



Published in final edited form as:

J Health Care Poor Underserved. 2011 February ; 22(1): 101–110. doi:10.1353/hpu.2011.0029.

Ethnic and Gender Disparities in Needed Adolescent Mental Health Care

John F. “Fred” Thomas, PhD, LCSW[Assistant Professor],

Preventive Medicine and Community Health and Director, Community-based Mental Health Services and Policy, at the University of Texas Medical Branch (UTMB) Office of Health Policy and Legislative Affairs, where he can be reached at 301 University Blvd., Galveston, TX 77555-0981; (409) 772-7890

Jeff R. Temple, PhD,

Department of Obstetrics and Gynecology at UTMB

Noe Perez, MS[Doctoral student], and

School of Biomedical Sciences, Department of Preventive Medicine and Community Health at UTMB

Richard Rupp, MD

Department of Pediatrics at UTMB

John F. “Fred” Thomas: jofthoma@utmb.edu

Abstract

Psychological problems are overlooked and undertreated in adolescents, especially in low-income and ethnically-diverse youth. School-based health centers are one way to increase health care utilization, and may be particularly important for accessing hard-to-reach populations. The present study examines adolescents’ psychological health and their experiences with receiving needed mental health care. Participants included 1,695 African-American (31%), Hispanic (38%), and White (31%) high-school students in southeast Texas. All students were from the same high school and all had access to a school-based mental health clinic. Twenty six percent of the sample had symptoms indicative of major depression, and 18% had scores consistent with subthreshold depression. Across all ethnicities, the prevalence of depressive symptoms was highest among females. Depressed White students were more likely than depressed minority youth to report having received a prior diagnosis of depression and to have been treated for depression. Thus, ethnic disparities in obtaining needed mental health care may persist even in settings where access to equivalent care is readily available.

Keywords

School-based mental health care; adolescents; ethnicity; gender; utilization

Psychological problems abound among adolescents, with as many as one in five youth suffering from mental illness, and many more living with subthreshold psychological distress.^{1–3} Despite this high prevalence, psychological problems are both overlooked and undertreated in adolescents, especially in low-income and ethnically diverse youth.⁴ For example, in an analysis of two national data sets, Fox and colleagues⁵ found that while less than a third of White adolescents were not receiving needed mental health care, half of minority adolescents were not receiving needed care. Some of this ethnic disparity in receiving needed care can be explained by the fact that adolescents of color are disproportionately lower-income and are less likely to be insured, than their White peers.⁵

However, research has shown that the disparity persists even when controlling for income and insurance status,^{5,6} as well as among Medicaid beneficiaries with mental illness.⁷

In order to increase needed service use among hard-to-reach populations, we must move beyond financial factors and address ethnic differences in the stigma associated with and access to mental health care, as well as the notion that our health care system is tailored to non-minorities. By providing access to all students, school-based health centers are one way to increase health care utilization, and may be particularly important for accessing hard-to-reach populations such as minority and low-income youth.^{8,9} One study found that adolescents with access to a school-based health clinic were 10 times more likely than adolescents without this access to make a mental health or substance use visit.⁹

The present study extends existing research on the receipt of needed mental health care by examining an ethnically diverse adolescent sample with access to a school-based mental health clinic. The fact that the clinic is available to all students in the school will help us determine whether providing equivalent access to care decreases the difference in unmet need often identified between adolescents of color and their White counterparts. Here, we define *unmet need* as existing in students who score in the moderate or high range on a depression screening, but who have never received treatment for depression, disclosed symptoms of depression, or been diagnosed with depression. Despite access to the same level of mental health services, we hypothesized that minority adolescents would be less likely to utilize needed care than their White counterparts.

Methods

Sample and procedure

Participants included 1,694 African American (31%), Hispanic (38%), and White (31%) students in the only public high school in a southeast Texas town of approximately 60,000 people. With a school enrollment of 2,440 students, this represents a response rate of 70%. Participating students were similar in gender and ethnic distribution to the total student body. Passive parental consent was obtained. Specifically, parents were informed of the study and options to opt their child out *via* automated messages and mailed announcements. (All materials, including screening instrument, psychoeducational materials, and community referral information, were available in English and Spanish.) Five parents chose to opt their children out of the study. All students present on the day of administration and not excluded by parent request were eligible to participate. Students could elect not to participate. Information is not available on the exact number of students absent on assessment days *versus* those who did not assent, but very few students elected to not participate. Females constituted 53% of the sample. Participants ranged in age from 13 to 19 years, with an average age of 16. Although income data were not collected on individual students, 50% of the student body qualified for school lunch vouchers.

Data collection occurred over a two-week period in Spring 2008. Participants completed a brief self-report questionnaire during their normally scheduled class time. Prior to completing the surveys, students were given a brief curricula-based overview of depression and mental health (e.g., symptoms of depression and who is affected), and a handout with information on available community services. This study received approval from the Institutional Review Board of the University of Texas Medical Branch.

School-based mental health services

The school-based mental health system available at the high school campus uses a multidisciplinary teamwork approach to providing care involving psychiatrists, pediatricians, developmental pediatricians, nurse practitioners, psychologists, social

workers, and child and parent community advocates. The clinic is characterized by an integration of care, an acknowledgement of the importance of cultural differences, and a vast array of referral sources in the community that provide children's health care, including the provision of no/low-cost medications for uninsured patients. Students are generally referred by their parents through consultation with teachers or administrators in the school system, and from other local community-based care providers. Mental health services are provided on a daily basis, and generally involve screening and continued therapy. The program had been in operation under its current structure for a year and a half prior to data collection.

Measures

Sociodemographic characteristics such as gender, race/ethnicity, and year in school were based on self-report. Three *yes/no* items assessed whether students had a prior diagnosis of depression, received treatment for depression, or self-disclosed depressive symptoms.

The Center for Epidemiologic Studies Depression Scale (CES-D)¹⁰ measured students' depressive symptoms. The CES-D is a 20-item self-administered scale that assesses the frequency of depressive symptoms during the past week using a four-point rating scale anchored by 0 (experienced rarely or none of the time) and 3 (experienced most or all of the time). A CES-D score of 16 or above is the standard cut-off point for identifying individuals *at high risk* of depression.¹⁰ However, scores of 22 or greater for males and 24 or greater for females have been shown to maximize the sensitivity and specificity of the CES-D in predicting DSM criteria for major depressive disorder.^{11,12} Thus, students were placed in one of three groups: at risk for major depression (CES-D \geq 24 for males and \geq 22 for females), subthreshold depression (16 to <22/<24), or not at risk for depression (<16). The CES-D has demonstrated strong internal consistency, adequate test-retest reliability, and is a valid measure of depression for high school students.¹⁰

Results

Twenty-six percent of the sample had CES-D scores consistent with a risk for major depression and 18% had scores consistent with risk for subthreshold depression (see Table 1 for CES-D means and standard deviations). As shown in Table 2, for the sample and across all ethnicities, the prevalence of depressive symptoms was highest among females ($t(1692)58.87, p<.0001$), with girls ($M=18.13$) scoring 5 points higher than boys ($M=13.15$) on the CES-D. The overall model for ethnicity was also significant ($f(1691)=6.34, p<.002$), with White students scoring 1.84 points higher on the CES-D than Hispanic students ($p<.05$), and 2.46 points higher than Black students ($p<.05$). No significant difference in CES-D score was found between Black and Hispanic students. In addition, we did not find a significant interaction between gender and ethnicity.

As shown in Table 1, adolescent girls who scored high on depressive symptoms (CES-D \geq 16) were significantly ($\chi^2=5.2, p<.03$) more likely than their male counterparts to have received a diagnosis of depression (OR=1.49, 95% CI = 1.06–2.11) and to have disclosed depressive symptoms to an adult ($\chi^2=21.3, p<.0001$; OR=2.02, 95% CI = 1.50–2.73). No differences were found for previous treatment for depression.

As demonstrated in Table 3, and after considering gender, there were substantial differences by ethnicity. Of the adolescents classified as at risk for subthreshold or major depression, White male students were over two and a half times as likely as Hispanic male students to report having received a prior diagnosis of depression (OR=2.59). Among female students at risk for depression, White females reported a prior diagnosis 4.35 times as often as Black females, and 2.93 times as often as Hispanic females. In addition, White female students at risk for depression were also significantly more likely than their Black and Hispanic

counterparts to have received treatment for depression within the past year (OR=3.23 and 2.56, respectively). Finally, significant ethnic differences were also found in regards to having disclosed depressive symptoms to an adult within the past year. Both White and Black female students who were at risk for depression were more likely to have talked to an adult about depression relative to Hispanic females (OR=2.26 and 1.40, respectively).

Discussion

Approximately a third of the male and half of the female students screened positive for depression or subthreshold depression. Consistent with findings from national surveys, females were substantially more likely to screen and be at risk for major depression than their male counterparts (30% and 20%, respectively). For example, in the most recent Youth Risk Behavior Survey (YRBS),¹³ females were almost twice as likely as males to report experiencing a two-week episode of feeling sad or hopeless in the past year (36% vs. 21%, respectively). However, unlike the YRBS that found higher rates of depression among Hispanic adolescents, we found significantly higher rates of depression among White students.

Overall, adolescent females with depressive symptoms were more likely than their male counterparts to report a prior diagnosis of depression and to have disclosed depressive symptoms to adults. With respect to ethnicity, White students with symptoms of depression were more than twice as likely as their Hispanic counterparts to have received a prior diagnosis of depression. Among female students with depressive symptoms, White females were over four times more likely to report a prior diagnosis of depression than Black females with depressive symptoms, and nearly three times more likely than Hispanic students with depressive symptoms. A similar pattern was observed for previous treatment for depression within this same group of female students. Thus, having access to a school-based mental health clinic did not appear to alleviate ethnic disparity on indicators of accessing and using needed care. Coupled with existing research on income and insurance status,^{5,6} these findings suggest that differences in socioeconomic status and accessibility do not fully explain ethnic disparities in mental health care utilization. Additional research should investigate whether minority youth (and their parents who must consent to treatment) have different health-related beliefs than their White counterparts. For example, it is possible that the shame and stigma associated with receiving psychological treatment is a stronger impediment to receiving needed care for minority youth than for White youth. However, research is mixed on the relationship between ethnicity and stigma of mental health treatment among adults.¹⁴

In addition to potential individual barriers such as attitudes and beliefs about health care, it may be that referral sources (parents/teachers/counselors) and health care providers interpret depressive symptoms differently depending on an adolescent's race/ethnicity.^{8,15} This point is supported by the current finding that depressed Black youth in the current study were just as likely as White youth to disclose depressive symptoms to an adult but substantially less likely to receive treatment from a health care professional. Alternatively, it may be that minority youth are more likely to be referred to and seek help from less medically oriented resources such as church, family members, or community mentors. Additional research is needed to determine whether ethnic disparities in receiving needed mental health care may be partially explained by African American and Hispanic adolescents seeking non-clinical care for their psychological needs. Future research should control for income, insurance status, and previous psychological treatment. The absence of these controls is a major limitation of the present study.

Ensuring that adolescents have access to and utilize needed mental health care has important and long-lasting implications.⁸ For example, adolescent depression has been shown to be a good predictor of future mental health problems.¹⁶ Therefore, addressing adolescents' immediate mental health needs may also serve to reduce the recurrence or severity of future psychological problems. At the very least, adolescents who receive appropriate care may be more inclined to use the health care system as adults. Further, when youth access services, it affords health care providers an opportunity to identify and modify risky behaviors and promote healthy living. School-based mental health centers address many of the significant barriers that limit access to mental health services by providing them in the setting where children spend the majority of their time, their school. However, our finding that ready access does not necessarily result in equivalent use suggests that additional attention be given to increasing minority youth's receipt of needed mental health care even in favorable settings. It is important to note that the school-based mental health system discussed in this study has been in operation for less than two years. Link and Phelen recently suggested that individuals with more resources, knowledge, and support initially benefit the most from novel approaches to improving health. However, they further state that innovative approaches to improving health ultimately benefit everyone.¹⁷ Thus, although the implementation of this program may have benefited White students more initially, we are hopeful that with time, continued outreach and education, and improvements, our school-based mental health program will witness improved rates of mental health care for all students in need. In fact, Black, White, and Hispanic students are represented fairly equally by patient population of this clinic.

Study limitations include using self-report data and a lack of information on individual socioeconomic status variables and use of other health care services. The explanatory power of our data would have been substantially stronger had we assessed this information. In addition, data were collected from a single high school in Southeast Texas, so these findings may not generalize to other communities. Future research would benefit from including a control school without a mental health clinic. Despite these limitations, the findings make it clear that we must do a better job of reaching those in need of mental health care, with a particular focus on adolescent boys and minority youth. Specifically, even with access to the same level of care that is not affected by income or insurance status, adolescent youth of color with psychological problems may not be having their needs met. This suggests that efforts must be made to educate the broader community on the importance of recognizing mental health symptoms and receiving needed health care.

Acknowledgments

Dr. Thomas is supported by grants from the Robert Wood Johnson Local Initiative Funding Program, Robert Wood Johnson Foundation, Annie E. Casey Foundation, Harris and Eliza Kempner Fund, Rockwell Fund, Moody Foundation, Jamail Galveston Foundation, Leon Bromberg Charitable Trust, Mary Moody Northern Endowment, Permanent Endowment Fund of Moody Memorial First United Methodist Church and a UTMB Presidents Cabinet Award. Dr. Temple is supported by Award Number K23HD059916 from the Eunice Kennedy Shriver National Institute of Child Health & Human Development. The content is solely the responsibility of the authors and does not necessarily represent the official views of the Eunice Kennedy Shriver National Institute of Child Health & Human Development or the National Institutes of Health. This work would not have been possible without the permission and assistance of the Galveston Independent School District.

Notes

1. Costello EJ, Mustillo S, Erkanli A, et al. Prevalence and development of psychiatric disorders in childhood and adolescence. *Arch Gen Psychiatry*. 2003 Aug; 60(8):837–44. [PubMed: 12912767]
2. Merikangas K, Avenevoli S, Costello J, et al. National comorbidity survey replication adolescent supplement (NCS-A): I. background and measures. *J Am Acad Child Adolesc Psychiatry*. 2009 Apr; 48(4):367–9. [PubMed: 19242382]

3. U.S. Department of Health and Human Services. Mental health: a report of the surgeon general. Rockville, MD: U.S. Dept of Health and Human Services; 1999. Substance abuse and mental health services administration, and Center for Mental Health Services.
4. Kataoka SH, Zhang L, Wells KB. Unmet need for mental health care among U.S. children: variation by ethnicity and insurance status. *Am J Psychiatry*. 2002; 159(9):1548–55. [PubMed: 12202276]
5. Fox, HB.; McManus, MA.; Zarit, M., et al. Racial and ethnic disparities in adolescent health and access to care (Fact Sheet No. 1). Washington, DC: The National Alliance to Advance Mental Health; 2007.
6. Elster A, Jarosik J, VanGeest J, et al. Racial and ethnic disparities in health care for adolescents: a systematic review of the literature. *Arch Pediatr Adolesc Med*. 2003 Sep; 157(9):867–74. [PubMed: 12963591]
7. Samnaliev M, McGovern MP, Clark RE. Racial/ethnic disparities in mental health treatment in six Medicaid programs. *J Health Care Poor Underserved*. 2009 Feb; 20(1):165–76. [PubMed: 19202255]
8. Juszcak L, Melinkovich P, Kaplan D. Use of health and mental health services by adolescents across multiple delivery sites. *J Adolesc Health*. 2003 Jun; 32(6 Suppl):108–18. [PubMed: 12782449]
9. Kaplan DW, Calonge BN, Guernsey BP, et al. Managed care and school-based health centers. Use of health services. *Arch Pediatr Adolesc Med*. 1998 Jan; 152(1):25–33. [PubMed: 9452704]
10. Radloff LS. The CES-D Scale: a self-report depression scale for research in the general population. *J Psychological Measurement*. 1977; 1:385–401.
11. Goodman E, Whitaker RC. A prospective study of the role of depression in the development and persistence of adolescent obesity. *Pediatrics*. 2002 Sep; 110(3):497–504. [PubMed: 12205250]
12. Roberts RE, Lewinsohn PM, Seeley JR. Screening for adolescent depression: a comparison of depression scales. *J Am Acad Child Adolesc Psychiatry*. 1991 Jan; 30(1):58–66. [PubMed: 2005065]
13. Centers for Disease Control and Prevention. Youth risk behavior surveillance—United States, 2007 (Surveillance summaries). Atlanta, GA: Centers for Disease Control and Prevention; 2008.
14. Ojeda VD, Bergstresser SM. Gender, race-ethnicity, and psychosocial barriers to mental health care: an examination of perceptions and attitudes among adults reporting unmet need. *J Health Soc Behav*. 2008 Sep; 49(3):317–34. [PubMed: 18771066]
15. Lieu TA, Newacheck PW, McManus MA. Race, ethnicity, and access to ambulatory care among U.S. adolescents. *Am J Public Health*. 1993 Jul; 83(7):960–5. [PubMed: 8328617]
16. Fergusson DM, Wingood LJ. Mental health, education, and social role outcomes of adolescents with depression. *Arch Gen Psychiatry*. 2002; 59:225–31. [PubMed: 11879160]
17. Link, BG.; Phelan, JC. "Fundamental Sources of Health Inequalities," in policy challenges in modern health care. New Brunswick, NJ: Rutgers University Press; 2005.

Table 1

DIFFERENCES BY ETHNICITY IN DEPRESSION AND INDICATORS OF ACCESS AND USE OF MENTAL HEALTH SERVICES AMONG FEMALE AND MALE STUDENTS IDENTIFIED AS AT-RISK FOR DEPRESSION (CES-D \geq 16)

	All Females (n=461)	Black Females (n=135)	Hispanic Females (n=156)	White Females (n=170)
Ever been told by a doctor/other provider that you have depression	29.3%	16.3%*	22.4%*	45.9%
During the past year have you received treatment from a social worker/psychologist for depression	20.6%	12.6%*	15.4%**	31.8%
During the past year did you talk to some other adult (parent, teacher, counselor) because you felt depressed	61.2%	66.7%***	48.7%*	68.2%
CES-D score (M \pm SD)	M=27.71 \pm 8.85	M=27.45 \pm 8.46	M=26.57 \pm 8.30	M=28.95 \pm 9.52
	All Males (n=281)	Black Males (n=77)	Hispanic Males (n=121)	White Males (n=83)
Ever been told by a doctor/other provider that you have depression	21.7%	19.5%	15.7%**	32.5%
During the past year have you received treatment from a social worker/psychologist for depression	22.4%	16.9%	25.6%	22.9%
During the past year did you talk to some other adult (parent, teacher, counselor) because you felt depressed	43.8%	40.3%	43.8%	47.0%
CES-D score (M \pm SD)	M=25.43 \pm 8.05	M=24.04 \pm 6.72	M=24.59 \pm 8.29	M=27.95 \pm 8.34

* Significantly different from same gender White students at $p < .001$

** Significantly different from same gender White students at $p < .005$

*** Significantly different from same gender Hispanic Students at $p < .005$

CES-D = Center for Epidemiologic Studies Depression Scale

Table 2

PERCENT OF STUDENTS AT-RISK FOR MAJOR AND SUBTHRESHOLD DEPRESSION

	% not at risk for depression^a	% at risk for subthreshold depression	% at risk for major depression
African-American	59	17	24
Male	67	15	18
Female	52	19	29
Hispanic, Non-white	57	20	23
Male	63	17	20
Female	51	22	27
Caucasian, White	52	16	31
Male	64	9	27
Female	43	22	35

^a“not at risk for depression” for these analyses was computed as those with a score of less than 16. At risk for subthreshold depression was operationalized as ≥ 16 . At-risk for major depression was operationalized as ≥ 22 for adolescent boys and ≥ 24 for adolescent girls.

Table 3

ODDS RATIOS (OR) FOR ETHNIC DIFFERENCES IN HAVING EVER BEEN TOLD YOU HAVE DEPRESSION, RECEIVING TREATMENT FOR DEPRESSION IN THE PAST YEAR, AND HAVING TALKED TO AN ADULT ABOUT FEELING DEPRESSED IN THE PAST YEAR

	Males				Females			
	OR ^a	95% C.I.	χ^2	p-value	OR ^a	95% C.I.	χ^2	p-value
Ever Had Depression								
White/Black	1.99	.96-4.12	3.51	.0609	4.35	2.51-7.52	29.89	<.0001
White/Hisp	2.59	1.32-5.07	7.98	.0047	2.93	1.80-4.75	19.75	<.0001
Received Treatment								
White/Black	1.46	.67-3.21	0.90	.3424	3.23	1.76-5.90	15.49	<.0001
White/Hisp	0.86	.45-1.66	0.19	.6563	2.56	1.49-4.40	11.99	.0005
Talked to an Adult								
White/Black	1.32	.70-2.46	0.73	.3913	1.07	.66-1.74	0.85	.7713
White/Hisp	1.14	.65-1.99	0.20	.6535	2.26	1.44-3.55	12.80	.0003
Black/Hisp	1.15 ^b	.65-2.07	0.24	.6230	1.40 ^b	1.13-1.73	9.51	.002

^aUnless otherwise noted, Odds Ratios represent the odds of White students experiencing a given response in relation to Black or Hispanic students.

^bRepresents the Likelihood of Blacks students experience a given response in relation to Hispanic students.

CI = Confidence Interval