

## RESEARCH ARTICLE

# Police brutality and unmet need for mental health care

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[Correction added on 25 August 2021, after first online publication: The name of the third author has been corrected in this version.]

## Abstract

**Objective:** National movements have raised awareness of the adverse mental health effects of police brutality. This study examines the relationship between perceived police brutality and unmet need for mental health care.

**Data Sources:** We used the 2018 Survey of the Health of Urban Residents ( $N = 4338$ ), a quota sample survey of adults in urban areas in the contiguous United States.

**Study Design:** Multivariate regressions were used to understand the association between police brutality and unmet need for mental health care. Unmet need was regressed on police brutality (the independent variable), controlling for sociodemographic and health status characteristics of respondents and access to care. We then stratified the sample by experiences of police brutality (no negative encounters with the police, encounters that were perceived as necessary, and encounters that were considered unnecessary) and described how medical mistrust and perceived respect within health care settings were associated with odds of unmet need for each subsample.

**Data Collection:** Data were collected online.

**Principal Findings:** Negative police encounters perceived as necessary were associated with greater odds of unmet need compared to no negative police encounters (odds ratio [OR] = 1.98, confidence interval [CI] = 1.30–2.65). Odds of unmet need were also higher among persons with negative and unnecessary police encounters (OR = 1.28, CI = 1.05–1.56). Greater respect was associated with lower odds of unmet need among persons who reported negative unnecessary encounters with the police (OR = 0.88, CI = 0.72–0.97). Medical mistrust was associated with greater odds of unmet need among those with negative unnecessary police encounters (OR = 1.52, CI = 1.12–1.93).

**Conclusions:** Persons who are exposed to police brutality are also likely to be those who experience unmet need for mental health care. Ensuring that they feel respected within medical settings and establishing conditions that build trust in medical institutions are important for eliminating unmet need for mental health care.

## KEYWORDS

medical mistrust, police brutality and mental health, police brutality, respect in health care settings, unmet mental health need

**What is known on this topic**

- Police brutality is associated with mental health problems such as depression, anxiety, and posttraumatic stress disorder.
- There are racial inequities in exposure to police brutality; Black and other people of color are disproportionately exposed.
- There are racial inequities in unmet need for mental health care; Black and other people of color have greater unmet need.

**What this study adds**

- Police brutality is associated with higher odds of unmet need for mental health care.
- Persons who report negative experiences with the police feel less respected in health care settings and report mistrust in medical institutions.
- Feeling respected by and having trust in medical institutions matter for the mental health of people who are historically mistreated across institutions, including Black populations disproportionately exposed to police brutality.

## 1 | INTRODUCTION

Police brutality is a social determinant of health that shapes how people live, work, and play.<sup>1</sup> It refers to police (in)action that dehumanizes, even in the absence of conscious intent, and includes verbal assault, psychological intimidation, and physical, sexual, and emotional violence.<sup>2,3</sup> As an indicator of structural racism,<sup>4</sup> police brutality disproportionately affects Black populations, but being White offers some protection from police use of force.<sup>5</sup> National movements have raised unprecedented awareness of the adverse mental health effects of police brutality. There is a growing body of research linking police brutality to mental health outcomes ranging from psychological distress<sup>6</sup> to posttraumatic stress disorder and suicidal ideation.<sup>7</sup> However, little is known about how police brutality might worsen mental health outcomes through its association with unmet need.

Perceived unmet need for mental health services is an important indicator of mental health status.<sup>8,9</sup> This subjective assessment of need for mental health care reflects perceived gaps between mental health status and the services that people believe they need. It also reflects attitudes toward mental health services and providers, as well as other barriers to care.<sup>10–12</sup> The proportion of persons with unmet need for mental health services in the United States has been steadily increasing. In 2018, one in four adults with any mental illness reported that their mental health needs went unmet at significantly larger rates than the proportion of adults with unmet need from 2008 to 2017.<sup>13</sup>

Unmet mental health need has consequences. It is associated with lower quality of life and increases health care expenditures through emergency room visits, substance-use disorders, and other comorbidities. It also reduces productivity and increases early mortality.<sup>14–16</sup> Research on reasons for unmet need has predominantly focused on a range of individual and health system characteristics such as race, gender, education, severity of symptoms, health insurance, availability of and trust in providers, and attitudes toward

treatment.<sup>10,11,17–20</sup> How experiences within different systems—systems outside of mental health that shape unmet need for mental health services—have received little research attention, although findings from a mixed methods study suggest that persons who have negative experiences with institutions outside of the mental health system are likely to forgo mental health care.<sup>17</sup> Here, we examined whether negative experiences in an institution outside of the health care system—the police—are associated with unmet need for mental health care.

Experiencing police brutality might be associated with greater unmet need because relationships with the police mirror relationships with health care institutions and shape the relational aspects of health care such as mistrust and respect. We know that experiences with the police are associated with the degree to which people trust doctors and health care providers,<sup>21</sup> and that this mistrust is associated with an increase in the likelihood of not getting medical care.<sup>22</sup> It is possible that people who experience police brutality might feel less respected in health care settings, given the systemic nature of institutional oppression. In addition, perceptions of respect, patients feeling that their unconditional value is recognized by providers,<sup>23</sup> might be associated with the likelihood of seeking and receiving mental health care.

Our study addresses two specific aims. First, it describes the relationship between perceived police brutality and unmet need for mental health care. Second, it identifies factors associated with unmet need among persons who have experienced police brutality and persons who have not. We hypothesized that persons with exposure to police brutality—perceived negative encounters with the police—are more likely to report unmet need for mental health care compared to those who have not had negative encounters with the police. We also hypothesized that relational aspects of care such as feeling respected or valued by health care providers and mistrust in medical institutions are associated with unmet need for mental health care especially among persons who have had negative experiences with the police.

## 2 | METHODS

### 2.1 | Data

Data were obtained from the Survey of the Health of Urban Residents (SHUR), a community-driven survey of individuals aged 18 years and older living in urban areas across the contiguous United States. SHUR assesses experiences of police brutality and a range of health, social, and economic characteristics of respondents.<sup>24</sup> Qualtrics, LLC<sup>25</sup> administered the survey to a nonprobability quota sample by leveraging multiple databases to access populations specific to researchers' needs. SHUR oversampled respondents of color and those whose usual source of care is not a physician's office. The sample was comprised of 4389 individuals. Our analytic sample ( $n = 4338$ ) was limited to persons with no missing data on unmet need for mental health care.

### 2.2 | Measures

The main outcome variable is perceived unmet need for mental health care. Respondents were asked, "During the past 12 months, was there any time when you needed mental health treatment or counseling for yourself but did not get it?" Unmet need for mental health care was analyzed as a binary variable, 0 for no and 1 for yes. The main independent variable, perceived police brutality, was created based on respondents' answers to whether they have ever had negative encounters with the police, as well as their evaluations of whether these encounters were necessary. Examples of negative encounters include police cursing at the respondent, hitting, kicking, or shoving the respondent and police using an electroshock weapon or pointing a gun at the respondent. If a respondent reported at least one negative encounter with the police, they were asked whether they thought that the action of the police officer was necessary. The variable, perceived police brutality, was created to reflect both negative encounters with the police and perceptions about the necessity of these encounters and grouped into three mutually exclusive categories as follows: no negative encounter, necessary negative encounter, and unnecessary negative encounter. Assessing individual evaluations of the necessity of police actions are consistent with previous research demonstrating that how people evaluate negative encounters with the police matter for their mental health beyond simply having these encounters.<sup>26</sup>

Other independent variables include perceived respect within health care settings and medical mistrust. Respect was assessed using a single-item scale. Respondents rated if in general, they felt that they were treated with a great deal of respect and dignity the last time they received health care. Ratings could range from 1 (no respect at all) to 10 (utmost respect). Mistrust was assessed using the 12-item group-based medical mistrust index.<sup>27</sup> Respondents were asked how much they agreed with statements such as "health care workers do not have the best interests of people who belong to my racial or ethnic group" and "people in my racial or ethnic group should be

suspicious of doctors." Responses ranged from strongly disagree (1) to strongly agree (5). We computed the mean score across all 12 items to create a mistrust scale ranging from 1 to 5 (Cronbach's alpha 0.80) with higher mean scores indicating greater medical mistrust.

Covariates included factors likely to be associated with perceived need for mental health care such as mental health status and access to care. For mental health status, we assessed depressed mood (yes/no) using the two-item patient health questionnaire for depression<sup>28</sup> and generalized anxiety<sup>29</sup> using the two-item patient health questionnaire for anxiety. Both instruments are commonly employed to screen for likely depression and anxiety in primary care settings.<sup>30</sup> We also assessed whether the respondent was limited in their ability to perform any activities as a result of physical, mental, or emotional problems (yes/no). Indicators of access to care included health insurance (uninsured, public insurance, or private insurance) and whether the respondent has a usual source of care (yes/no). We controlled for race/ethnicity, age, gender, employment status, and level of education.

### 2.3 | Analyses

We described respondents' characteristics by perceived unmet need for mental health care and assessed significant differences using chi-square and *t*-tests. We also examined the adjusted association (controlling for all covariates) between police brutality and perceived respect and between police brutality and medical mistrust using multivariate linear regressions. To evaluate the relationship between perceived police brutality and unmet need for mental health care, we computed a multivariate logistic regression of unmet need on police brutality including respect, medical mistrust, indicators of mental health status and access to care, and sociodemographic characteristics of respondents. Then, we ran additional multivariate logistic regressions to identify factors associated with unmet need for mental health care among three subsamples as follows: those with no negative encounters with the police, those with perceived necessary negative encounters with the police, and those with perceived unnecessary negative encounters with the police.

## 3 | FINDINGS

As shown in Table 1, about one in three respondents reported unmet need for mental health care (31.95%), and more than half reported having a negative encounter with the police; 31.1% said negative police actions were necessary, while 26.4% said negative actions by the police were not necessary. The mean rating for respect was 7.02, indicating that most respondents reported being treated with some level of respect, although not the greatest level of respect. Mean respect ratings were significantly lower among persons with unmet need ( $\bar{x} = 6.66$ ) compared to persons with no unmet need ( $\bar{x} = 7.19$ ) ( $t = 8.67, p = 0.00$ ). The mean mistrust score was 2.43 for the entire sample and significantly higher among persons with unmet need

**TABLE 1** Sample characteristics by perceived unmet need for mental health

	Total (N = 4338)		No unmet need (68.05% N = 2952)		Unmet need (31.95% 1386)		
	%	N	%	N	%	N	
<i>Perceived police brutality</i>							
No negative encounter	42.5	1842	49.5	1459	**	27.6	383
Negative encounter necessary	31.1	1347	25.6	756	***	42.6	591
Negative encounter unnecessary	26.4	1146	24.9	734	**	29.7	412
Mean respect rating	$\bar{x} = 7.02$	4338	$\bar{x} = 7.19$	2952	***	$\bar{x} = 6.66$	1386
Mean mistrust score	$\bar{x} = 2.43$	4338	$\bar{x} = 2.35$	2952	***	$\bar{x} = 2.61$	1386
Likely depressed mood	33.4	1448	22.9	675	***	55.8	773
Likely generalized anxiety	33.8	1466	22.6	667	***	57.7	799
Activity limitation	42.3	1833	28.7	848	***	71.1	985
<i>Health insurance</i>							
Uninsured	10.8	470	9.8	290	*	13	180
Public insurance	52.2	2265	49.6	1464		57.8	801
Private insurance	37	1603	40.6	1198	**	29.2	405
<i>Usual source of care Race/ethnicity</i>							
Non-Hispanic White	63.7	2762	65.2	1924		60.5	838
Non-Hispanic Black	14.2	615	14.8	436		12.9	179
Hispanic/Latinx	11.8	510	10.2	302	***	15	208
Native American	1.4	59	1	29		2.2	30
Asian	3.8	165	4.3	126		2.8	39
Multiple/other	5.2	226	4.5	134		6.6	92
<i>Gender</i>							
Cis man	23.7	1026	25.2	745		20.3	281
Cis woman	71.7	3108	71	2097		72.9	1011
Transgender or gender fluid	4.7	204	3.7	110	**	6.8	94
<i>Age category, years</i>							
18–24	19.4	842	17.5	516		23.5	326
25–34	27.9	1211	26.2	773	*	31.6	438
35–44	21.1	916	19.8	583		24	333
45–54	13.8	599	14.6	431		12.1	168
55–64	10.1	436	12.1	356	***	5.8	80
65 and older	7.7	334	9.9	293	**	3	41
<i>Level of education</i>							
No high school (H.S.)	7.1	306	6.5	192		8.2	114
High school or GED (General Educational Development)	25.5	1107	26.4	778		23.7	329
Some college or associate degree	45.4	1970	43.9	1295		48.7	675
Bachelor's degree or higher	22	955	23.3	687		19.3	268
<i>Work status</i>							
Not in labor force	7.1	1389	34.7	1001	***	8.23	388
Unemployed, looking for work	25.5	523	12.6	363	**	23.74	160
Part time for pay (<30 h/week)	45.4	663	13.8	399	***	48.7	264
Full time for pay (≥30 h/week)	22	1667	38.9	1120	***	19.34	547

Note: Chi-square test for differences between groups for categorical variables and t-test (two-tailed) for differences in mean respect and mistrust scores. \* $p < 0.05$ , \*\* $p < 0.01$ , and \*\*\* $p < 0.001$ , significant differences between persons with unmet need and persons without unmet need.

**TABLE 2** Associations between police brutality and respect within health care settings and between brutality and medical mistrust

	Adjusted coefficient of respect		Adjusted coefficient of mistrust	
	$\beta$	95% CI	$\beta$	95% CI
Police brutality				
No negative encounter	Reference		Reference	
Negative encounter necessary	-0.21***	-0.28 to -0.05	0.13***	0.08-0.18
Negative encounter unnecessary	-0.70***	-0.81 to -0.55	0.45***	0.39-0.50

Abbreviation: CI, confidence interval.

\*\*\* $p \leq 0.001$ .**TABLE 3** Associations between unmet need for mental health care and police brutality

	Model 1: Full sample		Model 2: No negative police encounters		Model 3: Perceived necessary negative encounters		Model 4: Perceived unnecessary negative encounters	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
<i>Police brutality (ref: no negative encounter)</i>								
Negative encounter necessary	1.98***	1.30-2.65						
Negative encounter unnecessary	1.28**	1.05-1.56						
Respect rating	0.91**	0.88-0.97	0.99	0.87-1.03	0.91*	0.86-0.99	0.88**	0.72-0.97
Mistrust scores	1.20**	1.05-1.36	1.03	0.81-1.24	1.12*	1.01-1.40	1.52**	1.12-1.93
Likely depressed mood (ref: none)	1.76***	1.46-2.11	1.81***	1.29-2.55	2.07***	1.52-2.86	1.36*	1.03-1.88
Likely generalized anxiety (ref: none)	2.21***	1.84-2.64	2.30***	1.65-3.22	2.29***	1.61-2.94	1.27**	1.05-1.71
Activity limitation (ref: none)	4.74***	4.03-5.51	5.47***	4.11-7.34	4.50***	3.43-6.06	4.34**	3.22-5.85
<i>Health insurance (ref: uninsured)</i>								
Public insurance	0.83	0.64-1.06	0.46**	0.28-0.72	1.37	1.00-2.48	0.71	0.46-1.08
Private insurance	0.63***	0.48-0.83	0.56**	0.35-0.89	0.82	0.50-1.33	0.52**	0.33-0.84
Usual source of care (ref: none)	1.03	0.76-1.37	1.32	0.35-0.89	0.68	0.40-1.14	1.43	0.86-2.36
<i>Race/ethnicity (ref: White)</i>								
Non-Hispanic Black	0.97	0.60-0.98	0.72*	0.36-0.89	0.91	0.58-1.42	1.18*	1.06-1.52
Hispanic /Latinx	1.24	0.98-1.58	1.04	0.61-1.59	1.61	0.98-2.90	1.01	0.66-1.52
Native American	1.7	0.99-3.0.2	1.31	0.72-7.91	2.36	0.99-12.02	1.00	0.62-1.45
Asian	0.9	0.61-1.47	0.38*	0.17-0.82	1.96	1.00-9.59	0.68	0.28-1.70
Multiple/Other	1.15	0.85-1.68	0.88	0.47-1.64	1.91	0.99-3.70	0.98	0.27-1.71
<i>Gender (Ref: cis man)</i>								
Cis woman	1.23	0.99-1.47	1.26	0.85-1.86	1.26	0.91-1.74	1.24	0.87-1.24
Transgender or gender fluid	1.38	0.95-2.00	0.32	0.38-1.80	1.68	0.87-3.22	1.74*	1.01-3.24
<i>Age category (Ref: 18-24), years</i>								
25-34	0.86	0.69-1.08	0.83	0.57-1.21	0.86	0.58-1.29	0.83	0.55-1.24
35-44	0.81	0.64-1.03	0.58*	0.38-0.89	0.83	0.54-1.26	1.08	0.70-1.67
45-54	0.51***	0.38-0.66	0.37***	0.22-0.60	0.41***	0.25-0.68	0.97	0.58-1.58
55-64	0.38***	0.26-0.52	0.23***	0.13-0.40	0.33***	0.18-0.61	0.75	0.40-1.39
65 and older	0.15***	0.08-0.26	0.15***	0.06-0.33	0.08***	0.02-0.27	0.30*	0.09-0.98
<i>Level of education (Ref: no H.S.)</i>								
High school or GED	0.89	0.63-1.12	0.69	0.40-1.20	1.25	0.71-2.19	0.76	0.46-1.24
Some college or associate degree	1.07	0.76-1.42	0.94	0.53-1.65	1.18	0.68-2.02	1.10	0.64-1.89
Bachelor's degree or higher	1.27	0.88-1.75	1.34	0.73-2.45	1.30	0.78-2.65	0.94	0.50-1.74
<i>Work status (Ref: not in labor force)</i>								
Unemployed, looking for work	0.92	0.70-1.20	0.85	0.54-1.33	1.29	0.78-2.13	0.76	0.46-1.24

TABLE 3 (Continued)

	Model 1: Full sample		Model 2: No negative police encounters		Model 3: Perceived necessary negative encounters		Model 4: Perceived unnecessary negative encounters	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Part time for pay (<30 h/week)	1.52**	1.16-1.98	1.57*	1.02-1.14	1.65*	1.07-2.69	1.33	0.82-2.17
Full time for pay (≥30 h/week)	1.36**	1.11-1.68	0.99	0.69-1.43	1.69**	1.17-2.44	1.39	0.95-2.05

Abbreviations: CI, confidence interval; OR, odds ratio.

\* $p \leq 0.05$ ; \*\* $p \leq 0.01$ ; \*\*\* $p \leq 0.001$ .

( $\bar{x} = 2.61$ ) compared to respondents without unmet need ( $\bar{x} = 2.35$ ) ( $t = 10.86, p = 0.00$ ). About a third of respondents screened positive for depressed mood and one in three also screened positive for generalized anxiety. The proportion of persons who met criteria for depressed mood or generalized anxiety were significantly larger among respondents with unmet need than among those who reported no unmet need for mental health care. One in 10 persons were uninsured, and nine in 10 had a usual source of care—a place they would usually go if they are sick or in need of advice about their health. The sample is disproportionately women (71.7%); about 22% had a bachelor's degree or higher, and about a quarter of the sample were unemployed and looking for work at the time of the survey.

Table 2 shows the relationships between police brutality and respondents' ratings of the respect they receive within health care settings and between police brutality and mean scores on the medical mistrust scale. When we adjusted for race, gender, education, work status, health insurance, usual source of care, depressed mood, generalized anxiety, and activity limitation, we found respect ratings to be lower among respondents who reported negative and unnecessary encounters compared to those with no negative police encounters ( $\beta = -0.70$ , 95% confidence interval [CI] =  $-0.81$  to  $-0.55$ ). Respect ratings were lower among those with negative but necessary encounters compared to those with no negative encounters ( $\beta = -0.21$ , 95% CI =  $-0.28$  to  $-0.05$ ). Mistrust scores were higher among respondents who reported negative and unnecessary encounters compared to those with no negative police encounters ( $\beta = 0.13$ , 95% CI =  $0.08$ - $0.18$ ) and among those with negative but necessary encounters ( $\beta = 0.45$ , 95% CI =  $0.39$ - $0.50$ ).

In Table 3, we presented results of logistic regressions. In model 1 (the full sample), adjusted odds of unmet need for mental health care were greater among persons who had negative necessary encounters with the police (odds ratio [OR] = 1.98, 95% CI = 1.30-2.65) and among those with negative unnecessary police encounters (OR = 1.28, 95% CI = 1.05-1.56), compared to respondents who reported no negative encounters with the police. Greater perceived respect was associated with lower odds of unmet need (OR = 0.91, CI = 0.88-0.97). And for each unit increase in mean medical mistrust scores, odds of unmet need increased by 20% (OR = 1.20, CI = 1.05-1.36). Other factors associated with greater odds of unmet need for mental health care in this model include depressed mood, generalized anxiety, and having an activity limitation. Persons with private health insurance were less likely to perceive an unmet need for mental

health care compared to their peers without insurance. Having a usual source of care was not associated with unmet need. There were no racial or gender differences in unmet need but persons who were 45 years and older had lower odds of reporting unmet need than persons of 18-24 years of age, and working part time or full time was associated with greater odds of unmet need than not being in the labor force.

In Model 2, we limited the analysis to persons who have not had any negative police encounters. Unlike the full sample in Model 1, respect and mistrust were not associated with odds of unmet need. Black respondents and respondents who reported multiple or other race were less likely than White respondents to have unmet need for mental health care. In Model 3, we identified factors associated with unmet need among respondents who reported negative encounters with the police and who thought that police actions were necessary. Respect and medical mistrust were associated with unmet need. The effect size for respect was greater among those who perceived police encounters as unnecessary (OR = 0.88, CI = 0.72-0.97, see Model 4) than among those who perceived these encounters as necessary (OR = 0.91, CI = 0.86-0.99). This was similar for mistrust with the effect size stronger among those who experienced unnecessary encounters with the police (OR = 1.52, CI = 1.12-1.93) than among those who perceived police encounters as necessary (OR = 1.12, CI = 1.01-1.40).

Also noteworthy, Black respondents with unnecessary negative encounters with the police had greater odds of reporting unmet need for mental health care compared to White respondents who have also had negative unnecessary encounters with the police (OR = 1.18, CI = 1.06-1.52), and being transgender and/or gender fluid was also associated with greater odds of unmet need compared to being cisgender male (OR = 1.74, CI = 1.01-3.24).

## 4 | DISCUSSION

About a third of our sample reported unmet need for mental health care, consistent with other studies where rates of adults with unmet mental health needs vary between 20% and 62%.<sup>13,31-33</sup> The prevalence of unmet need underscores the importance of identifying and addressing new barriers to mental health services. A novel finding from our study is that individuals who experienced negative encounters with the police had significantly greater odds of having unmet

need for mental health care compared those who reported no experiences of police brutality. Given that police brutality is associated with greater odds of unmet need for mental health care, identifying and addressing barriers to psychiatric care that might be common among populations disproportionately experiencing police brutality is important for reducing unmet need and improving mental health status. However, most of the research and theoretical frameworks connecting police brutality to mental health status have examined its impact on mental illnesses such as major depressive disorder, anxiety, and posttraumatic stress disorder through mechanisms that link violence and trauma to psychological well-being.<sup>34,35</sup> Ours is the first study to suggest that police brutality might affect mental health status because of its association with unmet mental health need.

How people perceive negative encounters with police matter for unmet need? People who have negative encounters with the police (such as the police yelling at them, threatening to give them a ticket, etc.) might consider these encounters as necessary, and their evaluations of their own experiences with the police matter for their mental health beyond solely their exposure to police brutality.<sup>26</sup> In addition, in publicized cases of police brutality, there is public debate about whether the actions of the police were justified. Sometimes, even police homicides are justified by the public and courts when the lives of others are at risk.<sup>36,37</sup> Here, we showed that even if negative encounters with the police are perceived to be necessary by the victims, these encounters are still associated with unmet need for mental health care. We expected that odds of unmet need would be greatest among persons with negative unnecessary encounters, but they were greatest among persons who perceived negative encounters as necessary. One potential explanation is that the effect of mental health status (depressed mood, generalized anxiety, and even activity limitation) on unmet need is greater and stronger among the subsample with negative necessary encounters compared to the subsample with negative police encounters that are perceived to be unnecessary. Mental health status might worsen material conditions such as the ability to work that then increase risks for unmet need. Ultimately, the strength of the mechanisms that shape unmet need might vary among persons with perceived necessary encounters compared to persons with unnecessary police encounters. For example, mental health status was more salient in the former (Model 3, Table 3) and relational aspects of care such as respect and mistrust stronger in the later subsample (Model 4, Table 3). This speculation needs further investigation.

We also showed that relational aspects of care matter for unmet need, but that the strength of the association between these factors and unmet need varies across exposure to police brutality. Specifically, after adjusting for covariates, we found that perceptions of respect within health care settings and medical mistrust were not associated with unmet need among persons with no experiences of police brutality. However, these associations were present among persons with negative necessary encounters with the police and stronger among the sub-sample who perceived their encounters with the police to be unnecessary. The very definition of police brutality—police action that dehumanizes the victim—implies that victims feel that police officers are not treating them with respect, and this leads

them to distrust the police.<sup>38</sup> Nevertheless, our experiences within systems are intertwined. Vicarious experiences that lead to mistrust in and perceptions of disrespect by the police are shaped by experiences in other social institutions<sup>39</sup> and also influence perceptions and expectations of treatment in health care and mental health institutions.<sup>17,21</sup> This means that police brutality is not only detrimental to relationships between the police and groups exposed to police violence. Police brutality might shape relationships with health care institutions because health systems are not autonomous. Health systems are nested within the same social contexts as law enforcement, as well as other institutions that could be perceived as disrespectful. Therefore, populations that disproportionately experience police brutality are likely the same populations with a higher probability of being disrespected in medical settings, have high levels of medical mistrust, and hence greater unmet need for mental health care.

Our findings also show perceived police brutality to be associated with perceptions of respect in health care settings and with medical mistrust. Respect and mistrust are relational aspects of care, and both are associated with odds of reporting unmet need for mental health care. Our findings here are consistent with previous research using these data<sup>21</sup> and findings from a nationally representative sample where persons who felt that the doctor treated them with little or no respect were less likely to utilize health services and to engage with health care.<sup>40</sup> What we added to the literature is that both respect and health outcomes including likelihood of reporting unmet need are associated with factors outside of the health care system—specifically perceived police brutality.

We also found associations between some health status indicators and unmet need. For example, persons who met criteria for depressed mood, generalized anxiety, and those limited in certain activities because of health problems had greater odds of reporting unmet need for mental health care in the full sample and across all subsamples. Although these findings are consistent with others that suggest elevated levels of perceived unmet need among those with mental and substance-use disorders, poor overall health, and chronic conditions,<sup>20,32,41</sup> they are still troubling. They might indicate greater barriers to mental health services or inadequacy of services among those who might need them the most. Continuing to identify and address population-specific barriers to care is critical.

Our findings suggest that police brutality might play a significant role in unmet need for mental health care among respondents of color. The absence of racial differences in unmet need in the full sample (Model 1, Table 3) that takes into account indicators of access to care, police brutality, and relational aspects of care—all variables that might be racism-related—might reflect the broader role of racism in unmet need for mental health care.<sup>17</sup> We think that adjusting for these factors in our analyses narrows the racial gaps in unmet need that we typically see in other studies that do not account for indicators of racism. Indeed, without any experiences of police brutality and controlling for all covariates, Black and Asian respondents had lower odds of unmet need than their White peers, while odds of unmet need were similar among Whites, Latinxs, and Native Americans. However, among those with experiences of police brutality, odds of



unmet need for Black respondents increased to become similar as for Whites, if police encounters were perceived as necessary, and greater than among Whites, if police encounters were perceived as unnecessary. We thought this pattern highlights the salience of police encounters as indicators of racism that shape relationships between Black people and medical institutions.<sup>21</sup> As a result, avoiding engagement with mental health systems might be a mechanism to prevent further exposure to systems of oppression.<sup>17</sup> For Black Americans who have experienced negative and unnecessary police encounters, our findings are part of a very discouraging picture. We know that police brutality disproportionately affects Black populations<sup>4,5</sup> and that it is associated with a range of mental health outcomes.<sup>6,7</sup> Only one in three Black people who need mental health care receives it.<sup>42</sup> And, when they do receive care, it is less likely to be consistent with guidelines and more likely to be from emergency rooms rather than from mental health specialists.<sup>43</sup> These factors sustain a cycle of unmet need and negative interactions with police.

Several other factors were associated with unmet need. Unsurprisingly, having private insurance was associated with lower odds of unmet need, most likely because of the strong relationship between insurance and utilization of mental health services.<sup>31,44,45</sup> Consistent with other studies,<sup>32,44</sup> respondents with jobs had greater unmet need than respondents not in the labor force. This could be because most persons not in the labor force might be beneficiaries of other safety-net programs that provide both financial and nonfinancial access (such as transportation) to a range of mental health services, thus reducing unmet need. Some employed individuals might have health insurance policies that provide limited mental health benefits and have high cost-sharing requirements. Persons of 45 years and older reported lower odds of unmet need compared to younger adults. This finding likely reflects relatively higher insurance rates among middle-aged and older adults who are also less likely to report structural barriers to mental health services and to minimize symptoms.<sup>44</sup> Among persons with experiences of police brutality, transgender respondents had greater unmet need than cisgender men. We speculated that police brutality might affect relationships between transgender persons and health care institutions in a somewhat similar way as among Black populations—disengagement from mental health care services being a form of coping. But this speculation requires further investigation, especially given the recent onslaught of new laws that limit access to health care among transgender persons.<sup>46</sup>

Findings from this study should be interpreted considering several limitations. First, the SHUR is a nonprobability sampling survey. Respondents might differ from nonrespondents in ways that matter for inferences of our estimates. However, the quota sampling technic employed matches the sample with the urban population of the United States by age, race, and ethnicity. This is presumed to reduce some of the selection biases in nonprobability samples.<sup>47</sup> Our study examines relationships between variables in the data. Without seeking to obtain point estimates that can be generalized to urban populations, the relationships that are identified in nonprobability samples are likely to be similar in probability samples if the sample composition of the nonprobability sample matches the composition of

the population from which the sample is drawn.<sup>48–50</sup> Second, this is a cross-sectional analysis. We only examined the associations between police encounters and unmet need for mental health care and then identified factors associated with unmet need across experiences of police brutality. These relationships are not causal. Neither our analyses nor data are longitudinal and should not be interpreted as such. Our data do not disentangle whether lifetime experience of police brutality occurred before the respondent formed views that depict medical mistrust or before the last health care visit that was used to assess perceived respect in health care settings or even before their experience of unmet need that is reported for the 12 months preceding the survey. Therefore, findings should be interpreted with attention to variation in the timing of events in the respondents' life. Finally, data on the frequency, context, and anticipation of negative police encounters would have further strengthened our analyses. It is not only the experiences of police encounters that might be associated with mental health and unmet need for mental health care. Knowing someone who has experienced police brutality or worrying that you or someone you know might have violent encounters police also matter for mental health.<sup>26,51</sup> These possibilities were not analyzed in the current study.

Despite limitations, our findings have significant implications. Causes of unmet need for mental health services are not limited to proximate health services factors such as costs, stigma, access to, and accessibility of mental health services, even though they have consistently received significant research attention. Factors outside of mental health service systems such as police brutality are associated with unmet need, regardless of whether the victims themselves think that such police actions are necessary. Therefore, it is not only the interactions between patients and providers that are associated with perceptions of respect and medical mistrust but experiences that patients have with the police. This highlights the need for clinicians to understand how structural factors shape relational aspects of psychiatric care,<sup>52</sup> to advocate for policies that eliminate police brutality, and to strengthen their relationships with communities that are disproportionately exposed to police brutality. Cross-sectoral collaborations are also necessary for addressing unmet need. Police brutality indicates unfair discriminatory treatment by the police. Experiences of discrimination in non-health care institutions such as in jobs, schools, and neighborhoods are associated with negative perceptions of medical institutions.<sup>53</sup> Therefore, the association between police brutality and perceptions of respect within medical settings and between police brutality and medical mistrust is not surprising. What is surprising, however, is the relative lack of collaboration between mental health providers and law enforcement and between mental health services researchers and law enforcement especially when it comes to addressing police violence. Hitherto, collaboration between these systems is limited to mental health crisis intervention.<sup>54,55</sup> Yet, even indirect exposure to police brutality such as living in a neighborhood with high stop-and-frisks rates is associated with less use of health services during an emergency.<sup>56</sup> Regardless of the presence of a crisis or an emergency, working with law enforcement and policy makers to address police brutality and advancing policies to limit exposure



to negative police actions are worthy efforts that clinicians and researchers should engage in as they hold promise for addressing more distal causes of unmet need and ultimately preventing crises.

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## DISCLOSURES

None

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