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Differences in Mental Health Service Sector Utilization among African American and Caucasian Youth Entering Systems of Care Programs

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Abstract

Differences in unmet need and access to services between African American and Caucasian youth have been established; less is known about differences in specific mental health service sectors. This study examined differences in past year outpatient, school based, day treatment, and residential/inpatient service utilization among African American and Caucasian youth (*n* = 3649) entering a federally funded system of care program. Random effects logistic regression models were implemented to examine the relationship between race and past year service utilization. Analyses revealed that African American youth were less likely than Caucasian youth to have utilized school-based and residential/inpatient mental health services in the past year. Findings suggest that racial disparities exist in service use for certain types of service sectors, and highlight the importance of understanding and identifying individual, family, and community factors that contribute to disparities in service utilization.

Keywords

race disparities; mental health services; youth

Introduction

The President's New Freedom Commission on Mental Health identifies the elimination of disparities in mental health services as an integral part to improving the health of the country.[1] Numerous community and epidemiological studies frequently find that there are differences in perceptions of mental health service need,[2–5] and access to or utilization of mental health services between African American and Caucasians in the U.S. for both youth and adults.[6–8] While differences in unmet need and access to services between African American youth and Caucasian youth have been fairly established, less is known about race differences in specific types of community based mental health services used among youth. This study addresses this gap and investigates differences in use of a spectrum of mental health services between African American and Caucasian youth.

Several community based studies have found that African Americans in general, and African American youth in particular, are less likely to use mental health services, more likely to suffer from untreated mental health problems, and more likely to have unmet need compared to

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Caucasian youth.[6–12] Even more, once African Americans enter services, they are also more likely to drop out of treatment earlier and at greater rates than Caucasians.[7,13–15]

Research suggests that African American youth are less likely to receive outpatient psychiatric care[8,16] and more likely to utilize emergency psychiatric care than Caucasian youth.[17] This is problematic since reliance upon emergency psychiatric care for the treatment of mental health problems does not provide continuity of care or access to the most effective, appropriate treatments.[7] Other research suggests that while African American youth are less likely to use inpatient services,[13] there tend to be no significant race differences in school-based mental health service use.[8, 18–19] If certain minority groups are less likely to receive services in general, and appropriate, effective services in particular, then these youth may then be at risk for negative outcomes such as poor school performance, violence, delinquency, and an increased risk of contact with juvenile justice systems.[20–21] Without timely and appropriate services, child and adolescent disorders frequently persist into adulthood.[1,22] Racial disparities in mental health service utilization and the subsequent implications are especially significant for African American youth who are disproportionately affected by poverty, unemployment, poor education, racism, and the consequences of living in troubled communities;[23–25] factors that may exacerbate mental health problems when services are underutilized. The existing research on racial differences in mental health service utilization has typically examined these differences among a limited type of services. A comprehensive examination of racial differences across a spectrum of mental health services has not been thoroughly conducted and could inform community level intervention and prevention efforts.

There are a number of factors, such as income, urbanicity, referral source, and clinical diagnosis,[9,26–27] that may obscure the true relationship between race and service use. For example, African American youth disproportionately reside in low-income, impoverished homes and neighborhoods.[28] Given these excessive economic disadvantages, African American youth are more likely to lack health insurance and experience out-of-pocket mental health costs, which is a significant obstacle to obtaining treatment.[29] This suggests that African American youth with emotional and behavioral problems are less likely to be served in specialty mental health settings, which can be costly. In addition, although African American youth are more likely to be referred to mental health services by juvenile justice and social services agencies, they are less likely to be referred for mental health services compared to Caucasians.[9,30] Clinical characteristics, such as diagnosis, are also related to racial disparities in service use. Clinical characteristics of youth vary by race[9,31] and youth with certain clinical diagnoses are more likely to receive services.[32–35] Studies that examine racial disparities in service use, without taking into account sociocultural and clinical factors, may overestimate the relation between race and service use.

While it is beyond the scope of this paper to review and investigate all factors associated with service utilization, it is important to acknowledge that there are factors other than sociocultural and clinical characteristics related to race differences in service utilization. Research suggests that fear of being perceived negatively by friends and family,[36] stigma,[37–39]fear of hospitalization or institutionalization,[40] and cultural mistrust [5,41–42] are particularly salient factors related to African American's underutilization of mental health services. In addition, there is evidence that there are significant race differences in the perception of mental health problems and the effectiveness of treatment, [43–45] which affect African American's utilization of mental health services. While it is not possible to examine these factors in the current study, research on differences in mental health service utilization would benefit from an examination of these issues.

Despite the increased emphasis among policy makers on reducing health disparities, there has been little investigation into the relation between race and youth's community mental health

service use across different types of services. A better understanding of the variations in type of service use among African American and Caucasian youth would assist policy makers, researchers, and community mental health program developers in efforts to reduce disparities in mental health services. This study addresses a gap in the literature by examining differences in multiple types of mental health services among African American and Caucasian youth entering federally funded community based systems of care programs. It was hypothesized that, compared to Caucasian youth, African American youth would be less likely to have used specific mental health services (i.e., outpatient services, school-based services).

Method

Data Source

The data for this study come from the National Evaluation of the Comprehensive Community Mental Health Services for Children and Their Families Program (CMHI). Initiated in 1993, the CMHI provides funds to communities to develop and enhance mental health systems of care for children and youth with serious emotional disturbances. The overall purpose of the national evaluation of the CMHI, initiated in 1994, is to examine the development and implementation of a system of care approach to child mental health services, service delivery practices, and child and family outcomes. To achieve this purpose, the project collects descriptive information (demographic information, diagnosis at intake, etc.) on all youth referred to the program, in addition to more extensive information on a sub-sample of youth and families who participate in a longitudinal study of the program. A detailed description of the national evaluation study design and procedures can be found elsewhere.[46–47]

Two datasets were made available for use in the current study: the original dataset, which included missing data, and a multiply imputed dataset, which had been created to allow multiple investigators to examine a broad range of research interests. In the current study sample, missingness at the variable level ranged from 0% to 33%, and the sample size in the final models would have been reduced by 67% if the original data, with missing data, had been used; therefore, the multiply imputed dataset was used in the present analyses. Briefly, multiple imputation is a principled method of addressing missing data whereby missing values are imputed by predicting the values based on the observed data.[48–50] The process is repeated multiple times; in the national evaluation dataset, the process was repeated five times, creating five complete datasets. Analyses are conducted on each dataset and the final estimates are combined to account for variability within and across each imputed dataset.[49–50] A more detailed description of the multiple imputation process and procedures can be found elsewhere.[51–52]

Sample Selection

The current study uses baseline data on children and youth referred into a funded system of care community, from 43 program sites across the United States, who participated in the longitudinal study between 1997 and 2005. The sites were comprised of urban (n=14) and rural communities (n=17), as well as communities whose geographic area spanned both urban and rural areas (n=13). Given the specific focus of the present study on services utilization among non-Hispanic White and non-Hispanic African American youth, Asian, Pacific Islander, American Indian/Alaskan Native, and youth of “other” racial/ethnic groups were excluded from the sample even though they were included in the larger national evaluation study. Two sites were excluded because no African American or Caucasian children were enrolled in those sites.

The sample (*n*=3649) includes Caucasian (69%) and African American (31%) children and youth between the ages of 5 and 18 years (mean=12 years) with an internalizing disorder (i.e.,

mood or anxiety disorders), externalizing disorder (i.e., Oppositional Defiant Disorder, Conduct Disorder, Disruptive Behavior Disorder, or Attention Deficit/Hyperactivity Disorder), or a co-morbid disorder (i.e., a combination of the above classes of disorders).

Measures

Service Use—At intake into services, caregivers were asked whether the child had received outpatient, school-based, day treatment, and residential/inpatient services in the past twelve months. Caregivers could endorse multiple services.

Psychiatric Diagnosis—Diagnostic and Statistical Manual, 4th Edition (DSM-IV) diagnoses were extracted from clinical records.[53] The diagnoses were used to create mutually exclusive categories with youth classified as having an internalizing disorder (DSM diagnosis of a mood disorder or an anxiety disorder), externalizing disorder (DSM diagnosis of Attention Deficit Hyperactivity Disorder, Oppositional Defiant Disorder, Conduct Disorder, or Disruptive Behavior Disorder), or a comorbid disorder (a combination of the above mentioned classes of disorders).

Covariates—Functional impairment, measured by the Child and Adolescent Functional Assessment Scale (CAFAS),[54] was assessed at intake into services by providers or independent interviewers who completed structured training to assure consistent, reliable scoring.55 The CAFAS is a valid and reliable measure of clinician ratings of functional impairment across eight domains: home role performance, school role performance, community role performance, behavior toward others, moods and emotions, self-harmful behavior, substance use or abuse, and thinking.56–58 The total functional impairment is a sum of scores across the eight domains, and ranges from 0 to 240, with higher scores indicating greater levels of impairment. Scores between 0–10 suggest minimal impairment, 20–40 mild impairment, 50–90 moderate impairment, 100–130 marked impairment, and 140–240 severe impairment. A score of 40 or below is suggested as a valid cut-point[55] and for the purposes of the present study, total functional impairment was dichotomized into scores of above 40 (e.g., moderate, marked, or severe impairment) versus scores 40 or less (e.g., minimal or mild impairment).

Trained interviewers and service providers obtained caregiver report of child gender, age, race, Medicaid eligibility (no/yes), source of referral into the system of care program, and family household income at intake. Caregivers were asked to identify the child's race (and were able to identify as many races as applied) and whether the child was Hispanic. For the purposes of this study, this information was then used to create two mutually exclusive race categories (non-Hispanic White and non-Hispanic African American). The original income variable was a ten-point Likert scale that ranged from *less than $5000* to *$100000 and over* and for the purposes of this study, income was re-categorized as <$15,000, $15,000–$24,999, $25,000–$49,999, and ≥$50,000.

Analyses

Random effects regression models were used to estimate the association between service use and race. These models take into account the correlation among youth from within the same funded site. Logit models were used for binary outcomes (use of outpatient, school-based, day treatment, and residential/inpatient services). Models were built by adding one variable at a time. Likelihood Ratio tests were used to aid in the selection of variables included in the final models. These variables were selected based on theoretical importance, (e.g., gender[33–34, 59–60]; age[33, 61–62]) or a p-value <.05 from Likelihood Ratio tests. Exploratory analyses and initial model building were conducted on one imputed dataset. Analyses for final models were conducted across the five imputed datasets and results were combined using Rubin's rules for combining multiply imputed data.[48,63] Analyses were conducted using Stata 10.0.[64]

Results

The study sample is described in Table 1. The sample was predominantly male (69%), and the majority had a household income less than $15,000 (48%), and had used mental health services in the past year (89%). There were significant differences in parent education ($p<.001$), functional impairment ($p<.001$), and use of mental health services in the past year ($p<.001$) between African American and Caucasian youth. African American youth were more likely to come from families with lower income and have a parent/caregiver who achieved less education, and they were less likely to have used a mental health service in the past year compared to Caucasian youth. Outpatient, school-based, and residential/inpatient were the most frequently used types of services.

Type of Service Use

Table 2 presents unadjusted odds ratios and 95% confidence intervals of the relation between race and past service use. African American youth were significantly less likely than Caucasian youth to have utilized outpatient services, school-based services, or residential/inpatient services. There were no significant race differences in the use of day treatment services.

Table 3 presents the relation between race and service use, after adjusting for potentially confounding factors. Once psychiatric diagnosis, referral source, and sociodemographic characteristics were taken into account, race continued to be significantly associated with past year school-based service use (OR=.78; 95% CI: .65–.94), and residential/inpatient services (OR=.81; 95% CI: .66–.99).

In addition to the relation between race and past service use, several of the covariates were also associated with service use. Compared to youth with internalizing disorders, youth with comorbid disorders were significantly more likely to have received outpatient services and school-based services (Table 3). Youth with externalizing disorders were more likely to have received school-based services, and less likely to have received residential/inpatient services compared to youth with internalizing disorders. Referral source was also significantly associated with outpatient service use, and in some instances school-based, and residential/inpatient service use. For example, youth referred into the system of care program from the juvenile justice system were significantly less likely to have received any of these services in the past year compared to youth referred from a mental health agency. Youth who were self or caregiver referred into the system of care program were also less likely to have received any services, outpatient, school-based, or residential/inpatient services compared to youth referred from a mental health agency.

Discussion

This study examined differences in mental health services use between African American and Caucasian youth entering a federally funded community based system of care program. The current findings suggest that youth entering the system of care program have been coping with and in treatment for mental health problems prior to their entry into the system, and that they may be entering the system of care in order to receive services that are more comprehensive. Further, African American youth were significantly less likely to have used mental health services in the previous year, compared to Caucasian youth. This finding supports previous literature that shows that African Americans disproportionately access mental health care.[1,16,65]

The results suggest that disparities exist for some types of mental health service use. African American youth were less likely to have used school-based services than Caucasian youth. School-based mental health services are thought to counter some of the barriers (e.g., stigma,

financial burden) associated with mental health care[66] and have been increasingly promoted as a way of addressing unmet service needs, particularly among youth with limited access to services.[67–68] While previous studies suggest no racial differences in school-based mental health service use,[18–19] the results of this study suggest that school-based services are not equally reaching African American and Caucasian youth who need mental health services. Further investigation into factors that may inhibit or promote use of school-based services among minority populations is needed.

African American youth were also significantly less likely than Caucasian youth to utilize residential/inpatient services. This difference is somewhat supported in the literature on race differences in youth hospitalization rates.[13,70] While both residential and inpatient services are services that address the needs of youth with more serious mental health problems, these two services are distinct and it is unclear whether racial differences exist within each of these service types. Additional research into racial differences among youth receiving residential services would enhance current understanding of disparities among youth across a spectrum of mental health services.

While African American youth were less likely to have used outpatient services in the unadjusted model, this difference only approached significance after potentially confounding factors were taken into account. Previous studies, using both community samples[18,35] and high-risk samples,[16,70] have found significant race differences in outpatient service use between Caucasians and minority groups. These other studies included covariates in their models that were unavailable in the current study, which may have contributed to the non-significant finding. For example, one study was able to measure and include parental attitudes toward service use[16] as a key covariate in their statistical models, which is an important factor in understanding race differences in youth service utilization.[36, 65,71] The present study, however, did not have this type of parent/caregiver-level data available, and therefore was unable to estimate its effect.

Similarly, there were no significant differences between African American and Caucasian youth in the previous use of day treatment services. The literature on day treatment service utilization is scarce and the findings are inconsistent. One study found that among Medicaid-enrolled youth, Caucasian youth were less likely to receive day treatment services than minority youth.[72] Another study found that African American youth were significantly less likely to receive day treatment.[9] Again, the current study found no race differences. The variation in findings between these studies may be related to differences in the study samples or to the type of social and environmental factors that were included in the models. Clearly, further investigation is needed to fully understand race differences in the use of day treatment programs.

In addition to the associations between race and service use, there were also a number of other factors that were related to service use. For example, youth with comorbid internalizing and externalizing disorders were more likely to have used services (specifically outpatient and school-based mental health) than youth with internalizing disorders only. In a climate of scarce resources, it is promising that the youth with more severe problems are more likely to receive mental health services. The significant associations between the covariates and service use highlight the complexity of mental health service utilization, and reinforce the fact that it is critical to consider factors at the individual, family, and community level when investigating race differences in service utilization.

This study's findings should be viewed in light of certain limitations. This was not a nationally representative sample and the results do not generalize to the broader population. Despite this limitation, this study does provide insight into race differences in service use among youth

entering a federally funded system of care program. Given the support for and increasing prevalence of mental health systems of care, it is important to understand the characteristics of youth entering these programs, and whether disparities exist in the types of services they may have accessed prior to entering a system of care. An additional limitation includes ascertainment of service use, which was based on caregiver report and may be subject to recall bias if caregivers of African American and Caucasian youth differentially report service use. Moreover, there was little additional information pertaining to caregivers (e.g., presence and severity of psychopathology, perceptions of problems, etc.) that likely affect both their utilization and self-report of mental health services. Finally, information was unavailable on the use of informal (such as clergy/church, etc) and crisis services (e.g., hotlines), which could provide a more comprehensive understanding of racial differences in the types of services used to help youth. While information was unavailable on these types of services, this study does provide valuable information regarding past mental health service use across a wide spectrum of formal service types.

Implications for Behavioral Health

The elimination of disparities in behavioral health services is a national priority and the results from this study provide valuable information on where interventions can best target vulnerable populations to reduce disparities in mental health service use. The findings support general concerns about the existence of racial disparities in service use and suggests that race disparities exist for certain types of services sectors, but not for others. This study raises questions about how youth are referred into different mental health service sectors and illustrates the importance of considering factors related to the child's health and environment when examining racial disparities. Further research is needed to identify individual, family, and system level factors that both contribute to and impede disparities in service use.

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Table 1

Sample Characteristics

Variables	Overall (*n* = 3649) % (n)	Caucasian (*n*=2508) % (n)	African American (*n*=1141) % (n)
Male	69 (2518)	69 (1731)	71 (810)
FAMILY INCOME*			
$ <15,000	48 (1751)	42 (1053)	60 (684)
$ 15–24, 999	22 (803)	22 (552)	21 (240)
$ 25–49, 999	20 (730)	23 (577)	14 (160)
$ 50000+	10 (365)	13 (326)	5 (57)
REFERRAL SOURCE			
Mental Health Agency	33 (1204)	34 (852)	29 (331)
School	22 (803)	22 (552)	24 (274)
Juvenile Justice	12 (438)	11 (276)	15 (171)
Child Welfare	12 (438)	11 (276)	13 (148)
Health Provider	2 (73)	2 (50)	<1 (0)
Caregiver/Youth	9 (328)	9 (226)	10 (114)
Other	10 (365)	11 (276)	9 (103)
CURRENT DSM DIAGNOSIS			
Internalizing disorder only	19 (693)	20 (502)	17 (194)
Externalizing disorder only	34 (1241)	31 (777)	39 (445)
Comorbid disorders	47 (1715)	49 (1229)	44 (502)
PARENT EDUCATION*			
Less than high school	21 (766)	18 (451)	26 (297)
High school diploma	33 (1204)	32 (803)	35 (399)
Some college	27 (985)	29 (727)	23 (262)
College degree	6 (219)	7 (176)	5 (57)
Graduate/professional	13 (475)	14 (351)	11 (126)
Functional Impairment*	93 (3394	94 (2358)	90 (1027)
ANY PREVIOUS SERVICE USE*	89 (3248)	91 (2282)	85 (970)
PAST SERVICE USE TYPE**			
Outpatient	75 (2737)	77 (1931)	69 (787)
School	63 (2299)	66 (1655)	57 (650)
Day Treatment	17 (620)	18 (451)	16 (183)
Inpatient/ Residential	31 (1131)	32 (803)	29 (331)
Age	*M*=12.02 *SD*=3.09	*M*=12.18 *SD*=3.15	*M*=12.14 *SD* 2.95

*Statistically different between African American and Caucasian at $p<.001$

** Values do not sum to the total, because caregivers could endorse multiple service types

Table 2

Unadjusted Effects of Race on Previous 12-Month Service Use in Youth: Odds Ratios and 95% Confidence Intervals

	Outpatient	School-based	Day treatment	Residential/Inpatient
[a]African American	.76 (.62–.93)*	.76 (.63–.91)*	.92 (.72–1.18)	.70 (.58–.84)**

[a]Reference group- Caucasian

*p<.01

**p<.001

Table 3

Adjusted Effects of Race on Previous 12-Month Service Use: Odds Ratios and 95% Confidence Intervals

	Outpatient	School Based	Day Treatment	Residential/Inpatient
[a]African American	.82(.67–1.01)	.78(.65–.94)*	1.03(.80–1.31)	.81(.66–.99)*
[b]DSM Diagnosis				
Externalizing	.94(.72–1.22)	1.30(1.04–1.62)*	.86(.64–1.17)	.60(.46–.78)**
Co-morbid	1.43(1.08–1.87)*	1.66(1.34–2.04)**	1.25(.93–1.69)	1.28(1.00–1.64)
[c]Income				
$15000–24999	1.10(.88–1.36)	1.16(.94–1.43)	.95(.68–1.35)	.96(.73–1.26)
$25000–49999	1.40(1.07–1.83)**	1.25(.98–1.58)	1.25(.95–1.66)	1.11(.86–1.43)
$50000+	1.72(1.14–2.60)**	1.19(.81–1.75)	1.71(1.23–2.37)*	1.73(1.17–2.58)**
[d]Referred from:				
School	.40(.31–.52)**	1.12(.87–1.43)	.80(.59–1.08)	.57(.44–.73)**
Juvenile justice	.45(.33–.62)**	.54(.40–.72)**	.74(.50–1.09)	.58(.42–.81)**
Child welfare	.67(.48–.92)*	.71(.52–.98)*	.86(.62–1.19)	1.20(.91–1.58)
Health	.30(.15–.61)**	.60(.30–1.21)	.40(.11–1.42)	.50(.21–1.21)
Caregiver/self	.44(.31–.61)**	.76(.56–1.03)	.76(.49–1.20)	.71(.51–.97)*
Other	.50(.35–.69)**	.83(.62–1.12)	.89(.62–1.29)	.72(.54–.98)*
[e]Parent Education				
High school	1.13(.90–1.41)	.95(.77–1.17)	.94(.71–1.24)	1.03(.82–1.31)
Some college	1.37(1.07–1.75)*	1.04(.81–1.34)	1.06(.79–1.42)	1.16(.91–1.49)
College	1.41(.94–2.13)	.94(.64–1.38)	.95(.58–1.57)	1.40(.98–2.01)
Graduate school	1.16(.85–1.58)	.98(.73–1.33)	.99(.69–1.42)	1.30(.95–1.78)
Age	1.01(.98–1.04)	.98(.96–1.01)	1.03(.99–1.07)	1.12(1.09–1.16)**
[f]Gender	1.07(.83–1.37)	.60(.51–.70)**	1.01(.83–1.25)	1.08(.90–1.29)
[g]Functional impairment	1.32(.97–1.81)	1.78(1.32–2.40)**	1.82(1.10–3.01)*	1.86(1.28–2.71)**
[h]Medicaid eligible	1.52(1.16–1.93)**	1.28(1.05–1.56)*	1.20(.93–1.55)	1.12(.92–1.36)

Reference groups are

[a]Caucasian

[b]internalizing disorders

[c]income<$15,000

[d]referred from mental health agencies

[e]less than high school diploma

[f] male

[g] no functional impairment

[h] Medicaid eligible

* p<.05

** p<.01