Disparities in Adequate Mental Health Care for Past-Year Major Depressive Episodes Among Caucasian and Hispanic Youths

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Objective: **Following efforts made in recent years to provide effective mental health treatments based on evidence-based guidelines, a working definition was developed in the literature detailing a minimum level of "adequate mental health care" for serious mental illness. However, little is known about racial or ethnic disparities in receipt of adequate mental health care for individuals affected with serious mental illness. The objective of this study was to examine disparities among Caucasian and Hispanic youths in receipt of adequate mental health care for past-year major depressive episodes.** ***Methods:*** **Data for this study were drawn from the 2005 National Survey on Drug Use and Health. The study sample was composed of 1,169 Caucasian youths and 316 Hispanic youths aged 12 to 17 with past-year major depressive episodes. The percentages of youths in the sample who received adequate mental health care for past-year major depressive episodes were estimated, and the correlates of receipt of adequate mental health care were examined.** ***Results:*** **Thirty-four percent of the full sample received adequate mental health care for past-year major depressive episodes, but separate analyses indicated that adequate mental health care was received by a significantly higher proportion of Caucasian youths (36%) than Hispanic youths (27%). The odds of receiving adequate mental health care for past-year major depressive episodes for Caucasians were 1.55 times that of Hispanics (p=.01). Having Medicaid or coverage via the State Children's Health Insurance Program significantly increased the odds of receiving adequate mental care for past-year major depressive episodes for both Hispanics and Caucasians.** ***Conclusions:*** **As mental health problems of adolescents from diverse racial or ethnic backgrounds become more easily identified and a larger proportion of these groups is referred to mental health treatment services, it is important to examine the degree to which treatment should be tailored to engage and retain specific racial or ethnic groups so that they will receive the minimum of adequate mental health care. (*Psychiatric Services* 60:1365–1371, 2009)**

The advent of the community mental health centers program in 1963 has led to a shift away from inpatient treatment in favor of community-based services for individuals affected by serious mental illnesses (1,2). More important, recent findings indicate a continued overall trend toward greater use of outpatient mental health care that now accounts for more than 59% of the nearly $12 billion spent in the United States to treat youths affected with mental disorders (3). Despite outreach efforts to treat these youths, a large proportion does not receive needed care, and there is particular concern about disparities in access to care across racial and ethnic groups (4,5). Indeed, studies demonstrate that Hispanic youths are less likely than Caucasian youths to receive specialty mental health services (6–9). Even when youths received treatment for mental health problems, Hispanics made fewer visits than Caucasians (10–12). An important area that has not been comprehensively investigated is whether these disparities exist in receiving a minimum of "adequate mental health care" for past-year major depressive episodes.

Following recent concerns about the levels of treatment received by individuals affected by serious mental illnesses, significant efforts have been made to ensure that mental health treatment is concordant with evidence-based guidelines (13–16). With the increasing involvement of primary care physicians in providing mental health care, the Agency for Healthcare Research and Quality developed evidence-based guidelines for the treatment of depression in primary care settings (17). The American Psychiatric Association also developed guidelines for the treatment of depression in specialty mental health settings (18,19). On the basis of these guidelines, a working definition of a minimum of "ade-

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quate mental health care" was defined in the literature as follows: either receipt of a prescribed medication in combination with four or more visits to a psychiatrist, psychologist, general medical doctor, or other medical doctor or if the individual is not psychotic, receipt of at least eight visits with a mental health specialist (20,21). Using this definition, we investigated racial and ethnic disparities in receiving adequate mental health care between Caucasian and Hispanic youths affected by past-year major depressive episodes. The topic is of keen importance because lack of adequate mental health care among youths represents a lost opportunity to intervene and possibly to prevent persistence of psychopathology into adulthood (22).

This study's framework draws from a well-validated theoretical model, Andersen's social behavioral model, which has been used to analyze mental health service use (23–26). This conceptual framework uses a system perspective and organizes variables into predisposing factors that shape attitudes toward health care utilization, need factors that encompass the individual's illness or impairment that necessitates service utilization, and enabling factors that refer to resources that promote or inhibit service use (23). As a framework for analysis, the social behavioral model does not dictate the exact variables and analytical methods that must be used. The appropriateness of variables to be included depends on the research question, the purpose of the study, and data availability (23). In addition to race and ethnicity, the data set used in this study contains other salient predisposing variables, including age and gender (26–28). Enabling factors are represented by school enrollment, city residency, and health insurance coverage (29,30). Need is assessed by several psychopathological measures, including severity of depression-related impairment, past-year delinquent behaviors, and substance abuse (31–33). The specific aims of this study were to investigate the extent to which racial or ethnic disparities exist between Caucasian and Hispanic youths in receiving adequate mental health care for past-year major depressive episodes and to examine the specific racial or ethnic factors that explain these disparities in receiving adequate mental health care. We hypothesized that among youths affected by past-year major depressive episodes, Caucasians would be more likely than Hispanics to receive adequate mental health care.

Methods

Data source and study sample

Data for this study were drawn from the 2005 National Survey on Drug Use and Health (NSDUH). The survey has been conducted since 1971 to provide estimates of substance use in the U.S. civilian population aged 12 and older. The NSDUH questionnaire was redesigned in the 1990s to place a greater emphasis on health status and health care, including access to mental health care (34). These data have been a useful tool for multidisciplinary studies (35). The 2005 NSDUH survey has a weighted screening response rate of about 90% and a weighted interview response rate of more than 80%. The interviews were conducted by using a combination of computer-assisted personal interviewing (CAPI), with responses entered by a field interviewer, and audio computer-assisted self-interviewing (ACASI), with responses entered privately by the participant. Details on the survey can be found elsewhere (36). The 2005 NSDUH contains 55,905 records covering equal proportions of persons aged 12–17, 18–25, and 26 years and older.

The 2005 NSDUH included a "youth depression" module to assess past-year major depressive episodes by using the diagnostic criteria set forth by the *DSM-IV.* Major depressive episode is defined as having at least five or more of nine *DSM-IV* clinical features nearly every day in the same two-week period, where at least one of the features was either a depressed mood or loss of interest or pleasure in daily activities (37). Questions were adapted from the depression section of the National Comorbidity Survey–Adolescent, which is based on a modified version of the World Health Organization Composite International Diagnostic Interview–Short Form (CIDI-SF) (38). In addition to good psychometric concordances between CIDI-SF and the full CIDI, clinical reappraisal analyses have shown agreement between CIDI diagnoses and independent clinician diagnoses (38,39). Moreover, the CIDI-SF is recommended to diagnose 12-month major depressive episodes in large-scale surveys (40). The sample used in this study included 1,485 Caucasians and Hispanics aged 12 to 17 years who were classified as affected by past-year major depressive episodes. The racial and ethnic distribution of the study sample was 1,169 (79%) Caucasians and 316 (21%) Hispanics.

Adequate mental health care

Respondents with past-year major depressive episodes were asked about their treatment experiences for depression during the past year, defined as "seeing or talking to a medical doctor or other health professional or taking prescription medication for major depressive episodes." All respondents were asked whether they received treatment or counseling during the past 12 months for emotional or behavioral problems that were not caused by alcohol or drugs at a mental health clinic or center; from a private therapist, psychologist, psychiatrist, social worker, or counselor; from an in-home therapist, psychiatrist, social worker, or counselor; or from a pediatrician or other family doctor. If respondents responded yes to any of the above questions, they were asked about the total number of visits to each of these providers. Other questions asked whether they received prescription medication for their depressive episodes.

Respondents who indicated that they received treatment were said to have received adequate mental health care if they received a prescription for an appropriate medication for depression, in combination with four or more visits to a psychiatrist, psychologist, general medical doctor, or other medical doctor, or if they were not psychotic, they received eight or more visits for depression-related problems with ei-

ther a psychiatrist or another type of mental health specialist. This definition is based on evidence-based treatment guidelines that recommend a minimum of four visits for patients receiving medication during the acute and continuation phases for several types of mental disorders, including mood, anxiety, and psychotic disorders (17,41). In addition, clinical trials found that a minimum of eight sessions are needed with a mental health specialist in the absence of medication (19,42,43).

Coding of covariates

As discussed earlier, the covariate of primary interest in this study was race and ethnicity (Caucasian and Hispanic youths). We coded other covariates as follows: age (12–13, 14–15, and 16–17 years), gender (girls versus boys), school enrollment (enrolled versus not enrolled), and city residency (lived in a large Metropolitan Statistical Area or metropolitan area, in a small metropolitan area, or in a nonmetropolitan area).

We used the Sheehan Disability Scale to control for depression symptom severity (44). Analyses found high construct validity and internal consistency reliability for the Sheehan Disability Scale in assessing psychiatric impairment (45). The Sheehan Disability Scale is a measure of the impact of depression on a person's daily activities based on four domains in a person's life: chores at home, school or work, close relationships with family, and social life. Each domain uses an 11-point scale, in which 0 corresponds to no interference, 1 to 3 corresponds to mild interference, 4 to 5 corresponds to moderate interference, 7 to 9 corresponds to severe interference, and 10 corresponds to very severe interference. The data set included an overall impairment variable defined by the highest level of severity of role impairment reported across all four role domains. On the basis of the variable distribution, we construed a binary variable representing low interference (nil, mild, and moderate impairment) and high interference (severe and very severe impairment).

To control for delinquent behavior, we used an index based on six types of past-year delinquent acts (46–48): got into a serious fight at school or at work, took part in fight where group fights group, carried a handgun, attacked someone with intent to seriously hurt him or her, sold illicit drugs, and stole or tried to steal anything worth more than $50. Delinquent behaviors counts were grouped into three categories: none, one or two types, and three or more types (46). Measures for alcohol abuse (yes-no) and drug abuse (yes-no) were also included. Finally, we controlled for health insurance status (no insurance, private insurance, or public insurance—that is, Medicaid or State Children's Health Insurance Program [SCHIP]).

Statistical analysis

Univariate analyses were used to estimate the percentages of Caucasian and Hispanic youths in the sample who received adequate mental health care for past-year major depressive episodes. Nonparametric Kruskal-Wallis tests were used to assess the strength of the association between the covariates and receipt of adequate mental health care by race and ethnicity. Multivariable logistic regressions based on the full sample were used to assess the independent effects of race and ethnicity on receipt of adequate mental health care, adjusting for covariates. Multivariable logistic regressions were also estimated for each racial and ethnic group to examine correlates of receipt of adequate mental health care. All analyses were conducted with Stata software, release 9.0 (49). We used the "SVY" command, using weights provided in the data set to adjust for variations in within-household probabilities of selection and for differential nonresponse.

Results

Race and ethnicity and adequacy of treatment for depression

Table 1 shows the characteristics of the sample of Caucasian and Hispanic youths with past-year major depressive episodes. Thirty-four percent of the sample received adequate mental health care for major depressive episodes. Nonparametric Kruskal-Wallis test of significant differences indicated a higher proportion of Caucasians (36%) than Hispanics (27%) received adequate mental health care ($p<.001$). Moreover, we found that a majority of Hispanic youths lived in large metropolitan areas, while a majority of Caucasian youths lived in small or nonmetropolitan areas. The results also indicate that a significantly larger proportion of Caucasians had private insurance, whereas Hispanics were mostly uninsured or had Medicaid or SCHIP.

We analyzed the associations between race and ethnicity and receipt of adequate mental health care for past-year major depressive episodes. In the first logistic regression model, where race and ethnicity were entered alone, the results indicated that the odds of receiving adequate mental health care for Caucasians was 1.55 times that of Hispanics (odds ratio [OR]=1.55, 95% confidence interval, 1.17–2.03, $p<.01$). In the second logistic regression model that included all of the variables that were controlled for (Table 2), the effect of race and ethnicity did not change (OR=1.56, $p<.01$). We also found that compared with respondents aged 12–13 years, those aged 14–15 years (OR=1.40, $p=.04$) and those aged 16–17 years (OR=1.41, $p=.03$) were more likely to receive adequate mental care. Youths with a high level of depression-related impairment had higher odds of receiving adequate mental health care, compared with those with a low level of depression-related impairment (OR=3.12, $p<.01$). Youths who abused drugs were more likely than those who did not to receive adequate mental health care for major depressive episodes (OR=1.67, $p=.01$). Having Medicaid or SCHIP increased the odds of receiving adequate mental health care (OR=1.72, $p=.02$), compared with having no insurance.

Correlates of adequacy of treatment for depression

Caucasians. Table 3 shows the multivariable logistic models of adequate mental health care for Caucasian youths. Older Caucasians were more likely to receive adequate mental health care—that is, compared with

Table 1

Characteristics of Caucasian and Hispanic youths diagnosed as having past-year major depressive episodes in the 2005 National Survey on Drug Use and Health

Variable	Total (N=1,485)		Caucasians (N=1,169)		Hispanics (N=316)		
	N	%	N	%	N	%	p[a]
Received minimally adequate mental heath care	509	34	424	36	85	27	<.001
Age							
12–13	298	20	233	20	65	21	
14–15	534	36	414	35	120	38	
16–17	653	44	522	45	131	41	
Gender							
Male	409	28	336	29	73	23	
Female	1,076	72	833	71	243	77	
Enrolled in school							
No	33	2	23	2	10	3	
Yes	1,452	98	1,146	98	306	97	
Urbanicity							
Large metropolitan area	589	40	427	37	162	51	<.01
Small metropolitan area	744	50	605	52	139	44	<.05
Nonmetropolitan area	152	10	135	12	15	5	<.01
Depression-related impairment							
Low	399	27	308	26	91	29	
High	1,086	73	861	74	225	71	
Alcohol abuse							
No	1,369	92	1,072	92	297	94	
Yes	116	8	97	8	19	6	
Drug abuse							
No	1,353	91	1,059	91	294	93	
Yes	132	9	110	9	22	7	
Types of delinquent behaviors							
0	728	49	579	50	149	47	
1–2	591	40	464	40	127	40	
≥3	166	11	126	11	40	13	
Health insurance							
No insurance	102	7	61	5	41	13	<.01
Private insurance	1,006	68	856	73	150	47	<.01
Medicaid or State Children's Health Insurance Program	377	25	252	22	125	40	<.01

[a] Statistical difference between Caucasian and Hispanic youths was determined with the Kruskal-Wallis test.

Caucasians aged 12–13 years, the odds of receiving adequate mental care increased for youths aged 14–15 years (OR=1.69, p<.01) and for youths aged 16–17 years (OR=1.58, p=.01). The odds of receiving adequate mental health care increased for respondents who reported a high level of depression-related impairment, compared with those who reported a low level of depression-related impairment (OR=3.46, p<.01). Youths who abused drugs were more likely than those who did not to receive adequate mental care for major depressive episodes (OR=1.58, p=.04). Caucasian youths who had Medicaid or SCHIP were more likely than those with no insurance to receive adequate mental health care (OR=2.74, p<.004).

Hispanics. Table 3 also shows the multivariable logistic models of adequate mental health care for Hispanic youths. Much like our findings for Caucasian youths, we found that drug abuse increased the odds of receiving adequate mental health care for major depressive episodes among Hispanic youths (OR=2.55, p<.01). Also, the odds of receiving adequate mental health care increased for Hispanic youths who reported a high level of depression-related impairment, compared with those who reported a low level of depression-related impairment (OR=2.35, p<.01). Medicaid or SCHIP increased the odds of receiving adequate mental health care, compared with no insurance (OR=1.30, p<.05).

Discussion

This study examined disparities in receiving adequate mental health care among Caucasian and Hispanic youths affected by past-year major depressive episodes. Thirty-four percent of all youths in the sample received adequate mental health care. Our results are slightly lower than the 39% found for individuals aged 15 to 54 years who were shown to receive mental health care for serious mental illness in the National Comorbidity Survey (22). Separate analyses conducted for Caucasians and Hispanics in our study indicate that 36% of Caucasian youths received adequate mental care, compared with 27% of Hispanic youths. Logistic regressions indicate that Caucasian youths were 1.55 times as likely as Hispanic youths to receive adequate mental health care. Although previous research has not extensively examined racial or ethnic disparities in receiving adequate mental health care for major depressive episodes by using this working definition of a minimum of adequate mental care (20,21), our results are consistent with findings indicating that even when persons from racial or ethnic minority groups engage in mental services, they are more likely to make only a small number of visits to their providers (10,12,50).

Our results indicate that differences observed in adequate mental health care for depression among Caucasian and Hispanic youths persisted even after we controlled for other predisposing elements, enabling factors, and need for services in the Andersen model. Moreover, some of these factors that the analyses controlled for differ by race or ethnicity. The literature provides several plausible explanations for our findings within the Andersen framework. Previous research indicates that need factors such as presentation and interpretation of symptoms of mental disorders might differ according to race or ethnicity (51). Enabling cul-

ture and ethnic factors may prevent receipt of appropriate care among Hispanic youths even after they access mental health services (52). In addition, many persons from racial or ethnic minority groups mistrust the traditional care system and use more alternative treatment outside the health care system, such as pastoral and family counseling (53,54). All of these factors could reduce the likelihood that Hispanic youths would use an antidepressant prescription or return for a visit (52), which could also explain racial and ethnic disparities in adequate mental health care found in our study.

Having Medicaid or SCHIP significantly increased the odds of receiving adequate mental care for past-year major depressive episodes for both Hispanics and Caucasians. From a public policy standpoint, this finding indicates that public medical insurance is an important enabling tool for increasing receipt of adequate mental health care for youths. Financing for treating mental disorders has not increased commensurately with the rise in the numbers of youths affected by mental disorders (55). Medicaid or SCHIP benefits for treatment of mental disorders vary widely across states, and the emphasis is often on acute care services rather than on the relapsing condition of mental illness (56). As the financing burden continues to shift from the private sector to the public sector, new research is needed to examine the effects of publicly funded insurance on the effectiveness of service delivery systems for youths with mental disorders. Consistent with the findings of previous studies identifying impairment severity associated with mental disorder symptoms as a significant determinant of mental health care utilization (57), the results of our study showed that regardless of race or ethnicity, youths who reported severe depression-related impairment were more likely than those who did not to receive adequate mental health care.

The results from the study presented here should be interpreted in light of its limitations. First, this study was based on cross-sectional data, and thus it is difficult to conclude that factors associated with receiving adequate mental health care are related causally. Second, the study used the "explicit mental health care" utilization concept, a relatively restricted definition of use that includes only services directly related to behavioral or emotional problems of youths (58).

Table 2

Logistic regression model of predictors of adequate mental care for past-year major depressive episodes among 1,485 Caucasian and Hispanic youths in the 2005 National Survey on Drug Use and Health

Variable	OR	95% CI
Caucasian (reference: Hispanic)	1.56**	1.15–2.10
Age (reference: 12–13)		
14–15	1.40*	1.01–1.93
16–17	1.41*	1.02 –1.92
Female (reference: male)	1.07	.83–1.28
Enrolled in school (reference: not enrolled)	1.74	.74–4.08
Urbanicity (reference: nonmetropolitan area)		
Large metropolitan area	1.07	.72–1.60
Small metropolitan area	1.21	.82–1.78
High levels of depression-related impairment (reference: low levels)	3.12**	2.33–4.17
Alcohol abuse (reference: no)	.96	.62 –1.47
Drug abuse (reference: no)	1.67*	1.12–2.49
Types of delinquent behaviors (reference: 0)		
1–2	1.02	.80–1.30
≥3	.99	.67–1.46
Health insurance (reference: no insurance)		
Private insurance	1.34	.83–2.16
Medicaid or State Children's Health Insurance Program	1.72*	1.04–2.85

*p<.05
**p<.01

Table 3

Logistic regressions model of predictors of adequate mental care for past-year major depressive episodes among youths in the 2005 National Survey on Drug Use and Health, by race and ethnicity

	Caucasians		Hispanics	
Variable	OR	95% CI	OR	95% CI
Age (reference: 12–13)				
14–15	1.69**	1.18–2.42	.74	.36 –1.53
16–17	1.58*	1.11–2.25	.93	.44–1.95
Female (reference: male)	1.07	.80–1.42	.99	.53–1.84
Enrolled in school (reference: not enrolled)	1.63	.62–4.27	1.77	.28–11.19
Urbanicity (reference: nonmetropolitan area)				
Large metropolitan area	1.16	.75–1.78	.69	.21–2.21
Small metropolitan area	1.21	.80–1.84	1.00	.31–3.19
High levels of depression impairment interference (reference: low levels)	3.46**	2.50–4.78	2.35**	1.27– 4.40
Alcohol abuse (reference: no)	1.08	.67–1.72	.62	.21–1.78
Drug abuse (reference: no)	1.58*	1.02–2.45	2.55**	1.21–6.35
Types of delinquent behaviors (reference: 0)				
1–2	1.04	.79–1.36	.92	.51–1.67
≥3	1.75	.48–1.17	2.00	.87–4.52
Health insurance (reference: no insurance)				
Private insurance	1.44	.80–2.58	1.16	.51–2.66
Medicaid or State Children's Health Insurance Program	2.74**	1.27–5.93	1.30*	1.02–2.30

*p<.05
**p<.01

Third, we investigated receipt of adequate mental health care in formal outpatient settings. As noted earlier, persons from racial or ethnic minority groups frequently seek help for psychological problems from nonprofessional sectors, such as church and family, which could not be captured by the study presented here (53,54). Fourth, we examined data from Hispanics as a group, but there might be differences between Hispanics with origins from different countries (for example, Mexico versus Puerto Rico) and between Hispanics who are more acculturated and those who are less acculturated. Unfortunately, the NSDUH does not have data on acculturation. Finally, as with all self-report studies, there is also the possibility of recall bias. The NSDUH procedures are designed to maximize honesty and recall, and studies that examined the validity of data collected for the NSDUH found that the use of ACASI and CAPI methods produce more valid results than other self-report methods (59).

Conclusions

The study presented here investigated and found racial and ethnic disparities in receipt of adequate mental health care for past-year major depressive episodes among Caucasian and Hispanic youths. Previous research also found racial and ethnic disparities in mental health care for mental disorders (60,61). As more adolescents of diverse racial and ethnic backgrounds seek access to mental health treatment services, more study is needed about the degree to which treatment should be tailored to engage and retain racial and ethnic groups.

Acknowledgments and disclosures

This study was supported by two National Institute on Drug Abuse (NIDA) grants (AA-13608 and DA-020923). NIDA had no further role in study design; in the collection, analysis, and interpretation of data; in the writing of the report; or in the decision to submit the article for publication. The data reported were from the 2005 NSDUH public data files available at the Substance Abuse and Mental Health Data Archive and the Inter-university Consortium for Political and Social Research at University of Michigan (webapp.icpsr.umich.edu). The data collection and preparation were sponsored by the Office of Applied Studies, Substance Abuse and Mental Health Services Administration.

The authors report no competing interests.

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