, Barriers, and Service Preferences During COVID-19 among Low-Income Housing and Market-Rate Housing Residents of Harlem in New York City

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## Abstract

This study examined the differences in mental health service use, barriers, and service preferences among 393 low-income housing (LIH) and market-rate housing (MRH) Harlem residents in New York City. One-third (34.6%) endorsed the need for professional support for psychological issues, 27.2% and 15.8% reported using counseling services and psychotropic medication, with no differences between housing types. LIH residents (21.6–38.8%) reported significantly higher use of all types of mental health resources (e.g., websites, anonymous hotlines, self-help tools) compared with MRH residents (16.1–26.4%). Eighty-six percent reported barriers to mental health access, with LIH residents reporting more than double the barriers. Particularly, LIH residents reported greater difficulty getting time off work (34.1% vs. 14%), lack of health insurance (18.7% vs. 9.8%), lack of trust in mental health providers (14.6% vs. 4.7%), and stigma (12.2% vs. 5.1%) compared with MRH residents. Residents most preferred places of services were health clinics and houses of worship; provided by healthcare and mental health providers; and services delivered in-person and phone-based counseling. In contrast, residents least preferred getting support at mental health clinics; from family/friends; and by the Internet. No differences were found between service preferences by housing type. LIH residents reported higher use of mental health services and resources, but they face significantly more barriers to mental health care, suggesting a need to address specific barriers. Preferences for mental health services suggest a need for expanding mental health services to different settings given the low preference for services to be delivered at mental health clinics.

**Keywords** Mental health · Low-income housing · Mental health service · Minoritized population · Barriers to care · New York City

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## Background

The COVID-19 pandemic has had a significant impact on the mental health of New York City (NYC) residents, particularly minoritized people, who have been disproportionately affected in terms of infection, hospitalization, and mortality [1]. More than a third of adult New Yorkers (34.3%) reported experiencing symptoms of depression and anxiety in the last two weeks of March 2020 [2], which is over twice the percentage seen prior to the pandemic in New York State (15.1%). Poor mental health persisted among New Yorkers throughout the pandemic, with rates reaching 37.0% in October 2020 [3]. Minoritized people consistently reported the highest rates of poor mental health over the course of the study [3]. COVID-19 has exacerbated anxiety and stress, which, in conjunction with pre-existing health disparities and systemic inequalities, has resulted in a heightened

need for mental health support services in NYC [4]. As a result, mental health professionals and organizations have responded to the surge in demand by introducing innovative measures such as teletherapy, support groups, and crisis hotlines. For example, NYC Well, the city's mental health services experienced a 185% increase in demand between March–April 2020 while the National Alliance on Mental Illness received a 60% rise in callers seeking help during the same period [5]. To better understand the mental health needs of NYC residents and how to effectively meet them, it is important to examine their preferences for mental health services, especially in the context of the pandemic and the increased demand for services.

Despite an overall increased demand for mental health services, minoritized communities are less connected to mental health resources than white communities. More than half of white residents in NYC with depression (58.3%) self-reported as having received mental healthcare in 2017 compared to 30.3% and 39.3% of Black and Latino residents, respectively [6]. Furthermore, COVID-19 has further disrupted the delivery of mental health care [7], with up to 25% of adult New Yorkers with anxiety and/or depression symptoms reporting an unmet need for mental health services [8]. Therefore, assessing specific barriers that minoritized populations face when accessing mental health care plays a key role in addressing unmet needs. Tailored interventions that are culturally appropriate and designed to meet the specific needs and preferences of patients from diverse backgrounds have been shown to improve the uptake and effectiveness of health information and programs, leading to better healthcare outcomes and reduced inequalities [9, 10]. Understanding the specific needs and experiences of minoritized populations is crucial to providing personalized services and tailored care that addresses their unique challenges and barriers, enhances accessibility, and improves health outcomes for these communities.

Harlem, is one of the poorest neighborhoods in NYC, with over one-fifth of all households living below the federal poverty level. It also has a long history of being underserved, with 13% of all adult residents lacking health insurance and 1 in 9 Harlem adult residents going without needed medical care [11–13]. The NYC Housing Authority (NYCHA) which is the largest public housing authority in the nation aimed to provide decent, affordable housing for low- and moderate-income New Yorkers. NYCHA is home to 1 in 17 new Yorkers, providing affordable housing to 528,105 residents, which is larger than the population of Atlanta, Miami or Sacramento. Manhattan has the largest number of NYCHA developments, with 99,777 residents [14]. Previous studies in NYC have primarily focused on the psychological impacts of COVID-19 among healthcare workers [15–18], medical trainees [19], and college students [20]. Although a few studies have assessed the utilization of mental health services among older Chinese immigrants before COVID-19 [21], and preferences for mental health support among healthcare workers during the pandemic [22], there is a gap in the evaluation of minoritized population. This study aimed to compare the mental health needs, usage, barriers to accessing care, and preferences between low-income housing (LIH) and market-rate housing (MRH) residents among a predominantly minoritized sample in Harlem, Northern Manhattan, NYC during the pandemic.

## Methodology

### Study Design and Sample Size

This online cross-sectional survey was conducted through Qualtrics between April and September 2021. The survey was open to individuals who reported living in Harlem, NYC and were at least 18 years old. To ensure eligibility, a rigorous procedure was implemented [23, 24], including the use of honeypot questions to prevent bots, verification of responses through e-mails and phone calls; and confirmation of address on Whitepages.com. The final sample included 393 individuals who met the criteria and were included in the analyses.

### Measurements

*Needs, usage, and satisfaction with mental health services* included three single items: (1) whether participants needed professional support for psychological or emotional issues since the start of the pandemic in March 2020 (yes vs. no); (2) a history of receiving counseling or therapy from a mental health professional since COVID-19 (yes vs. no); and (3) satisfaction level of participants who received mental health counseling/therapy, rated on a 3-point scale (not at all satisfied, a little satisfied, and satisfied).

*Attitude towards mental health services* were evaluated by asking participants to rate their likelihood of using seven different mental health services. These services included options such as "*Websites with useful information and referral sources*" and "*Confidential but not anonymous online counseling and therapy services.*" Participants were asked to indicate their levels of usage: currently use, would consider using them if needed, or would not use them. To simplify the analysis, these items were dichotomized as either currently used (yes) or not currently used (no).

*Preferences for mental health services* were assessed across three domains including place of service delivery, providers, and modalities. Each domain included 7 options, and participants were asked to rank their preferences from 1 to 7, with a higher rank indicating a lower preference. Preferences for the place of receiving services included

options such as doctor's offices or health clinics, residential buildings, and community gardens. Preferences for service providers encompassed choices such as healthcare providers and professional mental health providers. Preferences for service modalities comprised of in-person meetings, phone consultations, etc.

*Barriers to accessing mental health services* included a list of 13 barriers that participants reported as hindering their access to mental health care. Experiencing any barriers was defined as responding to at least one of the identified barriers. The responses also were summarized into a score ranging from 0 to 13, with higher scores indicating a greater number of barriers to accessing mental health services. For example, "*I do not know where to get help*," or "*I do not have adequate transportation.*"

*Demographic characteristics*: We examined several demographic variables including age (in years), gender (male, female, or other), race/ethnicity (white or non-white), place of birth (born inside or outside the U.S.), marital status (currently married or not), household size (ranging from only yourself to 3–8 people), educational attainment (from high school or less to bachelor or graduate degree), employment status (employed or unemployed), the impact of COVID-19 on work (yes or no), annual income (categorized as <$25K, $25K-$49K, ≥$50K) and health insurance or health coverage plan (yes vs. no). Furthermore, participants' self-reported housing type was gathered and categorized into LIH, including affordable housing and public housing (NYCHA), and MRH, which refers to rented housing in the private market.

### Statistical Analysis

Numeric variables were summarized by presenting their means and standard deviations (SD), while categorical variables were presented as frequencies and percentages. Statistical testing were conducted using t-tests, Fisher's exact test, and Chi-squared tests to examine differences and associations between demographics, mental health needs, usage, preferences as well as barriers with housing types. Data were cleaned and analyzed using STATA version 17.

## Results

### Demographic Characteristics of Participants

Of 393 residents, the mean age was 34.7 (SD = 8.9) with most ranging from 30 to 39 years old (48.6%). More than half were female (53.7%) and one-third were white individuals (35.1%). Most of the participants (92.1%) were born in the U.S. and the majority were currently married (70.0%). About three-quarters reported living with 3–8 people (73.0%) and having at least an associate's or college degree or higher (72.3%). Approximately 19.1% experienced unemployment and 67.9% had work changed during the COVID-19 pandemic. Most respondents (57.3%) had an annual income between $25K and $49K, and 92.9% reported having health insurance or health coverage plan. Approximately two-thirds of the participants lived in market-rate housing, while 35.4% resided in low-income housing (Table 1).

### Mental Health Services Need, Usage, and Satisfaction

Overall, 34.6% of residents showed a need for professional support for psychological or emotional issues since the beginning of the pandemic in NYC, of which 78.7% received counseling/therapy from mental health professionals. Among those who received mental health services, more than two-thirds reported being satisfied or very satisfied with their care. The percentages of residents who self-reported using counseling services and psychotropic medication among all participants were 27.2% (107/393) and 15.8% (62/393), respectively. The current use for mental health services ranged from 19.3% (e.g., using text-based support or anonymous phone counseling) to 28.5% (e.g., using websites with useful information and referral sources). The use of anonymous online counseling and therapy (27.2%) and self-management or wellness guidebooks (27.0%) were among the most common uses of mental health services. LIH residents were almost twice as likely as MRH residents to use anonymous online counseling and therapy services (38.8% vs. 20.9%, $p < 0.001$), anonymous phone counseling (25.2% vs. 16.1%, $p = 0.033$), and text-based support (28.8% vs. 14.2%, $p < 0.001$) (Table 2).

### Barriers to Accessing Mental Health Services

LIH residents reported more barriers to accessing mental health services compared to MRH counterparts (2.2 vs. 1.7 out of 13, $p < 0.001$). A majority (85.8%) of residents reported facing barriers to mental health access. The top three barriers were inadequate transportation (34.6%), difficulty scheduling appointments (33.1%), and high costs (28.7%). When evaluating individual barriers, LIH residents reported more than twice as many barriers as MRH residents. Particularly, LIH residents reported greater difficulty getting time off work (34.1% vs. 14.0%, $p < 0.001$), lack of health insurance (18.7% vs. 9.8%, $p = 0.028$), lack of trust in mental health providers (14.6% vs. 4.7%, $p = 0.002$), less comfortable sharing about personal life and emotions (12.2% vs. 5.1%, $p = 0.032$), and a greater reluctance to disclose seeing a mental health providers (2.8% vs. 13.0%, $p < 0.001$) compared to MRH residents (Table 3).

**Table 1** Distribution of the demographic characteristics of Harlem residents and by housing type: 2021

| | Total N = 393 (100%) | Market-rate housing n = 254 (64.6%) | Low-income housing n = 139 (35.4%) | P-value[+] |
|---|---|---|---|---|
| Age, years (mean ± SD) | 34.7 ± 8.9 | 35.3 ± 9.3 | 33.5 ± 7.9 | 0.059 |
| Age groups | | | | 0.004 |
| 18–29 | 110 (28.0) | 62 (24.4) | 48 (34.5) | |
| 30–39 | 191 (48.6) | 120 (47.2) | 71 (51.1) | |
| 40–81 | 92 (23.4) | 72 (28.4) | 20 (14.4) | |
| Gender | | | | < 0.001 |
| Female | 211 (53.7) | 143 (56.3) | 68 (48.9) | |
| Male | 145 (36.9) | 75 (29.5) | 70 (50.4) | |
| Others | 37 (9.4) | 36 (14.2) | 1 (0.7) | |
| Ethnicity | | | | 0.51 |
| White | 138 (35.1) | 86 (33.9) | 52 (37.4) | |
| Not white | 255 (64.9) | 168 (66.1) | 87 (62.6) | |
| Born outside of the United States | | | | 0.25 |
| No | 362 (92.1) | 237 (93.3) | 125 (89.9) | |
| Yes | 31 (7.9) | 17 (6.7) | 14 (10.1) | |
| Being currently married | | | | 0.11 |
| No | 118 (30.0) | 69 (27.2) | 49 (35.3) | |
| Yes | 275 (70.0) | 185 (72.8) | 90 (64.7) | |
| Household size | | | | |
| Only yourself | 38 (9.7) | 12 (4.7) | 26 (18.7) | < 0.001 |
| Yourself and another | 68 (17.3) | 52 (20.5) | 16 (11.5) | |
| 3–8 people | 287 (73.0) | 190 (74.8) | 97 (69.8) | |
| Educational attainment | | | | 0.77 |
| High school and less | 109 (27.7) | 73 (28.7) | 36 (25.9) | |
| Associate's or college's degree | 205 (52.2) | 129 (50.8) | 76 (54.7) | |
| Bachelor or graduate degree | 79 (20.1) | 52 (20.5) | 27 (19.4) | |
| Respondents' unemployment status | | | | < 0.001 |
| Employed | 318 (80.9) | 185 (72.8) | 133 (95.7) | |
| Unemployed | 75 (19.1) | 69 (27.2) | 6 (4.3) | |
| Having work changed during COVID-19 | | | | 0.11 |
| No | 126 (32.1) | 74 (29.1) | 52 (37.4) | |
| Yes | 267 (67.9) | 180 (70.9) | 87 (62.6) | |
| Respondents' yearly income[++] | | | | |
| <$25K | 97 (25.1) | 55 (21.9) | 42 (30.9) | 0.11 |
| $25K-$49K | 222 (57.3) | 147 (58.6) | 75 (55.1) | |
| ≥$50K | 68 (17.6) | 49 (19.5) | 19 (14.0) | |
| Health insurance or health coverage plan | | | | 0.004 |
| No | 28 (7.1) | 11 (4.3) | 17 (12.2) | |
| Yes | 365 (92.9) | 243 (95.7) | 122 (87.8) | |

[+]T-test and Chi-squared tests; [++]Refused to answer (n = 6)

## Mental Health Services Preferences

Residents of LIH and MRH differed significantly in their preferred place of service delivery, provider type, and modality for mental health services, but the order of their preferences was similar. Overall, the most preferred locations for residents to receive mental health services were at a doctor's office or health clinic (mean = 2.5), followed by a house of worship and community-based organizations (means = 3.1 and 3.3, respectively). Residents were less inclined to receive mental health services at mental health clinics and community gardens (means = 4.3 and 4.2, respectively).

**Table 2** Prevalence of mental health services need, usage, and satisfaction among Harlem residents since the start of the pandemic and by housing type: 2021

| | Total<br>N = 393<br>n (%) | Market-rate housing<br>n = 254<br>n (%) | Low-income housing<br>n = 139<br>n (%) | P-value[+] |
|---|---|---|---|---|
| Seeking professional support for psychological or emotional issues | 136 (34.6) | 89 (35.0) | 47 (33.8) | 0.83 |
| Receiving counseling/therapy from mental health professionals (n = 136) | 107 (78.7) | 70 (78.7) | 37 (78.7) | 1.00 |
| Taking psychotropic medication to help with any emotions or with your concentration, behavior, or mental health | 62 (45.6) | 41 (46.1) | 21 (44.7) | 1.00 |
| Levels of satisfaction with mental health services (n = 107) | | | | 0.49 |
| Not at all/A little satisfied | 35 (32.7) | 20 (28.6) | 15 (40.5) | |
| Satisfied | 65 (60.8) | 45 (64.3) | 20 (54.1) | |
| Very satisfied | 7 (6.5) | 5 (7.1) | 2 (5.4) | |
| Attitude toward mental health services | | | | |
| Websites with useful information and referral sources | 112 (28.5) | 67 (26.4) | 45 (32.4) | 0.24 |
| Anonymous online counseling and therapy services | 107 (27.2) | 53 (20.9) | 54 (38.8) | < 0.001 |
| Anonymous phone counseling (counseling hotlines, crisis hotlines) | 76 (19.3) | 41 (16.1) | 35 (25.2) | 0.033 |
| Confidential but not anonymous online counseling and therapy services | 99 (25.2) | 56 (22.0) | 43 (30.9) | 0.068 |
| Text-based support | 76 (19.3) | 36 (14.2) | 40 (28.8) | < 0.001 |
| Self-management or wellness guidebooks | 106 (27.0) | 60 (23.6) | 46 (33.1) | 0.057 |
| Mental health phone applications | 88 (22.4) | 58 (22.8) | 30 (21.6) | 0.80 |

[+]Chi-squared or Fisher's exact tests

**Table 3** Prevalence of barriers to accessing mental health services among Harlem residents and by housing type: 2021

| | Total<br>N = 393 | Market-rate housing<br>n = 254 | Low-income housing<br>n = 139 | P-value[+] |
|---|---|---|---|---|
| Barriers to accessing MH services (0–13) | 1.9 ± 1.3 | 1.7 ± 1.2 | 2.2 ± 1.4 | < 0.001 |
| Any barriers | 337 (85.8) | 214 (84.3) | 123 (88.5) | 0.29 |
| Inadequate transportation | 117 (34.6) | 82 (38.1) | 35 (28.5) | 0.076 |
| Difficult scheduling appointments | 112 (33.1) | 68 (31.6) | 44 (35.8) | 0.47 |
| High MH cost | 97 (28.7) | 62 (28.8) | 35 (28.5) | 1.00 |
| Difficulty taking time off from work/school | 72 (21.3) | 30 (14.0) | 42 (34.1) | < 0.001 |
| In need of childcare | 67 (19.8) | 41 (19.1) | 26 (21.1) | 0.67 |
| Insurance plan with limited MH provider options | 59 (17.5) | 33 (15.3) | 26 (21.1) | 0.18 |
| Lack of information on accessing MH care | 50 (14.8) | 36 (16.7) | 14 (11.4) | 0.21 |
| Do not have health insurance | 44 (13.0) | 21 (9.8) | 23 (18.7) | 0.028 |
| Challenges with cultural understanding at local clinics | 47 (13.9) | 35 (16.3) | 12 (9.8) | 0.10 |
| Lack of trust in MH providers | 28 (8.3) | 10 (4.7) | 18 (14.6) | 0.002 |
| Less comfortable sharing about personal life and emotions | 26 (7.7) | 11 (5.1) | 15 (12.2) | 0.032 |
| Reluctance to disclose seeing MH providers | 22 (6.5) | 6 (2.8) | 16 (13.0) | < 0.001 |
| Services not available in customers' comfort language | 9 (2.7) | 3 (1.4) | 6 (4.9) | 0.078 |

[+]T-test and Chi-squared tests; MH: Mental health

Regarding provider references, residents expressed a preference for mental health services delivered by healthcare providers (mean = 2.6) and professional mental health providers (mean = 3.2). Residents demonstrated the least interest in receiving mental health services from peers who have had similar experiences or concerns and family or friends (means = 5.7 and 7.9, respectively). The most preferred service modality was in-person meetings (mean = 2.6), followed by phone consultations and the use of mental health and wellness apps (means = 3.1 and 3.2, respectively). Residents expressed the least interest in the internet-based calling (mean = 7.0; Table 4).

**Table 4** Mean scores for mental health services preferences in Harlem residents and by housing type: 2021

| | Total | Market-rate housing | Low-income housing | P-value[+] |
|---|---|---|---|---|
| | N = 393 | n = 254 | n = 139 | |
| Place of service delivery | | | | |
| Doctor's office or health clinic | 2.5 ± 1.6 | 2.6 ± 1.7 | 2.4 ± 1.6 | 0.35 |
| House of worship (church, temple, mosque, etc.) | 3.1 ± 1.7 | 2.9 ± 1.7 | 3.5 ± 1.6 | 0.002 |
| Community-based organization in the neighborhood | 3.3 ± 1.6 | 3.1 ± 1.5 | 3.6 ± 1.6 | 0.005 |
| Residential building | 3.7 ± 1.5 | 3.8 ± 1.4 | 3.5 ± 1.6 | 0.027 |
| Community garden | 4.2 ± 1.5 | 4.3 ± 1.4 | 3.9 ± 1.6 | 0.005 |
| Mental health clinic | 4.3 ± 1.8 | 4.3 ± 1.7 | 4.2 ± 1.9 | 0.57 |
| Provider preferences | | | | |
| Healthcare provider | 2.6 ± 1.8 | 2.5 ± 1.8 | 2.8 ± 1.9 | 0.14 |
| Professional mental health provider | 3.2 ± 1.7 | 3.0 ± 1.5 | 3.5 ± 1.8 | 0.002 |
| Service providers in the community | 3.6 ± 1.6 | 3.6 ± 1.6 | 3.7 ± 1.6 | 0.62 |
| Faith leader | 3.7 ± 1.9 | 3.8 ± 2.0 | 3.6 ± 1.9 | 0.41 |
| Service provider in the residential building | 4.6 ± 1.7 | 4.8 ± 1.6 | 4.3 ± 1.8 | 0.012 |
| Other people who have similar experiences or concerns | 5.7 ± 1.9 | 5.9 ± 1.8 | 5.5 ± 2.0 | 0.043 |
| Family or friends | 7.9 ± 0.7 | 7.9 ± 0.6 | 7.9 ± 0.7 | 0.98 |
| Modality preferences | | | | |
| In-person meeting | 2.6 ± 1.7 | 2.7 ± 1.7 | 2.4 ± 1.5 | 0.044 |
| On the phone | 3.1 ± 1.5 | 3.1 ± 1.5 | 3.2 ± 1.6 | 0.50 |
| Through mental health and wellness apps | 3.2 ± 1.5 | 3.2 ± 1.5 | 3.3 ± 1.5 | 0.62 |
| Group meeting | 3.5 ± 1.4 | 3.4 ± 1.4 | 3.6 ± 1.5 | 0.23 |
| Through text | 3.8 ± 1.7 | 3.6 ± 1.6 | 4.1 ± 1.7 | 0.008 |
| Other means of receiving counseling | 4.8 ± 1.6 | 5.0 ± 1.6 | 4.5 ± 1.7 | 0.005 |
| On the Internet through Internet-based calling | 7.0 ± 0.3 | 7.0 ± 0.3 | 7.0 ± 0.3 | 0.90 |

[+]T-tests; Higher mean indicates lower preference (on a scale of 1 to 7)

## Discussion

Our study showed a high demand for mental health services during the COVID-19 pandemic, with 34.6% of Harlem residents indicating a need for professional support for psychological or emotional issues. This aligns with NYC Health Opinion Poll in May 2020 [25], which reported that up to 44% and 36% of adult New Yorkers experienced symptoms of anxiety and depression during COVID-19, respectively. This is a significant increase from an approximately 9% of adult New Yorkers who experienced depression each year before the pandemic [26]. The increase in prevalence implying a high need for mental health services may be attributed to the economic downturn, as well as the stresses of maintaining vigilance and adhering to COVID-19 precautions, such as staying at home, physical distancing, and closure of non-essential business [4]. This is particularly concerning as Harlem is one of the poorest communities in New York and home to a large population of Black and Latino people [27] who have been disproportionately impacted by COVID-19 [4], with higher rates of COVID-19 related infection, hospitalization, and mortality [1]. However, the supply of mental health providers in NYC is insufficient to meet unmet need for mental health services [28]. These results emphasize the importance of prioritizing mental health services and support during times of crisis, especially among low-income residents and minoritized people. Providing culturally responsive mental health services can help increase accessibility as well as address these disparities and promote equitable recovery.

In addition, LIH residents were more likely to use mental health services compared to MRH residents. It might be impacted by the fact that the combination of economic hardship, social isolation, and poor living conditions faced by LIH residents in NYC can lead to higher rates of mental health issues [29], which in turn increases the likelihood that they will use mental health services compared to MRH residents. The COVID-19 pandemic has disproportionately impacted minoritized groups in NYC, especially those who live in affordable housing. For example, Latino/a and Black New Yorkers were 1.3 to 2 times more likely than white individuals to report being unable to pay rent or mortgage, gas, oil or electricity bills, phone or internet bills [30]. Another possible explanation is that many affordable housing

developments have on-site health care services, social workers/case managers who can help people connect to mental health services. This suggests that integrating mental health services into housing sites could be a great way to increase access mental health services. Our study also found that the most common use of mental health services was through accessing online resources such as websites with useful information and referral resources, anonymous online counseling/therapy, self-management, or wellness guidebooks. A previous study showed that participants reported high levels of willingness to use nontraditional services, with 32.7% and 25% using online communities and self-help books to treat and/or manage mental health conditions, respectively [31]. It is crucial to provide accessible and diverse forms of mental health services, including technology-based interventions [32], especially for individuals who experience financial constraints or other obstacles in accessing traditional in-person services.

In our study, inadequate transportation, difficulty scheduling appointments, and high costs were identified as major obstacles to receiving mental health care. Furthermore, LIH residents faced more significant barriers to accessing mental health care compared to MRH residents, including difficulty taking time off work, less trust in mental health providers, less comfort sharing personal life and emotions, and a greater reluctance to disclose seeing a mental health provider. These findings are supported by the RAND 2020 report [7], which highlighted individual-level barriers hindering the ability to seek care, such as struggling to explain mental health issues to families, communities, and friends, as well as the negative perceptions that participants may encounter from these groups. Therefore, efforts are needed to increase awareness and education about mental health issues and to reduce the stigma associated with seeking mental health care. Additionally, costs were identified as the most prevalent provider-related barrier, followed by a lack of trust in providers and the mental health system [7]. These barriers can have a negative impact on individuals' ability to receive timely treatment and may even worsen mental health conditions [33]. Addressing these barriers requires a multifaceted approach that implements community-based mental health services [32] considering the unique needs and experiences of low-income and marginalized communities.

Both LIH and MRH residents indicated a preference for receiving mental health services in a doctor's office or health clinic rather than in a mental health clinic. Furthermore, residents preferred healthcare or professional mental health provider, which aligns with previous studies [31, 34]. This may be attributed to the fact that these providers have a modest level of discrimination [34]. In Cohen's 2019 study, 71.1% and 36.5% of adult Americans in Chicago opted for mental health providers and primary care providers to treat and/or manage mental health conditions, respectively [31]. Hence, integrating mental health services into primary health care can be a practical approach to reduce stigma and bridge the treatment gap for individuals with mental health concerns [35]. Harlem residents also expressed a preference for in-person or phone-based delivery of mental health services, which is concordant with previous studies indicating that telehealth emerged as an effective and acceptable modality during COVID-19, successfully bridging gaps in access to care [32, 36]. Overall, these findings underscore a comprehensive and individualized approach that considers the distinct needs and preferences of various communities to reduce stigma and enhance access to mental health care.

The present study is not without limitations. First, this study also combined race and ethnicity questions, which limits its ability to capture the nuances of diversity within Harlem. Future research should separate these categories. Additionally, the use of convenience sampling in Harlem with a predominantly minoritized sample and the implementation of the survey in English may limit the external validity of the findings to the wider population of New York. Nonetheless, our study is among the first to assess mental health needs, barriers to care, and preferences among the most vulnerable populations during COVID-19 in an urban setting. Moreover, the online survey approach could have led to different interpretations of questionnaire among participants. Despite this limitation, it was a useful method to obtain a sufficiently large sample size during COVID-19.

## Conclusion

Our study highlights the critical need to address the high demand for mental health services during COVID-19, particularly for LIH residents who reported higher use of mental health services but also faced significant barriers to care compared to MRH residents. To address these barriers, developing more personalized or tailored mental health care is necessary to meet the specific needs and preferences of individual residents. Additionally, the low preference for services to be delivered at mental health clinics suggests the need to expand mental health services into different settings, such as primary care clinics, to improve access and utility of mental health services.

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**Data Availability** The data that support the findings of this study are available from the corresponding author upon reasonable request.

## Declarations

**Competing Interests** The authors declared no conflict of interest.

**Ethical Approval** This study was conducted in accordance with the Declaration of Helsinki and with ethics approval from the Institutional Review Board at the Graduate School of Public Health & Health Policy, The City University of New York.

**Consent to Participate** All respondents gave their consent through an online form before participating in the survey.

**Consent for Publication** Not applicable.

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