

# RACIAL/ETHNIC DISPARITIES IN MENTAL HEALTH SERVICE UTILIZATION AMONG YOUTH PARTICIPATING IN NEGATIVE EXTERNALIZING BEHAVIORS

**Purposes:** Racial/ethnic differences in mental health service utilization were examined among youth who reported participating in negative externalizing behaviors.

**Methods:** The study utilized merged data from the 2007–2010 National Survey on Drug Use and Health (NSDUH) to examine differences in utilization of inpatient or outpatient mental health services not related to substance or alcohol use by White, Black and Hispanic youth who reported engaging in negative externalizing behaviors (“acting out”). Differences in service utilization in these groups were assessed using logistic regression models.

**Results:** Race/ethnicity was a significant predictor of outpatient mental health service use. Black and Hispanic children were less likely to use outpatient services. Inpatient service use decreased with increasing income. Parental presence in the household increased the likelihood of outpatient service use for minorities.

**Conclusion:** Racial/ethnic minority youth in the United States continue to use outpatient mental health services at lower rates. This may lead to high prevalence of untreated negative externalizing behaviors among minority adolescent groups and, in turn, lead to use of inpatient services from systems such as juvenile justice and foster care. Such severe treatment alternatives can be prevented if timely and culturally tailored outpatient intervention is provided. (*Ethn Dis.* 2015;25[2]:123–129)

**Key Words:** Health Disparities, Mental Health, Adolescent Health, Race/Ethnicity

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## INTRODUCTION

More than a decade ago, the Surgeon General’s 2001 report, *Mental Health: Culture, Race and Ethnicity, A Supplement to Mental Health* clearly highlighted the lack of adequate mental health services, poor quality of services, and the high burden from unmet mental health needs among racial and ethnic minorities in the United States.<sup>1</sup> Further attention of racial and ethnic disparities was focused in the Institute of Medicine’s *Unequal Treatment* report<sup>2</sup> and, the President’s New Freedom Commission on Mental Health, *Achieving the Promise: Transforming Mental Health Care in America*, specifically outlined the goal of eliminating disparities in mental health services in its vision of a transformed mental health system.<sup>3</sup>

Unfortunately, disparities in mental health service utilization continue to persist, especially for racial and ethnic minority youth.<sup>4,5</sup> Data from three national surveys showed that among youth with mental health needs, only about 5%–15% received some form of treatment.<sup>6–8</sup> While it is estimated that 69% of White youth do not receive the treatment they need, 78% of Black youth and 80% of Hispanic youth do not get the help they need, at the time they need it.<sup>9</sup>

Persistent disparities across all sectors of services have been reported in the literature.<sup>5,9</sup> Specialty services, such as treatment by a psychiatrist or psychologist in a specialty mental health setting, are utilized at lower rates by African Americans and Latinos<sup>9</sup> as are outpatient services.<sup>10</sup> Emotionally distressed Black adolescents are less likely to receive psychological counseling,<sup>11</sup> and regional studies also report that minority children are more likely to use

crisis services.<sup>12</sup> When they do receive care, minority children also receive poorer quality of care.<sup>13</sup>

Such disparities exert a substantial toll on youth, their families and society<sup>14</sup> and are a cause for concern for many reasons. Lack of timely mental health care for youth may limit their ability to attend and perform well in school,<sup>15</sup> interfere with the development of healthy social relationships, and cause them to display negative externalizing behaviors.<sup>16,17</sup> The term, externalizing, refers to “disruptive, harmful, or problem behaviors that are directed to persons and/or things.”<sup>18</sup> Such behaviors may be aggressive (such as fights and bullying), hyperactive and impulsive, and/or delinquent (such as physical assault, theft, and vandalism). Children engaging in such behaviors are more likely to be given psychiatric diagnoses such as conduct disorder and antisocial personality disorder,<sup>19</sup> both of which may be predictors of violence later in life.<sup>16</sup> Violent behavior in adolescence has also been shown to be a risk factor for worse health outcomes in adults.<sup>20,21</sup>

Understanding the role of race and ethnicity in contributing to inequality of

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**Table 1. Description of youth (12–17 years) who reported engaging in at least one negative externalizing behavior, NSDUH, 2007–2010 (N= 20970)**

Variable	%		
	Non-Hispanic White (n=12435, 59.3%)	Non-Hispanic African American (n=4137, 19.7%)	Hispanic (n=4417, 21.06%)
Age			
12 years	13.5	14.5	15.5
13 years	16.1	16.8	15.6
14 years	17.2	17.7	16.9
15 years	18.5	17.3	18.4
16 years	17.9	18.4	16.9
17 years	16.7	15.4	16.7
Sex			
Male	58.8	56.6	58.0
Female	41.2	43.3	42.0
Family income <sup>b</sup>			
Very low income	11.5	38.2	27.4
Low income	19.0	29.5	30.4
Moderate income	29.8	20.7	26.9
High income	39.7	11.6	15.4
Mother in household <sup>b</sup>			
Yes	91.4	86.1	91.7
No	8.6	13.9	8.3
Father in household <sup>b</sup>			
Yes	77.9	41.8	71.1
No	22.1	58.2	28.9
Insurance <sup>b</sup>			
Yes	93.3	94.3	82.1
No	6.7	5.7	17.9
Overall health <sup>b</sup>			
Excellent	28.4	31.8	29.7
Very good	44.7	38.1	36.1
Good	22.9	24.3	28.1
Fair	3.8	5.6	5.8
Poor	0.1	0.3	0.3
Day treatment <sup>a</sup>			
Yes	2.9	2.0	2.0
No	97.1	98.0	98.0
Family doctor <sup>b</sup>			
Yes	4.8	3.3	3.0
No	95.1	96.7	97.0
Mental health clinic <sup>b</sup>			
Yes	4.6	2.5	2.9
No	95.4	97.5	97.1
In-home counseling <sup>a</sup>			
Yes	5.2	3.9	4.3
No	94.8	96.1	95.7
Therapist <sup>b</sup>			
Yes	15.8	10.4	11.3
No	84.2	89.6	88.7

Table 1 continues on page 125.

mental health outcomes in young people is important in providing timely care, reducing disparities, and addressing their consequences. Hence, the purpose of our study was to quantify differences in unmet needs by studying differences in service utilization by race and ethnicity among youth who “act out.”

## METHODS

### DATA

Four years of data (2007–2010) from the youth experiences component of the NSDUH were merged. The study sample was derived from a sub-sample of adolescents who exhibited negative externalizing behaviors, as measured by youth experiences in NSDUH. Youth were defined as having participated in negative externalizing behaviors if they answered ‘yes’ to questions related to any of the following six behaviors within the past year: participating in a serious fight at school, participating in group fights, carrying a handgun, selling illegal drugs, stealing anything worth more than \$50 or attacking someone with intent to seriously hurt them. The final sample included any adolescent between aged 12–17 years who reported participating in at least one of the behaviors one or more times. Of the 71,888 adolescents interviewed in NSDUH between 2007 and 2010, 21,188 (29.5%) youth participated in at least one of the six behaviors specified above. Three hundred and six youth had missing information on one or more outcome variables and were excluded from analysis. Thus, the final sample size for this analysis was 20,970 adolescents.

### Measures

#### *Severity of Behavior Score*

Participants’ responses to the six NSDUH survey questions measuring the frequency of behaviors were reported in the following categories: zero times, 1–2 times, 3–5 times, 6–9 times

Table 1. Continued

Variable	%		
	Non-Hispanic White (n=12435, 59.3%)	Non-Hispanic African American (n=4137, 19.7%)	Hispanic (n=4417, 21.06%)
Foster care			
Yes	0.9	1.0	0.8
No	99.1	99.1	99.2
Hospital			
Yes	3.5	3.8	3.3
No	96.5	96.1	96.7
Residential center			
Yes	1.8	1.5	1.4
No	98.2	98.5	98.6

<sup>a</sup>  $P < .05$ .  
<sup>b</sup>  $P < .0001$ .

and 10 or more times. The mid-points of the response categories for each question were taken, and the scores across each of the six behaviors added to create a summary score representing the frequency of behaviors (minimum=0, maximum=60). A three-level categorical variable representing severity of behaviors as Low (1–2), Moderate (3–9), and High (>9) was created. Hence, the Low category comprised youth who reported engaging in only one of the behaviors 1–2 times and the High category included youth who may have reported 10 or more times on only one of the behaviors or had a combination of 10 or more behaviors.

#### Dependent Variable

The primary outcome variable was type of mental health treatment received during the year prior to participation in the survey, across different treatment settings. Only services used specifically for emotional or behavioral problems not related to drug or alcohol use were included. Overnight stays in foster care, hospital or residential treatment center were categorized as inpatient services and, treatment received in a day care or mental health clinic, from a pediatrician or family doctor, in-home therapist or counselor were treated as outpatient services. These services were grouped together because 1)

reports of service use at the general level are more reliable than reports of service use at the specific level<sup>22,23</sup> and, 2) the rate of each specific type of service was relatively low in this dataset.

#### Predictor Variable

Race/ethnicity was the main predictor variable, and included non-Hispanic Whites, non-Hispanic Blacks and Hispanics. In the remainder of this article, the categories non-Hispanic White and non-Hispanic Black are referred to as White and Black.

#### Other Covariates

Since age, sex, family income, health insurance (any coverage vs no coverage), presence of mother and/or father in household, and overall health (self-reported on a scale from 1=excellent to 5=poor) have been reported to be determinants of mental health service use, they were included as covariates.<sup>4</sup> Income was categorized into quartiles as very low (\$0–\$19,999), low (\$20,000–\$39,999), moderate (\$40,000–\$74,999) and high income (>\$75,000). All measures were self-reported and categorical, except age, which was continuous.

#### Statistical Analysis

All analyses were done using Proc Surveyfreq, and Proc Survey Logistic in

SAS.<sup>24</sup> Bivariate analyses were conducted to determine the association between the demographic, problem behaviors and service use variables by race/ethnicity. A Chi-square test was done to test if race predicted externalizing behaviors at each level and a Bonferroni correction of the alpha level was used to assess statistical significance ( $P \leq .05$  /  $P \leq .017$ ). Multinomial regression models were estimated for the outcomes of inpatient, outpatient, both inpatient and outpatient and no service use in the last year. The base model only contained race as a predictor. Further models were adjusted for age and sex. Each of the other potential confounder or causal variables was then added to the model individually to assess the effect on the race term. A variable was considered a confounder of the association between race and service use if the race term changed by  $\geq 10\%$  when the variable was added to the model. A final model that adjusted for all variables simultaneously was estimated.

## RESULTS

Of the 71,888 adolescents interviewed in the NSDUH between 2007 and 2010, 21,185 (29.5%) participated in at least one of the six negative externalizing behaviors. Of these, 306 respondents had missing information on one or more outcome variables and were excluded from the analysis altogether. In the final sample, 12% of the adolescents reported participating in more than one type of behavior at least two or more times in the past year. The prevalence of behaviors was strikingly similar for all levels of severity for the three racial/ethnic groups. While nearly half the Hispanic and White adolescents reported participating in low severity behaviors, the prevalence was slightly lower (47%) for Black adolescents. Prevalence in medium severity behaviors was 36.5% for White, 40.7% for Black

**Table 2. Service utilization by race/ethnicity and severity of externalizing behaviors among youth (12–17 years) who reported engaging in at least one negative externalizing behavior, NSDUH, 2007–2010**

Race	Severity of Externalizing Behaviors <i>n</i> , (%)											
	Low <sup>a</sup>				Moderate <sup>a</sup>				High <sup>b</sup>			
	None	Both	OutP	InP	None	Both	OutP	InP	None	Both	OutP	InP
Non-Hispanic White	5187(80.4)	116(1.8)	1013(16.8)	69(1.0)	3445(75.3)	141(2.8)	901(19.4)	95(2.4)	1013(71.9)	99(6.2)	308(19.1)	40(2.7)
Non-Hispanic Black	1578(84.4)	31(1.9)	220(11.4)	52(2.3)	1372(81.5)	43(1.9)	240(13.5)	52(3.1)	409(76.8)	28(3.4)	77(15.0)	29(4.9)
Hispanic	1799(85.5)	21(1.1)	278(11.9)	40(1.6)	1333(80.2)	50(2.5)	254(13.9)	46(3.1)	453(81.3)	28(4.4)	85(12.3)	25(2.0)

OutP, outpatient; InP, inpatient.

<sup>a</sup>  $P < .0001$ .<sup>b</sup>  $P < .0033$ .

and 38.4% Hispanic adolescents. Participation in high severity behaviors was reported by 11.4% White, 12.2% Black and 12% Hispanic adolescents. Differences between groups were significant at the bivariate level ( $P = .0004$ ).

Table 1 shows the demographics and service utilization for each racial/ethnic group. Groups differed significantly on income ( $P < .0001$ ), presence of father or mother in household ( $P < .0001$ ), and overall health ( $P < .0001$ ) and all categories of outpatient service use. Black and Hispanic children were overrepresented in the two lowest income categories (67.7% and 57.8%, respectively) and less than half (41.8%) of the Black children reported having a father in the household, compared with three-fourths of the White and Hispanic adolescents. Receipt of outpatient services was generally higher among Whites for all types of services, compared with Blacks and Hispanics.

Table 2 shows the prevalence of “acting out” behaviors by race. The overall mean for negative externalizing behaviors in this sample was 4.41 (95% CI 4.32–4.51). Mean scores differed significantly between races and were higher for Black adolescents (4.66, 95% CI 4.43–4.89) and Hispanic adolescents (4.56, 95% CI 4.40–4.72) compared with the overall sample and White children (4.26, 95% CI 4.15–4.38).

Overall rates of service utilization were generally low in this population, with 71.9%–85.5% adolescents in any

category of severity reporting that they received no services. This is consistent with previous studies, which have reported rates of mental health service utilization to be between 1% and 15% among adolescents in the United States.<sup>7,25,26</sup> Service use differed significantly among different racial groups with White adolescents’ use of outpatient services higher than Blacks and Hispanics. This trend was reversed for inpatient services, with the rates of inpatient service use being almost double for Blacks in both the high and low severity categories (data not shown).

Table 3 shows differences in service use among youth reporting at least one negative externalizing behavior. Unadjusted odds showed Black youth were

more likely to use inpatient services compared with Whites (OR 1.62, 95% CI 1.23–2.12), and both Black and Hispanic youth were less likely to use outpatient services (OR .67, 95% CI .58–.77 and OR .66, 95% CI .58–.76, respectively). (data not shown) Adjusting for age and sex did not change odds for inpatient and outpatient service use among Black and Hispanic children.

In the model adjusting for all covariates, race/ethnicity no longer remained significantly associated with inpatient service use (OR 1.09, 95% CI .80–1.49 for Blacks; OR .96, 95% CI .70–1.34 for Hispanics). Increased severity of behavior, income and poor self-reported health increased the odds of inpatient service use. Children with

**Table 3. Racial/ethnic differences in service use after adjusting for covariates among youth (12–17 years) who reported engaging in at least one negative externalizing behavior, NSDUH, 2007–2010**

	Inpatient Services	Outpatient Services	Both
Model with All Covariates			
Black <sup>b</sup>	1.09 (.80–1.49)	.61 (.52–.70)	.55 (.40–.76)
Hispanic <sup>b</sup>	.96 (.70–1.34)	.68 (.58–.79)	.63 (.46–.86)
Age	.94 (.87–1.01)	.95 (.93–.98)	1.00 (.93–1.07)
Male <sup>b</sup>	1.09 (.87–1.36)	.57 (.52–.63)	.44 (.34–.56)
Moderate severity behavior <sup>b</sup>	2.06 (1.63–2.62)	1.27 (1.15–1.38)	1.63 (1.23–2.17)
High severity behavior <sup>b</sup>	2.22 (1.60–3.09)	1.36 (1.17–1.58)	3.58 (2.59–4.96)
Very low income <sup>b</sup>	3.76 (2.36–5.98)	.83 (.71–.96)	1.27 (.90–1.79)
Low income <sup>b</sup>	2.56 (1.60–4.01)	.85 (.73–.98)	1.28 (.91–1.80)
Moderate income <sup>b</sup>	1.98 (1.30–.04)	.91 (.78–1.05)	1.02 (.75–1.38)
Insurance <sup>b</sup>	.92 (.59–1.43)	.65 (.54–.80)	.57 (.36–.91)
Father <sup>a</sup>	.99 (.74–1.33)	1.30 (1.13–1.49)	1.28 (1.01–1.63)
Mother	.95 (.65–1.39)	1.21 (1.02–1.44)	1.26 (.93–1.72)
Health <sup>b</sup>	1.19 (1.03–1.38)	1.23 (1.16–1.31)	1.40 (1.23–1.60)

<sup>a</sup>  $P < .05$ .<sup>b</sup>  $P < .0001$ .

the highest severity behaviors were more than twice as likely to receive inpatient services (OR 2.22, 95% CI 1.60–3.09). The poorest children were more than three times as likely as the reference category to receive inpatient services (OR 3.76, 95% CI 2.36–98) and adolescents who reported poorer overall health were also more likely to receive inpatient services (OR 1.19, 95% CI 1.03–1.38).

Blacks (OR .61, 95% CI .52–.70) and Hispanics (OR .68, 95% CI .58–.79) were both less likely to receive outpatient services than Whites, even after accounting for all covariates. Factors associated with increased outpatient service use included race/ethnicity, sex, severity of behavior, income, insurance, having a mother or father in the household and better overall health. Male children were less likely to receive outpatient services (OR .57, 95% CI .52–.63). Odds of receiving outpatient services were lower for all children whose reported family income was <\$75,000, but were lowest for children in the two poorest income quartiles (OR .83, 95% CI .71–.96 for very low income, and OR .85, 95% CI .73–.98 for low income). Conversely, adolescents who reported having a father or mother in the household were more likely to receive outpatient services (OR 1.30, 95% CI 1.13–1.49 and OR 1.21, 95% CI 1.02–1.44 respectively).

## DISCUSSION

We set out to examine differences in mental health service utilization and unmet needs among a large sample of youth with externalizing, “acting out” behaviors. This research confirms that racial/ethnic disparities in mental health service use persist among adolescents. The study also clearly identifies that service use differs by race/ethnicity among adolescents engaging in negative externalizing behaviors of varying severity. While previous studies have looked at disparities in

service utilization among youth diagnosed with mental health conditions, to our knowledge this is the first study from a nationally representative sample which looks at differences in youth who exhibit externalizing behaviors. Our findings emphasize the need to identify and preventatively address disparities in service utilization in such youth, especially racial and ethnic minorities, before they engage in more severe externalizing behaviors.

Among youth with access to mental health treatment, our study is consistent with previous studies that suggest that White youth are more likely to have access to outpatient specialty and private care whereas minority youth are more likely to access services through public welfare systems, such as child welfare and juvenile justice.<sup>27,28</sup> The existence of a two-tier mental health system where minorities, especially Black youth, are more likely to be diverted to the juvenile justice system for treatment, is well documented,<sup>29</sup> and is especially problematic for youth with negative externalizing behaviors. As a result, there is considerable overlap of youth involved

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*Our finding that a greater number of minority youth have more severe negative behaviors and lower odds of outpatient treatment compared with White youth suggests that minority adolescents may not receive early outpatient interventions and may need a greater intensity of services when they finally do access care downstream.*

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in both systems,<sup>30</sup> and for many youth, juvenile justice may be used as the *de facto* mental health care system.<sup>31,32</sup>

Our finding that a greater number of minority youth have more severe negative behaviors and lower odds of outpatient treatment compared with White youth suggests that minority adolescents may not receive early outpatient interventions and may need a greater intensity of services when they finally do access care downstream. For inpatient settings, such as juvenile justice and residential placement, access to mental health services is inadequate<sup>33</sup> and can potentially serve to worsen the mental health conditions of youth who end up confined.<sup>34</sup> Since timely mental health care has been associated with reduced or delayed risk of juvenile justice involvement,<sup>30,35</sup> ensuring timely access is a compelling strategy for reducing overrepresentation of minority youth in this system.

The persistence of differences we found for outpatient service utilization by race after adjusting for covariates, such as poverty and poor health, is also consistent with previous studies,<sup>4,5</sup> and suggests that more needs to be done to improve utilization of services among minorities. However, in contrast to a study that reported the effect of having a father in the household to be unclear on children’s mental health,<sup>36</sup> our study found that having either parent in the household increased the odds of receiving outpatient treatment to similar extents. This finding underscores the role of supportive environments including friends, family and health care providers<sup>37</sup> and the need for strategic partnerships between mental health professionals and these support systems<sup>38</sup> to improve outpatient service utilization.

Such partnerships may also help negate the effects of stigma related to seeking care among young Black males<sup>39</sup> and help address a family’s mistrust of the mental health system. Both stigma and mistrust of the mental health care system

among minority communities<sup>40,41</sup> have been long understood as reasons for negative attitudes toward professional help and underutilization of services. Lastly, because they are thought to foster trust, diversifying the pediatric psychiatric workforce<sup>42</sup> and improving cultural competence training<sup>43</sup> have been evaluated as credible strategies to improve mental health outcomes among minority adolescents.

There are limitations to our study. First, because the responses to the questions included in our dataset were self-reported by adolescents, there is a concern that these behaviors might be under-reported. These data also do not measure whether minority youth are diverted to inpatient services as a result of differential involvement with the juvenile justice system. Information about juvenile justice involvement was only available for two of the four years of data used. Future analyses will examine the subgroup of individuals for whom this information is available to shed light on the time of entry into the juvenile justice system. Although income may explain differences in receipt of inpatient treatment, not having additional socioeconomic data about the respondents' neighborhoods limits our ability to draw conclusions about their access to outpatient mental health services. The validity of the severity of behavior score will also be the subject of future analysis and is acknowledged as a limitation. Additionally, there is some evidence of response bias to the questions used to measure externalizing behaviors; hence, the prevalence of these behaviors may be underreported.

## CONCLUSION

Mental health service utilization differs by race/ethnicity among adolescents who display negative externalizing behaviors. Because these behaviors may signify unmet mental health needs, understanding which youth are not receiving

appropriate mental health care services may help prevent their downstream use of inpatient care or entry into alternate systems of mental health care, such as the juvenile justice system. Further research should assess the impact of early and prevention-focused intervention in reducing the utilization of inpatient care, especially for minority youth, while increasing outpatient use through culturally sensitive care.

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