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Race/ethnicity, parent-identified emotional difficulties, and mental health visits among California children

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Abstract

Variability in mental health services utilization by race/ethnicity was evaluated with a Behavioral Model approach. Subjects were 17,705 children 5–11 years of age in the 2005, 2007, and 2009 California Health Interview Surveys. Parents identified minor emotional difficulties in 18.7% of these children (ranging from 14.8% in Asians to 24.4% in African Americans) and definite or severe difficulties in 7.4% (5.5% in Asians to 9.7% in ‘other race’). Overall, 7.6% of children had at least one mental health visit in the prior year (2.3% in Asians to 11.2% in African Americans). Parent-identified need was the most salient predictor of mental health visits for all racial/ethnic groups. Beyond need, no consistent patterns could be determined across racial/ethnic groups with regard to the relationship between contextual, predisposing, and enabling measures and mental health service utilization. Different factors operated for each racial/ethnic group, suggesting the need for studies to examine mental health need, mental health service use, and determinants by racial/ethnic subgroup. These findings suggest that a ‘one-size-fits-all-approach’ with regard to policies and practices aimed at reducing mental health disparities will not be effective for all racial/ethnic groups.

Keywords

Mental health services; children; access to care; Behavioral Model of Health Services Utilization; race; California Health Interview Survey

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Introduction

Disparities in mental health service use among children and adolescents have been amply documented in the literature.^{1,2,3} Some of these disparities can be explained by racial/ethnic variation.² Questions remain, however, about the relationships among mental health service use, mental health need, and explanatory variables, such as race/ethnicity. There is, for example, evidence of a strong relationship between mental health need and use but not an exact match.⁴ The effect of racial/ethnic differences is not clear either and may be confounded by such factors as poverty and immigration status, which are correlated to both need and access to services.^{5,6} Studies are needed to disentangle the potentially confounding effects of the multiple influences bearing on mental health treatment. Guided by Andersen and Aday's Behavioral Model of Health Services Utilization,⁷ and using California Health Interview Survey data (CHIS), the nation's largest state-health survey, the present study seeks to answer two research questions: (1) Are there racial/ethnic differences in parent-identified need for mental health services for one's child? (2) Taking into account parent-identified need, are there still racial/ethnic differences in seeking mental health treatment? The high percentage of Hispanic and Asian families in California makes CHIS data particularly valuable for examining racial/ethnic differences in mental health service use.

Mental Health Need and Service Use

Rates of mental health disorders among children have been estimated at about 20 percent for mild functional impairment and at five to nine percent for severe functional limitations.⁸ Merikangas et al., using data from the National Health and Nutrition Survey, reported that 12.8% of children in the 8 to 11 year age range had a DSM-IV defined disorder, as did 13.4% of those in the 12 to 15 year age range.⁹ Mental health problems vary by sociodemographic factors. Mood disorders, for example, are more common among females and Mexican Americans.⁹ Attention-Deficit Hyperactivity Disorder (ADHD) is more common among boys and those of lower socioeconomic status.⁹ Data from the 2001–2004 National Health Interview Study showed that among 29,265 children, ages 4 to 17, the prevalence of difficulties in emotions, concentration, behavior, or being able to get along with others varied by sex, age, race, family structure, poverty status, and health insurance coverage.¹⁰

Unfortunately, fewer than half of youth with mental disorders receive treatment.^{9,11} Merikangas et al. reported that as few as 20% of children with mental disorders received any treatment, whereas 74% of children with a physical handicap received treatment.¹²

Race/Ethnicity and Mental Health Service Use

Multiple studies have shown variability in utilization rates based on race/ethnicity. African American, Asian/Pacific Islander, and Latino youth have higher rates of unmet mental health needs and lower rates of treatment, adjusted for need, compared to White youth.^{13–16} Racial/ethnic variability seems to persist even when controlling for the severity and burden of mental health difficulties.¹⁰ One reason may be more stigma-related barriers to care and negative expectations regarding treatment.¹³ Stigma involves both fear of the “labeling effect” for the child and parents’ fears of being blamed, rebuffed, and stigmatized for “causing” mental health problems.¹⁷ Other culturally-related barriers to treatment include problems with engagement and retention in treatment, limited availability of linguistically competent providers, and culturally/ethnic-specific providers.¹⁸ Parental cultural factors, parental values, beliefs and behaviors, and level of parental acculturation also have been reported in the literature.¹⁹ Parental endorsement of mental illness etiologies (biopsychological, sociological, spiritual, or nature disharmony) was found to partially mediate the relationship between race/ethnicity and treatment for Asian/Pacific Islander

American and Latino youths.²⁰ Furthermore, researchers found that Asian and Latino consumers of public mental health services were considerably more likely than were their White counterparts to live with family members. These differences in family involvement and support played a role in explaining racial disparities in mental health treatment.²¹ Particularly in a state such as California, which has a large Latino and Asian immigrant population, race/ethnicity and immigration are closely intertwined. Prior analysis of California data suggests that immigration should be included in studies of healthcare disparities, particularly because racial/ethnic minorities are more likely to report healthcare discrimination.²²

Behavioral Model of Health Services Utilization

To understand the effects of multiple factors on mental health service use, Andersen and Aday's Behavioral Model of Health Services Utilization⁷ offers a useful conceptual framework for thinking about and evaluating barriers to mental health services use. The Behavioral Model considers the effects of individual characteristics (predisposing, enabling, and need) on access to healthcare. Individual sociodemographic characteristics such as race/ethnicity, age, and gender, and enabling factors, such as insurance and income, may facilitate or hinder utilization. The Behavioral Model also accounts for contextual effects, that is, factors related to the environment and health care system, including the availability and characteristics of health care providers. Access to care is considered equitable if need for services, in this case individual emotional/behavioral health, plays a predominate role in utilization patterns, and inequitable to the extent that contextual measures, social measures, and enabling variables contribute to utilization.⁷ Contributions by predisposing measures, such as age and gender, can be considered equitable if they are directly linked to underlying health status, in this case, poor mental health.

Contextual Effects—General reasons for under-treatment include insufficient funding, limited availability of services and geographic location of services.¹³ Distance between residence and treatment location and transportation-related factors, such as adults having a driver's license, were shown to be significant predictors in mental health care in rural places.²³

Individual Predisposing Factors—Besides variability by race/ethnicity, there is evidence that other individual predisposing factors influence mental health service use, for example, mental health service use increases with age among youth.²⁴ There is some evidence for treatment variability by gender but findings are not consistent.¹³ Parental characteristics are important predictors of children's mental health services. Negative expectations about treatment, for example, have been found to adversely affect parent's help-seeking behavior for their children.²⁵ Harrison reported that parents who have negative attitudes toward mental health services have a preference to seek advice from family members, friends, media "experts," religious leaders, or from self-help books and resources.²⁶ As an example of interaction among independent variables, parents from rural communities are less likely to seek treatment due to negative perceptions about mental health care professionals.²⁷

Enabling Factors—Private insurance is the primary funding source for mental health services among youth;⁴ however, despite empirical work, the relationship between insurance and mental health treatment utilization remains unclear. Analysis of 1997 and 1999 children's data from the National Survey of America's Families showed that the uninsured were significantly less likely to have any mental health visit in 1999, although insurance was not a significant predictor in 1997.²⁸ More recent studies do not show a strong relationship. In one study, having health insurance was not statistically significantly related to services

among youth with a mental disorder,⁹ and in another study, no statistically significant difference in mental health visits existed between children having private insurance versus Medicaid or other public insurance.²⁹

Need Factors—Need for services, including both professional evaluation of need and patients' or parents' perception of need, has been identified as one of the most important factors affecting service use. The type and severity of problems influence parental help-seeking behaviors. Weisz and Weiss, for example, found that children with externalizing problems (e.g., ADHD and conduct disorder) were significantly more likely to be referred for mental health services than were children with internalizing problems (e.g., anxiety and depression).³⁰ Having more symptoms also increased parental help-seeking behaviors.³¹ Researchers found that parents of children who had been diagnosed with ADHD felt empowered and that in some cases, diagnosis reduced parental blame and increased the likelihood of obtaining treatment.³²

Despite evidence of a strong relationship between mental health need and use of mental health services, the relationship does not appear to be linear. Analysis of 2001 NHIS data found that the majority of youth (ages 4 to 17 years) with any visits in the past year did not have serious emotional distress, as defined by the 90th percentile from the 25-item Strengths and Difficulties Questionnaire.⁴ Correspondingly, many children with identified need based on questionnaire responses did not receive care.⁴

Study Purpose

A two-step analysis approach was used within the framework of Andersen and Aday's Behavioral Model of Health Services Utilization.⁷ The first step involved examining the effect of contextual and personal predisposing and enabling factors on parent-identified need. In the second step, the effect of contextual, predisposing, enabling, and parent-identified need factors on mental health visits was examined. Need was measured through parents' appraisals of their child's emotional and behavioral problems. Although standardized clinical measures of need better estimate the presence/extent of mental health problems, parents' subjective appraisals have been shown to be a significant indicator for help-seeking behavior and, thus, are believed to be good need indicators.²⁰ Parents are gatekeepers to their children's care, and their perceptions of the type and severity of problems and their ability to address these problems, in part, will determine whether treatment is sought.^{30,31}

Method

Data

The California Health Interview Survey (CHIS; www.chis.ucla.edu) is a bi-annual random-dial household telephone survey covering a variety of health status indicators and behavioral measures and is the nation's largest state-level health survey. Public-use child, adolescent, and adult surveys are available from CHIS. For each selected household, one child, adolescent, and adult is randomly selected for interview. The most knowledgeable adult, typically a parent, is surveyed regarding the selected child. The sampling design was modified in 2009 to include cell phones in addition to landline telephones. Four hundred and eighty two children's surveys were completed from the cell phone sample.

Survey completion rates from CHIS are comparable to other large-scale surveys, such as the California Behavioral Risk Factor Surveillance System.^{33–35} In 2005, the screening completion rate of all households was 49.8%, and the child extended survey completion rate was 75.2% for a survey completion rate of 37.4%.³³ The completion rate for child surveys in

2007 was $35.5 \times .737 = 21.1\%$ ³⁴ and in 2009 was $36.1 \times .729 = 26.3\%$.³⁵ There are modest variations in response rates based on geography and respondent gender, age, and household size. For example, it has been observed that response among households with children is declining more quickly over survey years compared to households without children, although the difference was smaller in 2009 with the inclusion of a cell phone sample.³⁶ Due to its sampling design and large sample size, CHIS data are considered to be representative of the diversity within California.^{33–35}

Surveys have been translated into Spanish and a number of Asian languages – Chinese (Mandarin and Cantonese dialects), Vietnamese, and Korean.³⁷ The percentage of child surveys (all completed by parent or primary caregiver proxy) conducted in a language other than English was 18% in 2005,³³ almost 16% in 2007,³⁴ and 24% in 2009.³⁵ The average child survey interview lasted 15 minutes,³³ 17.5 minutes,³⁴ and 16 minutes,³⁵ respectively. Surveys conducted in a non-English language generally took more time.

Subjects

There were 17,705 completed surveys for children ages 5 to 11 in CHIS 2005, 2007, and 2009 combined.

Measures

The dependent variable was any mental health visit, a yes/no response to the question, “Has your child received psychological or emotional counseling in the past 12 months.” The independent variables, coded as shown in Table 1, are as follows:

Context measures included survey year and location. Household zip codes were categorized by CHIS using the Claritas rural-urban continuum to create the four-level measure of urban, second city, suburban, and town/rural.

Individual predisposing measures included gender and age (shown as categorical for descriptive purposes). Race/ethnicity originally was a CHIS-defined, six-level variable. For the present analyses, American Indian and Alaska Native and Pacific Islander/Other single race/multiple race were recoded into “other race.” Thus, the race/ethnicity categories we evaluated were White, Latino, Asian, African American and Other race. Immigration measures were child born in the U.S. (yes vs. no) and languages spoken at home (thirteen-level variable recoded to English only, English and another language, and no-English). There also was information on whether the mother or father had immigrated, but that was highly correlated with language, and language was seen as more pertinent for utilization. Parental measures included marital status (single vs. married), age group (a four-level variable recoded to less than 40, 40 to 49, and 50 and older), and education (an eleven-level variable recoded to up to high school graduate vs. any post high school training/education).

Individual enabling measures were: Usual source of care (a five-level variable recoded to seen by individual physician/group/HMO, seen at clinic, or no regular source), insurance (a six-level variable recoded to employment-based/private purchased, Medicaid (Medi-Cal), and other), and income (24 Federal Poverty Level categories recoded to four levels).

Individual need was measured by asking parents or primary caregivers if the child had difficulties with emotions, concentration, or behavior/interaction with other people in the past six months. If they responded yes to this one question, they were asked if those difficulties were minor, definite, or severe. This four-level measure was recoded to none, minor, definite/severe.

Analytic Plan

Descriptive statistics were generated to show frequencies (adjusted for survey design and combination of multiple years of data) for all variables, as well as the proportion of mental health visits within each independent variable category. The Pearson test, using design-based F values, was used to determine statistically significant differences in the proportion of visits among categorical variables. The analytic approach followed the example of Zuvekas and Fleishman in their analysis of self-reported mental health need and racial variation in mental health services among adults.³⁸ To address the first research question of whether there are racial/ethnic differences in parent-identified need for mental health services for one's child, multivariable ordinal logistic regression was done, with the dependent variable being parent-identified emotional problems (none, minor, definite/severe). Results from that model were used to generate multivariable-predicted proportions for categories of need by race/ethnicity. The raw proportions of level of emotional problems by race/ethnicity also were shown to better visualize the potential magnitude of the effect by contextual, predisposing, and enabling measures,

For the second question of whether there were still racial/ethnic differences in seeking mental health treatment after adjusting for need, multivariable binary logistic regression models were specified to determine the unique effect of each independent variable on mental health visits for each of the major racial groups. Based on those regression models, predicted proportions were generated for mental visits (yes/no) by race and level of emotional problems. As with research question 1, raw proportions of any visits by race/ethnicity and level of emotional problems were shown to better illustrate the magnitude of the effect of contextual, predisposing, enabling, and need measures on utilization. A jackknife approach was used in calculating confidence intervals due to the survey's sampling design. STATA/SE 11.1 software were used for statistical analyses.

Results

There were 17,705 completed CHIS surveys for children ages 5 to 11 years from the years 2005, 2007, and 2009, representing an estimated annual population of 3,724,822 children (39.6% White, 34.7% Latino, 11.3% Asian, 6.7% African American, and 7.6% 'other race'). Table 1 presents both sample description and percentage of children having had a mental health visit.

Nearly 8% of children had at least one mental health visit in the previous year. Visit proportions were notably higher for Black children (11.2%), children raised by a single parent (14.1%) or a parent being 50 and older (15.2%), and those with Medicaid coverage (10.6%). Also, children reported to have definite/severe emotional problems had much higher mental health visitation rates (34.9%). The proportion of children having a mental visit was particularly low among Asians (2.3%), those with no emotional difficulties (3.1%), immigrant children (3.5%), and households where no English is spoken at home (3.9%).

No emotional difficulties were reported for approximately three-fourths of children. As shown in the raw proportions of Table 2, parents of Asian children were least likely to report emotional problems; approximately 80% of Asian children reportedly had no emotional problems, compared to 74% of White and Latino children, and 68% of African American children. African American children were most likely to have mild emotional problems (24%). Definite or severe problems were reported for 9.7% of "other race," 8.6% of Whites, 7.5% of African Americans, 6.0% of Latinos, and 5.5% of Asians. There was little difference between the raw proportions and the predicted proportions from the ordered logistic regression, taking into account other sociodemographic measures.

Table 3 shows the multivariable effects of all contextual and personal variables on mental health service utilization for each of the racial/ethnic groups. For the contextual variables of location and survey year, only Whites had a lower likelihood of visits in 2007 and 2009. Asian children living in towns or rural areas and Latinos living in the urban fringes also were less likely to receive mental health care. Regarding predisposing measures, older age of the child was positively associated with higher odds of mental health utilization for Whites and Latinos. For all races, male gender, languages spoken home, and child's birth country were not significantly associated with mental health care. Single parent status significantly increased odds of mental health utilization for Whites, Latinos, and other race. The likelihood of treatment was higher if parents were 50 years of age and older for Whites, African Americans, and other race. Higher parental education was positively associated with odds of utilization for Whites. Yet, college education was associated with a reduced likelihood of visits among African Americans. Regarding enabling measures, not having a regular source of care negatively affected mental health utilization among Whites only. Similarly, Medicaid coverage was positively associated with mental health service use for White children only. On the other hand, there was no significant effect of income on likelihood of mental health service. Regarding need, any parent-identified emotional difficulties were positively associated with increased likelihood of care for all races. Specifically, the odds of a mental health visit increased notably when definite/severe problems were reported and were highest for Asian children (OR=33.7), followed by African American children (OR=32.5), White children (OR=22.3), other race children (OR=14.7) and Latino children (OR=7.0).

Table 4 presents both raw and multivariable predicted proportions of visits, based on parent-identified need. Both sets of numbers show an increased proportion of children having visits as the level of need increases. Asian children clearly have a lower proportion of any mental health visits, particularly for those with minor problems. Looking at the raw proportions, 46.1% of White children with definite/severe problems had at least one mental health visit, followed by 42.0% of African American children, 29.9% of other race children, 22.0% of Latino children, and 17.4% of Asian children. There is good agreement between the raw and predicted proportion of utilization for children with no problems or minor problems; however, the predicted proportion of visits for Asians and other races having definite or severe emotional problems is noticeably higher than what was actually observed.

Discussion

Regarding research question 1, there were racial/ethnic differences in parent-identified need for mental health services for one's child, with African American parents being most likely to perceive emotional difficulties among their children and Asian parents being least likely to perceive such difficulties. Regarding research question 2, there still are racial/ethnic differences in seeking mental health treatment after taking into account parent-identified need, with Asian and Latino children being least likely to receive services.

In the present study, rates of parent-identified emotional and behavioral problems fell within the ranges reported by the Surgeon General Report in 1999.⁸ For example, the Surgeon General's report documented a rate of 5% for mental health problems with extreme functional impairment and 11% for significant functional impairment. In the present study, rates for severe problems ranged from 4.6% for Asian children to 7.6% for African American children. The rate of minor problems, ranging from 14.5% for Asian children to 24.4% for African American children, also reflects reported rates of emotional and behavioral problems for about one-fifth of all U.S. children.

The majority of studies in the area of mental health services have pointed to racial/ethnic disparities in treatment utilization, although findings are not entirely consistent about which racial/ethnic groups experience the greatest degree of disparities. Findings differ from other studies, such as a national study that reported emotionally-distressed African American youth had lower rates of psychological counseling compared to White and Hispanic youth.³⁹ Low rates of use also have been reported among Asian youth; however, along with a higher threshold of severity before seeking services.⁴⁰ Indeed, we observed that Asian and other race children having the most severe emotional problems were less likely to receive care than expected based on other parental and child characteristics.

The application of the Behavioral Model revealed substantial racial/ethnic variation in how contextual, predisposing, and enabling factors among California children influence use of mental health services, which is in line with reports from several investigators.^{39,41,42} Results show that parental appraisal of emotional and behavioral difficulties in children is the most salient factor influencing mental health services and the only variable that is significant across all racial/ethnic groups. This is congruent with prior literature.^{30,31} The odds of mental health service utilization were noticeably greater if problems were assessed as being definite/severe, but even minor problems significantly increased the odds of receiving care, particularly for African Americans. Parent-identification of definite/severe emotional problems had the least relative effect for Latino children. A limited number of studies have examined mental health service use among Hispanic youth, and findings about their service utilization rates in relation to other racial/ethnic groups have not been consistent.³⁹ Differences in rates, in part, have been explained by immigration status.⁴³ It may be that immigration-related measures simply were overwhelmed by other parental characteristics, such as marital status, age, and education. Similarly, there are only a handful of studies on mental health service use among Asian youth, but existing studies generally indicate low rates of use and a high need threshold before services are sought,^{19,20,40} which is supported by the present study's findings.

Beyond need, no consistent patterns could be determined across racial/ethnic groups with regard to the effect of contextual, predisposing, or enabling measures. This makes it difficult to interpret findings. Age was a significant predictor for higher mental health service use for White and Latino children. For these two groups, the odds of utilization increased by 20% and 10%, respectively, with increasing age.

Multivariable regression revealed that marital status was significant for White, Hispanic and other race children. Single parent status is considered a risk factor, and, therefore, it is not surprising that it may be a "gateway" to receiving treatment; however, it is unknown why single parent status would not affect utilization for Asians and African Americans. Reasons for the association between being an older parent and higher mental health service use are speculative as well. Older parents may have greater awareness and, therefore, may be more likely to seek help; however, this still raises the question why this association was not observed for Asians. It is encouraging that language barriers did not appear to be a significant problem, after adjusting for other factors.

As a group, enabling measures had a limited effect on care. Insurance and source of care were significant only for Whites, and a minor effect by income was observed only for Latinos. The lack of a consistent pattern across racial/ethnic groups may point to the need to examine mental health service utilization by each racial/ethnic group separately to clearly identify factors that most affect a particular group. It also suggests that there are no single factor theories that will provide adequate explanation across different racial groups.

In the present study, the range of variability in mental health service utilization, particularly comparing Asians and Latinos to Whites, was more striking than differences in parent-identified mental need among race/ethnicity. This suggests that outreach efforts for Asians and Latinos should emphasize the acceptability of mental health treatment rather than the identification of mental health problems.

Findings of this study need to be interpreted within its methodological strengths and limitations. CHIS is a large telephone-based survey with many strengths, such as large sample size, being administered with rigor, high percentage of Latino and Asian respondents, translation into multiple languages, and so forth. There also are limitations. For this analysis, for example, we had to rely on a dichotomous measure of mental health service use, which indicated whether a treatment occurred during the past year but did not provide information about the quantity or quality of services received. Although a relatively weak criterion variable, measuring mental health service use as a categorical variable and within a limited time period (e.g., previous year) is quite common in the mental health service use literature.^{42,44,45}

Mental health need was determined by caregivers' perception of their child's emotional problems rather than by a standardized clinical evaluation. Multiple studies have shown substantial disagreement among informants about a child's behavior problems.^{46–48} Rather than interpreting this disagreement as measurement error, it is now understood that differences among multiple informants reflect the various contexts, situations, and settings in which a child experiences such problems, the effect of the relationship, and the type of behavior measured.^{46,49} Although, generally, it is recommended to obtain behavioral data from multiple informants, parents are considered to be important sources of information about their children's problems. In some studies, it has been demonstrated that parents tend to report fewer problems than the youth him- or herself but more problems than teachers.⁴⁷ Regardless of their level of agreement with other informants, however, parents tend to be the ultimate gatekeepers of utilization, having to follow through with referrals that may have been made by professionals.

Implications for Behavioral Health

Given the variability in the relationship between mental health service utilization and contextual, predisposing, enabling, and need factors, it is premature to formulate implications for policy or practice. The main finding from this study is that different factors operate to affect utilization for each racial/ethnic group. As such, studies of mental health need, mental health service use, and determinants by racial/ethnic subgroups are sorely needed. Policy that is created based on aggregate research findings about race/ethnicity, in fact, may ignore the needs of a particular racial/ethnic group and, thus, serve to further mental health service disparities. Special attention should be given in future studies to the differential influence of predisposing and enabling factors depending on race/ethnicity. This is particularly important given that Asian and Latino parents are less likely to have their children treated, even when they perceive that their child has emotional problems.

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Table 1

Population description for California children (survey n = 17,705)

	Percent (estimated annual N = 3,724,822)	Percent having a mental health visit	
Total:	100.0	7.6	
Contextual measures			
Urban	41.7	7.8	
Second City	26.2	6.7	
Suburb	20.5	8.2	
Town/Rural	11.6	8.0	
Survey year			
2005	33.8	8.7	
2007	33.4	6.8	
2009	32.8	7.4	*
Predisposing measures			
Race/ethnicity			
White	39.6	9.7	
Latino	34.7	6.2	
Asian	11.3	2.3	
African American	6.7	11.2	
Other race	7.6	7.8	***
Age			
5–6 yrs	28.7	4.2	
7–8 yrs	27.2	7.2	
9–10 yrs	29.2	9.8	
11 yrs	15.0	10.6	***
Gender			
Female	48.7	6.2	
Male	51.3	9.0	***
Nativity			
Child born in US	93.0	7.9	
Child not born in US	7.0	3.5	***
Language			
English only at home	49.1	9.8	
English and another language	36.0	6.1	
No English spoken at home	15.0	3.9	***
Marital status			
Married	75.8	5.5	
Single	24.2	14.1	***
Parent age group			
<30 years	10.2	5.0	
30 to 40	42.4	6.2	

	Percent (estimated annual N = 3,724,822)	Percent having a mental health visit	
40 to 50	37.7	7.9	
50 and greater	9.7	15.2	***
Parent education			
Through HS	41.5	7.1	
Any college	44.9	8.1	
Graduate school	13.6	7.3	
Enabling measures			
Usual source of care			
Physician/HMO	69.7	7.8	
Clinic	26.0	7.8	
No regular source	4.3	3.9	*
Insurance			
Medicaid	27.2	10.6	
Private	57.8	6.8	
Other payer	15.1	5.1	***
Income			
0 to 99% FPL	21.0	7.6	
100 to 299% FPL	34.9	8.4	
300 to 599% FPL	28.6	7.1	
600% and greater	15.5	6.8	
Need measure			
Emotional Difficulties			
None	73.9	3.1	
Minor	18.7	14.8	
Definite or Severe	7.4	34.9	***

*
p<0.05,

**
p < 0.01,

p < 0.001

Table 2

Proportion of parent-identified emotional difficulties, by race/ethnicity

	White	Latino	Asian	African American	Other race
Raw proportions					
Emotional / behavioral difficulties					
No problems	0.740	0.736	0.797	0.681	0.715
Minor problems	0.174	0.204	0.148	0.244	0.189
Definite / severe problems	0.086	0.060	0.055	0.075	0.097
Predicted proportions					
Emotional / behavioral difficulties					
No problems	0.751	0.748	0.809	0.681	0.726
Minor problems	0.166	0.189	0.145	0.244	0.194
Definite/severe problems	0.084	0.064	0.046	0.076	0.080

Table 3

Logistic regression, mental health visits by race/ethnicity

	White OR	Latino OR	Asian OR	African American OR	Other race OR
Survey n:	n=9,238	n=4,568	n=2,129	n=739	n=1,031
Contextual measures					
Location					
Urban (ref.)	--	--	--	--	--
Second City	0.9	0.6 **	0.4	0.9	0.8
Suburb	1.2	1.0	1.3	0.5	2.1
Town/Rural	1.1	0.8	0.2 *	2.2	1.1
Survey year					
2005 (ref.)	--	--	--	--	--
2007	0.7 *	0.8	0.8	1.0	1.0
2009	0.6 **	1.2	0.8	2.2	0.5
Predisposing measures					
Age (years)	1.2 ***	1.1 *	1.1	1.2	1.1
Gender					
Female (ref.)	--	--	--	--	--
Male	1.1	1.5	1.6	1.1	0.9
Nativity					
Child born in US (ref.)	--	--	--	--	--
Child not born in US	1.2	0.5	2.0	0.2	0.4
Language					
English only at home (ref.)	--	--	--	--	--
English and other language(s)	0.8	0.6	0.5	1.3	1.0
No English spoken at home	0.6	0.5	0.2	0.5	1.1

	White OR n=9,238	Latino OR n=4,568	Asian OR n=2,129	African American OR n=739	Other race OR n=1,031
Survey n:					
Marital status					
Married (ref.)	--	--	--	--	--
Single	2.7	***	2.2	0.7	3.4
Parent age group					
<40 years (ref.)	--	--	--	--	--
40 to 50	1.2	1.4	0.5	2.5	2.2
50 and greater	2.1	***	1.3	4.2	3.0
Parent education					
Through HS (ref.)	--	--	--	--	--
Any college	1.5	*	4.0	0.4	1.4
Graduate school	1.7	*	2.7	1.0	2.7
Enabling measures					
Usual source of care					
Physician/HMO (ref.)	--	--	--	--	--
Clinic	1.1	1.3	1.0	0.9	0.6
No regular source	0.4	**	0.7	1.1	1.1
Insurance					
Private (ref.)	--	--	--	--	--
Medi-Cal	2.0	**	0.9	0.8	0.8
Other	1.0	1.0	0.6	0.4	0.6
Income					
0 to 99% FPL (ref.)	--	--	--	--	--
100 to 299% FPL	1.0	1.5	0.8	1.2	0.8

	White OR n=9,238	Latino OR n=4,568	Asian OR n=2,129	African American OR n=739	Other race OR n=1,031
Survey n:					
300 to 599% FPL	0.9	2.1	0.9	0.4	0.4
600% and greater	0.8	2.2	0.8	0.3	0.3
Need measures					
Emotional / behavioral problems					
No problems (ref.)	--	--	--	--	--
Minor problems	6.1 ***	3.6 ***	3.5 ***	15.5 ***	4.4 **
Definite/severe problems	22.3 ***	7.0 ***	33.7 ***	32.5 ***	14.7 ***

* p<0.05,

** p<0.01,

*** p < 0.001

OR = Odds Ratio

Table 4

Proportion with a mental health visit, by race and parent-identified need

	White	Latino	Asian	African American	Other race
Raw proportions					
Emotional / behavioral problems					
No problems	0.033	0.034	0.011	0.027	0.037
Minor problems	0.189	0.116	0.032	0.251	0.121
Definite / severe problems	0.461	0.220	0.174	0.420	0.299
Predicted proportions					
Emotional / behavioral problems					
No problems	0.038	0.024	0.015	0.026	0.039
Minor problems	0.185	0.124	0.045	0.200	0.170
Definite / severe problems	0.472	0.241	0.286	0.500	0.463