UC Berkeley
UC Berkeley Electronic Theses and Dissertations

Title
Racial Group Differences in School-Based Health and Social Services: An Exploration of the Role of Referral Routines

Permalink
https://escholarship.org/uc/item/8791n7fz

Author
Anyon, Yolanda Temko

Publication Date
2012

Peer reviewed|Thesis/dissertation

Racial Group Differences in School-Based Health and Social Services: An Exploration of the Role of Referral Routines

by

Yolanda Temko Anyon

A dissertation submitted in partial satisfaction of the requirements for the degree of

Doctor of Philosophy

in

Social Welfare

in the

Graduate Division

of the

University of California, Berkeley

Committee in Charge:
Professor Susan Stone, Chair
Professor Jill Duerr Berrick
Professor W. Norton Grubb

Spring 2012

Racial Group Differences in School-Based Health and Social Services: An Exploration of the
Role of Referral Routines

Copyright 2012

by

Yolanda Temko Anyon

Abstract

Racial Group Differences in School-Based Health and Social Services: An Exploration of the
Role of Referral Routines

by

Yolanda Temko Anyon
Doctor of Philosophy in Social Welfare
University of California, Berkeley
Professor Susan Stone, Chair

Given persistent racial disparities in access to health and social services, scholars and advocates
have long argued that intensive school-based support programs are a critical condition for the
success of disadvantaged students of color. Yet surprisingly little is known about the actual
dynamics of service use across by race in educational settings. Data from school health programs
in a large and diverse urban school district (n= 6,696 students served across 15 sites) indicate
that the provision of services in schools improves access for many historically underserved
groups of youth. However, racial disproportionalities observed in students' use of psychosocial
interventions warranted further investigation. Drawing on institutional theory and research from
special education, this study used archival, administrative, and survey data to examine racial
group differences in service utilization and their relationship to school staff members' referral
practices. Using multilevel modeling techniques, analyses of racial group differences in service
use (n=8,466 students, 15 schools) remained significant after controlling for students' risk taking
behaviors and demographic covariates. Black, Latino, Pacific Islander and Multiracial youth
were all more likely to access their school health program than White or Asian youth. Referrals
by teachers, administrators and school counselors were significantly associated with service use
for Black and Pacific Islander youth only. Multinomial regression analyses of referral data (n=
690 referrals, 3 schools) revealed that school staff members were also more likely to refer Black
and Pacific Islander students for emotional concerns. In contrast, they were more likely to refer
Asian and White youth for social or relational issues, and Latino youth for substance abuse. This
study is the first of its kind to examine the role of referrals in students' use of school health
programs.

Table of Contents

List of Tables

List of Figures

Acknowledgements

Chapter 1: Introduction

Background and Significance

More than 30% of adolescents experience significant health, social or emotional concerns that can interfere with their developmental progress, and there is strong evidence that many of these youth do not receive the support and care they need to successfully transition to adulthood (Becker & Luthar, 2002; Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Mulye et al., 2009). Youth of color in particular are much less likely to have access to resources and services that promote their healthy development (Currie, 2005; Kao & Thompson, 2003; Lin & Harris, 2008). Youth or family characteristics cannot explain racial disparities in unmet need (defined as having a diagnosable health condition or engaging in high risk behaviors, but not receiving needed services); they remain significant even after controlling for gender, family income, insurance status, acculturation, immigration status, urbanicity, and a host of other characteristics (Cuffe et al., 2001; Kataoka, Zhang, & Wells, 2002; Kodjo & Auinger, 2003; McCabe et al., 1999; Smedley, Stith, & Nelson, 2002; Wu et al., 1999).

An increasingly popular strategy to reduce racial disparities in unmet need is to offer health and social services in educational settings, where barriers such as cost and inconvenience can be eliminated (Slade, 2003; Stephan, Wieist, Kataoka, Adelsheim, & Mills, 2007). Scholars and advocates have long argued that intensive, school-based support services are a critical condition for the success of disadvantaged students of color (Dryfoos, 1991; Tyack, 1992). Most recently, the school health program model of service delivery has received considerable support from government and philanthropy. For example, over the last fifteen years, the number of school-based health centers in the United States grew by 650% – from approximately 200 in 1990 to 1,498 in 2002 (The Center for Health and Health Care in Schools, 2003). A primary rationale for providing such services in schools is to improve access for historically underserved racial minority youth in order to reduce long-standing disparities in health and educational achievement (Stephan et al., 2007). Yet little is known about the actual dynamics of service provision and use in educational settings, particularly across race.

Research from comprehensive school health programs in one urban district indicates that additional attention to dynamics of race in service use is warranted. In Metro Unified School District,[1] comprehensive school health programs coordinate and connect students to a wide range of prevention and intervention services (e.g. primary care, health education and promotion, mental health, case management, youth development, and recreational activities) at fifteen high schools. Since the start of this school health initiative, practitioners and program evaluators have observed differential patterns of service use by race (see Figures 1 and 2). Black and Latino students are overrepresented in this student support program, while White and Asian youth are underrepresented. To illustrate: 13% of high school students at participating sites are Black, but they make up 23% of school health program participants. In contrast, Asian students comprise almost 55% of the district's high school population, but they are 41% of the youth served across participating sites (see the appendix for calculation of disproportionality metrics for all groups). These patterns vary somewhat by individual school, but these general trends have been consistent for the last ten years. These numbers may be evidence of progress: some groups of

---

[1] All the names of people and places have been changed to pseudonyms in order to protect the privacy of the individuals and communities, programs, and sites involved in this study.

Figure 1. *Students Receiving Services*
(n=6,558 from 15 School Health Programs)

Latino
31%

Asian
41%

White
6%

Black
22%
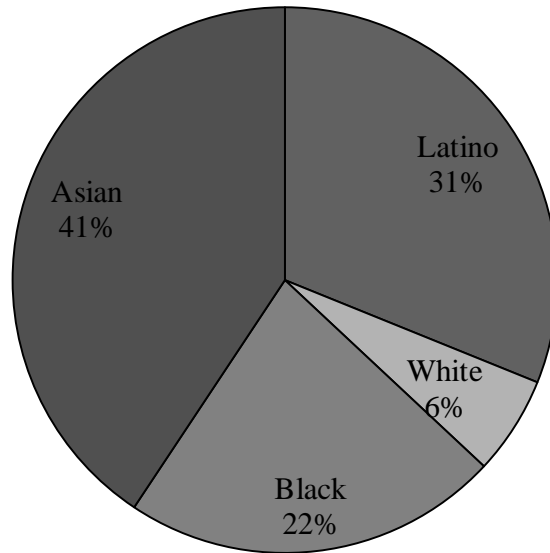
Metro Student Health Initiative, 2009

Figure 2. *Student Population by Race*
(n=15,273 from 15 schools with Health Programs)

Latino
23%

White
9%

Asian
55%

Black
13%
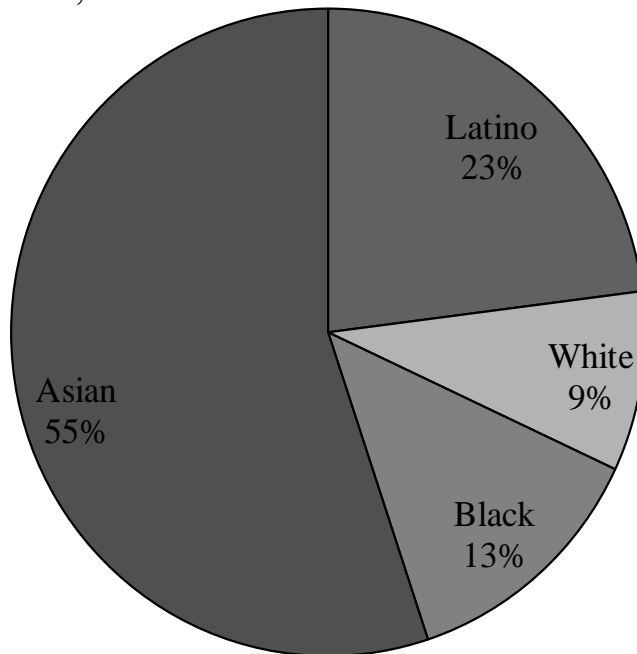
Metro Unified School District, 2009

students who are underrepresented in public health systems are accessing support services, reducing their unmet physical, social and emotional needs, enhancing their capacity for learning, and gaining the coping skills necessary for productive adulthood (Becker & Luthar, 2002). In other words, these patterns may reflect higher health and psychosocial concerns among Black and Latino youth, relative to White and Asian adolescents.

However, a closer look at the data from the Metro initiative also reveals some areas of potential concern. Overall patterns of representation in these school health programs are driven by students' enrollment in individual therapy and case management. For example, of all the students who participated in these school health programs, only 30% received prevention oriented services such as health education or mentoring, whereas 68% received psychosocial interventions like individual counseling. In light of this trend, the underrepresentation of Asian youth in these school health programs unexpected because they experience the highest rates of unmet need for mental health concerns among American adolescents – unlike White youth, who are also underrepresented in these school based health services, but are likely receiving healthcare from other sources (Bui & Takeuchi, 1992; Garland et al., 2005; Ho, Yeh, McCabe, & Hough, 2007; Huang, Yu, & Ledsky, 2006; McCabe et al., 1999; Yeh et al., 2005; Yu, Huang, & Singh, 2004). Moreover, the similarity of these patterns to those found in special education and school discipline, where Asian and White youth are also underrepresented and Black and Latino youth are overrepresented, is striking (Coutinho & Oswald, 2000; Kitano & DiJiosia, 2002; Skiba, Michael, Nardo, & Peterson, 2002).

What else could contribute to these patterns of disproportionality school health program participation, beyond different rates of unmet need across racial groups? Perhaps these group differences reflect self-selection due to culturally informed help-seeking preferences. They could also be a result of greater outreach efforts among Black and Latino youth by school health providers, the more widespread implementation of culturally adapted interventions that target these groups, or the use of counseling and case management as a prevention strategy for youth exposed to community violence or other traumas of growing up in poverty. Another possibility is that these patterns are interconnected with broader processes in the school context. School systems have historically sorted students by race and class, labeled Latino and Black youth as "deviants" or "misfits," and ignored the structural mismatch between schools and students' of color (Bourdieu & Passeron, 1990; Carrier, 1986; Deschenes, Cuban, & Tyack, 2001; Skiba et al., 2002). In this context, such disproportionate patterns of service use could also indicate that school staff are sending challenging students to these programs – not necessarily those students who most need health services.

In focus groups and interviews I conducted with Asian students as part of a pilot study for my dissertation (Anyon, 2010), youth observed that use of the individual services offered by their school health program was associated with being a "bad" kid who is a "troublemaker" in school. These youth generally understood the target population of school health programs to be students who were not feeling well, needed support with family or relationship issues, or engaged in risky behaviors like truancy, substance use or sexual activity. For example, Mike, a 10th grader reflected:

> [Using the school health program] is associated with being different. Like those people always cut class and go over there and hang out or something. So it's just like, you feel awkward in there.

3

Asian youth observed that teachers send these types of students to their school health programs, and that it seemed as though only the students who get in trouble ask teachers for permission to go there during class. Cindy, an 11th grader noted:

> Teachers send the students who always get in trouble. Or some students just go [to the school health program] because they don't want to go to class, just to ditch. It's not really that they need to be there…like they have nowhere else to go and they're just going there.

Cindy and Mike's observations suggest that patterns of service use are related to relationships and processes in schools. In other words, these patterns do not just reflect varying student need; they may also reflect the context of a system that has historically sorted and labeled students by race, and had limited success creating learning environments that are engaging for Black and Latino youth (National Research Council, 2004).

The consequences of these two phenomena (overrepresentation and underrepresentation) are different depending on the group involved. On the one hand, Asian youth may be under-served and have their needs go unmet, whereas the identities of Black and Latino youth as "problems" in schools may be exacerbated. Such processes may constrain the ability of school health programs to reach Asian students most in need of healthcare, and may exacerbate historical trends in education that segregate students by race and classify Black and Latino youth in particular as problems.

Specific Aims

My dissertation investigates these patterns of racial group differences and their relationship to school context by examining the following research questions:

1. Do racial group differences vary by service type and related target domains (physical, emotional, social)? Are racial group differences more pronounced in psychosocial interventions (e.g. psychotherapy and case management), compared to prevention (e.g. health education and youth leadership development) and medical services (e.g. first aid, dental or vision care)?
2. Does the varied prevalence of risk behaviors across subgroups explain racial patterns of participation in school-based services?
3. Are school staff referral rates associated with service use for youth who are overrepresented in services (Black and Latino)? For those who are underrepresented?
4. Do school staff referral practices vary by student race?

Drawing on institutional theory, research from special education and school discipline, I hypothesize that racial group differences in school-based service utilization will vary depending on the type of service provided, will persist after accounting for student risk behaviors, and will be linked to school staff referral practices. Specifically, I propose that group differences will be more pronounced in psychosocial interventions than prevention or medical services, because they target more subjective concerns, are more stigmatized, and have historically served to reinforce the labels of "deviant" and "misfit" (Foucault, 2001; Thornton, 1992). Using research on disproportionality in special education and school discipline for guidance, where racial group differences persist after taking into account student need, I propose that racial disproportionalities will not be fully explained by differential risk taking behaviors (Coutinho & Oswald, 2000; Gaviria-Soto & Castro-Morera, 2005; Skiba et al., 2002; Snowden, 2003). With insights from institutional theory, where widespread organizational routines are understood as reflections of taken-for-granted notions about young people and their needs, I hypothesize that school staff members' referral rates will predict service use for Black and Latino youth (who are

assumed to have need) but not for Asian and White students (Colyvas & Powell, 2006; Scott, 2001). Finally, drawing on Skiba's (2002) research on race effects in disciplinary referral data, in which he found teachers referred Black students for more subjective reasons, I propose that referral reasons will vary by race of the students.

Chapter 2: Literature Review

Racial Disparities in Adolescent Health and Wellness

Adolescence is a particularly fruitful time for prevention of and intervention in health problems that can interfere with achievement in school and beyond (Costello, Egger, & Angold, 2005; Kessler, Berglund, & Demler, 2005). A large number of youth experience significant physical, social and emotional concerns over this period, but there is also strong evidence that many youth do not receive the support and care they need to successfully transition to adulthood (Costello et al., 2003; Grunbaum, 2000; Mulye et al., 2009; Wald & Martinez, 2003). Over 20% of American youth do not have a regular source of primary care and up to 80% of children who have mental health concerns do not receive treatment (Burns et al., 1995; Kataoka et al., 2002; Weinick & Krauss, 2000). Across demographic groups, youth of color are significantly less likely than their peers to receive the healthcare they need (U.S. Department of Health and Human Services, 2001). These disparities are troubling. Research indicates adolescents' unmet social, emotional and physical health needs are contributors to school dropout, underachievement, youth violence, delinquency, and suicide (Cocozza & Skowyra, 2000; Copeland, Miller-Johnson, Keeler, Angold, & Costello, 2007; Currie, 2005).

Socioeconomic and family characteristics alone do not fully explain the problem of racial disparities in health and social service use. Differences have been consistently documented across multiple service systems and remain statistically significant even after controlling for need, age, gender, income, urbanicity, insurance status, acculturation, immigrant status, and a host of other caregiver characteristics (Bui & Takeuchi, 1992; Burns et al., 1997; Cohen & Hesselbart, 1993; Cuffe et al., 2001; Elster, Jarosik, VanGeest, & Fleming, 2003; Kataoka et al., 2002; Kodjo & Auinger, 2003; McCabe et al., 1999; Wu et al., 1999; Zimmerman, 2005). Cauce et al. (2002) provide a useful framework for conceptualizing the existence of racial group differences exist in health service utilization (see Figure 1). This model draws attention to the ways in which the various events, actions and decisions that lead to formal service use are embedded in multiple, mutually-constituting contexts: social, cultural, organizational and structural (Andersen & Davidson, 2001; Cauce et al., 2002; Srebnik, Cauce, & Baydar, 1996). Such an emphasis on context is in contrast to medical models of service use that emphasize instrumental and rational choices in health care delivery and use. In this chapter, I use this framework to organize and present the extant literature regarding contextual influences on racial group differences in health and social service use.

Understanding Racial Group Differences: Previous Research on the Role of Context

The process leading to formal service use, represented by the boxes and arrows in Figure 3, begins with the recognition that a young person is in need of support with a physical, emotional or social concern (Srebnik et al., 1996). Youth may recognize need for health services for themselves, but adolescents' health and psychosocial problems are often identified by an adult with whom they are in regular contact (Srebnik et al., 1996). Once the need for assistance is recognized, young people may decide to access support under voluntary, suggestive or coercive conditions (Pescosolido, Brooks-Gardner, & Lubetl, 1998). This in turn influences the type of support youth pursue, including care and advice from friends and family in their personal network, informal support offered by caring adults such as teachers or religious leaders, or formal treatment provided by healthcare professionals (Boldero & Fallon, 1995). Not only are

Figure 3. *Service Use in Context.*

STRUCTURAL

ORGANIZATIONAL

CULTURAL

SOCIAL

Contexts

Recognition of Need
*Self-perception
*Other's evaluation

Decision to Seek Help
*Voluntary
*Suggestive
*Coercive

Service Selection
*Refusal
*Personal network
*Informal
*Formal

(Adapted from Cauce et al., 2002; Davidson, Anderson, Wyn & Brown, 2004, Srebnik, Cauce, & Baydar, 1996)
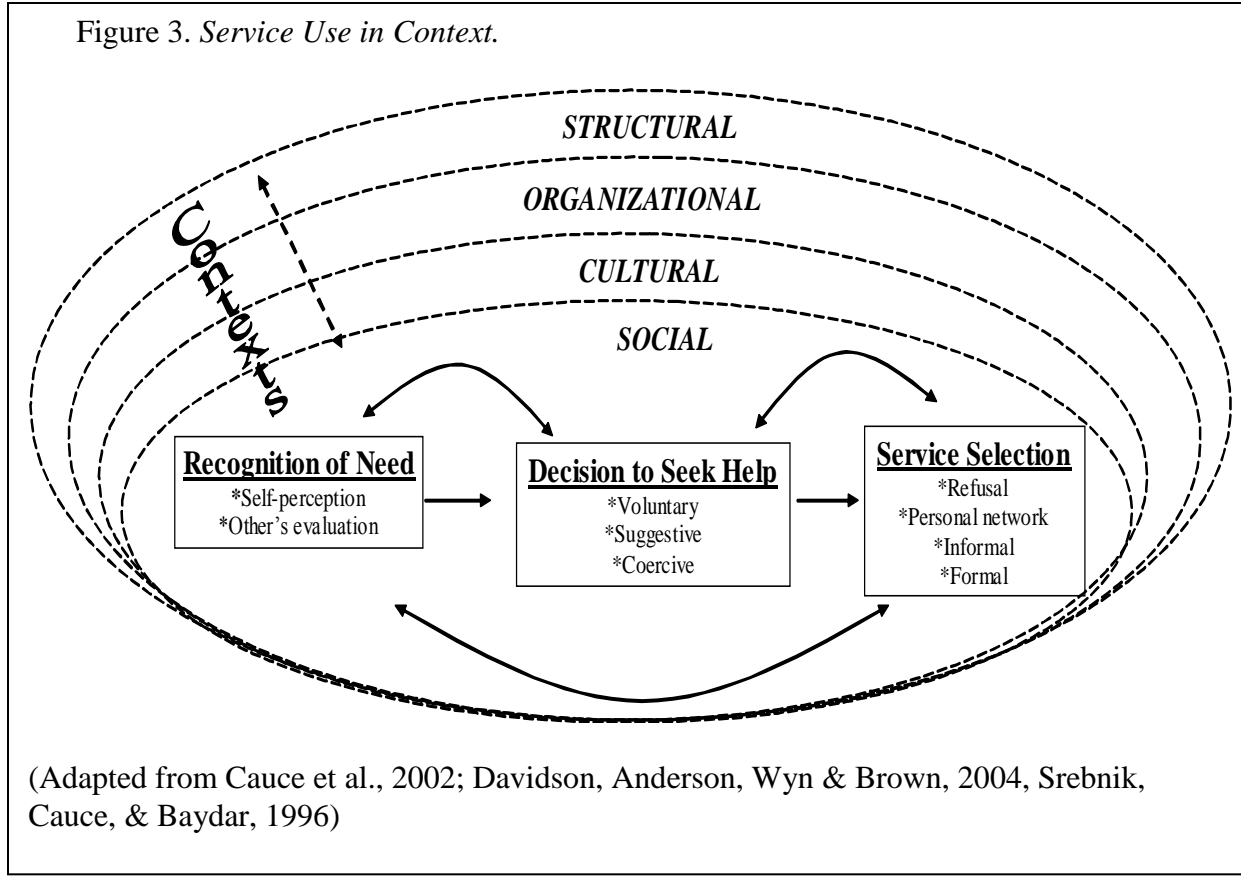
adolescents' help-seeking pathways made up of, and informed by, multiple decision-making points and actors, but they take place in multiple contexts - social, cultural, organizational, and structural. Figure 3 outlines these contexts using dotted lines in order to emphasize that they influence each other and are not exclusive of one another.

On one level, *structural contexts* influence level of need for services. In particular, growing up in a neighborhood with concentrated poverty, as youth of color are more likely to experience, is associated with a host of negative health and psychosocial outcomes in adolescence (Leventhal & Brooks-Gunn, 2000; Thomas-Presswood & Presswood, 2008). Exposure to racial discrimination also serves as a chronic stressor for many youth of color and can have a negative impact on their health and well-being (Pascoe & Smart Richman, 2009; Sanders-Phillips, Settles-Reaves, Walker, & Brownlow, 2009; Williams, Neighbors, & Jackson, 2003). At the same time, structural contexts also shape conditions of access – the number, type, affordability and quality of health and psychosocial services available in a community and the resources necessary to access those further away (Burns et al., 1995; Burns et al., 1997; Glied, Hoven, Moore, Garret, & Regier, 1997; Slade, 2003; Sturm, Ringel, & Andreyeva, 2003).

Although research in this area is quite limited, existing studies suggest that the *organizational contexts* in which services are delivered to adolescents also appear to inform patterns of program utilization. Racial disparities in mental health service use vary by the organizational context within which they are provided (e.g., education, public health, child welfare, or juvenile justice) even when need, socioeconomic status and a range of other relevant variables are controlled (Burns et al., 1995; Gudino, Lau, Yeh, McCabe, & Hough, 2009; Leaf et

al., 1996; Wu et al., 1999). In part, this may reflect different outreach, referral and enrollment systems used in different organizational fields (Sue, 2006).

To explain racial group differences, scholars have increasingly focused on the *cultural contexts* that shape adolescents' pathways into services, especially in the case of mental health treatment. Research indicates that youth of color associate greater stigma with psychosocial interventions than their White peers (Chandra & Minkovitz, 2007; Watson, 2005). Many racial minority youth find these interventions to be a shameful reflection on the perceived inadequacy of their family or religious faith (Goldston et al., 2008; Sue, 1994). Adolescents of color may be less likely to use psychosocial services, even when they have a need for treatment, if they view formal help-seeking as contradictory to cultural expectations or norms, and instead turn to community or religious leaders (Chang, Morrissey, & Koplewicz, 1995; Corrigan, 2004).

For youth and adults alike, perceptions of need for services are contingent upon one's explanatory framework for health and psychosocial problems – beliefs about their origin, how they can best be resolved, and what constitutes a problem that is serious enough to warrant assistance from a professional helper (Garland et al., 2005; Power, Eiraldi, Clarke, Mazzuca, & Krain, 2005). Both community dynamics (e.g. the predominance of a particular behavior in a neighborhood) and cultural background inform individuals' distress thresholds and what types of providers they turn to when certain conduct, feelings, or symptoms are identified as problems that necessitate outside assistance (Power et al., 2005; Roberts, Alegria, Roberts, & Chen, 2005; Yeh et al., 2005). For example, it is unlikely that a person will seek, or suggest, psychological services for a concern they do not conceive of as a mental health problem. Instead, they may turn, or be referred, to medical providers, indigenous healers, community leaders, or clerics. Individuals may also ignore symptoms of psychosocial distress, or minimize their identification as problems that warrant attention from others.

Shared culture between students and service providers also matters for young people's comfort when accessing services and their desire to continue using them. Interventions targeted to a specific cultural group, or led by practitioners who have the same racial or linguistic background as their adolescent clients, are more effective, increase frequency of service utilization, and reduce dropout (Griner & Smith, 2006; Yeh, Eastman, & Cheung, 1994; Yeh, Takeuchi, & Sue, 1994). The (mis)alignment of available programs with students' preferences – for particular types of services or for those provided by adults who share their background – has consequences for adolescents' help-seeking trajectories.

Finally, *social contexts*, in the form of relationships and networks, shape young peoples' help-seeking pathways and their service utilization. Networks contain knowledge of available services, their quality and perceived efficacy. Personal relationships can also serve to encourage or deter help-seeking from healthcare professionals. Or they can provide effective support in place of professional services (Pescosolido, 1992; Pescosolido et al., 1998; Rickwood, 1995). Young people with health and psychosocial challenges most often report seeking help from their parents, friends or teachers– not formal service providers, though this varies somewhat by problem type (Boldero & Fallon, 1995; Copeland & Hess, 1995). When students do seek help from non-familial adults, they are more likely to turn to individuals already known and trusted (Rickwood, 1995). Trust is a crucial factor in adolescents' decisions to access healthcare, and youths' feelings towards health professionals in this regard are likely influenced by the experiences of others in their social network (Power et al., 2005). Scholars have theorized that suspicion of health professionals in communities of color is relatively high because of a history of abuses and culturally insensitive practices (Goldston et al., 2008; Schnittker, 2004; Whaley,

2001). For the most part, empirical research with youth in this area has considered the perspectives of Black adolescents, among whom cultural mistrust is related to negative attitudes towards formal help-seeking (Whaley, 2001). In these various ways, patterns of service need and service use are likely influenced by relationships between providers and youth, and young people's personal networks.

Limitations of Previous Research

Early scholarship regarding racial disparities in health and psychosocial programs attended to the ways in which structural contexts, such as lack of accessibility and affordability, constrained decisions by youth of color or their parents to seek help from formal healthcare providers (Cauce et al., 2002). New research, however, has found unexpected relationships between race, structural barriers, and formal service use (Huang et al., 2006). In some cases, parents of children of color report fewer barriers to service use than White parents, but still access support programs at lower rates (Yeh, McCabe, Hough, Dupuis, & Hazen, 2003). These recent studies suggest that other contexts may shape patterns of service utilization more than previously thought (Yeh et al., 2003). Moreover, the existence of racial group differences in programs offered in educational settings, where structural barriers like transportation, insurance coverage and cost are essentially eliminated, suggests that attention to additional influences on help-seeking and service use is required.

More recent research on disparities for youth has considered the role of cultural contexts on adolescents' pathways into services. There is no doubt as to the value of studies that increase awareness and cultural competency among providers. However, existing research in this area tends to oversimplify the relationship between values, attitudes and behavior (Lamont & Small, 2008). Recent studies have raised questions about the taken-for-granted idea among health professionals that adherence to ethnic cultural ideals constrains service-use. One study indicated that as Latino youth acculturated to American values and belief systems, they actually became less likely to seek help (Stanton-Salazar, Chavez, & Tai, 2001). The only research that has directly considered culture-specific explanatory models for mental health problems focused on parents. After controlling for age, gender, income, parent education, and need, other investigators found that Latino and Asian parents' belief that their child's symptoms were caused by a physical health problem or trauma were more likely to seek services, but there was not a statistically significant relationship between sociological or spiritual beliefs and utilization (Yeh et al., 2005). It therefore seems unlikely that cultural values or norms are the only meaningful determinants of service utilization among youth.

Furthermore, the scholarship on cultural contexts directs attention to racial minority youths' degree of "otherness" or difference in contrast to the dominant reference group, White adolescents. Calls for improved cultural competency and responsiveness often follow such analyses. Yet even those efforts to promote cultural competence among service providers are limited by a failure to recognize the bidirectional nature of the relationship between young people's cultures and those of the institutions, organizations, or professionals who offer health and psychosocial services. These implicit assumptions locate the "problem" in students' cultural backgrounds, rather than those of the service providers and the broader structural and organizational contexts that inform them. As Cauce et al. observe, providers' cultural competency will "quickly become irrelevant if ethnic minority adolescents do not find their way into [their services]" (2002, p. 46). Investigators must also consider how cultural factors "operate in conjunction with…differential discrimination, access to structural opportunities and

constraints." (Lamont & Small, 2008, p. 95; Stewart & Napoles-Springer, 2003). In short, the cultural explanation for underutilization fails to attend to the ways social institutions and their agents directly shape adolescents' patterns of service use.

The causes of racial group differences in help-seeking are enormously complex, with multiple determinants. As is evident in this literature review, insufficient attention has been paid to the role of organizational contexts in racial disparities. Moreover, prevailing research on adolescent help-seeking and service utilization, particularly with youth of color, has been conducted in community-based health systems or with them in mind. School systems are unique and distinct organizational contexts; this must be considered in order to understand racial group differences in school-based health and social services.

The Organizational Context of School-Based Services

Most empirical research has focused on structural and cultural contexts of racial disparities, while less attention has been paid to the organizational contexts that shape service use patterns. Yet racial disparities in service use vary by the setting in which they are provided, suggesting this as a productive area of inquiry. Empirical research of this type is virtually nonexistent in the area of school-based health and services, though practitioners and scholars have addressed the idea conceptually (Hoagwood, 2007; Ringeisen, Henderson, & Hoagwood, 2003; Rones & Hoagwood, 2000). The following section therefore draws heavily on studies of racial disproportionalities in special education and school discipline. Drawing on this literature is appropriate because these services similarly target youth in need of extra support for or attention to physical, emotional or behavioral problems in school. I then discuss limitations in the current literature and outline how this dissertation addresses gaps in the knowledge base.

Referral systems and practices.

Differential patterns of utilization likely reflect varying outreach, referral and enrollment systems used within organizations (Sue, 2006). Referrals often determine who is served by school-based health and psychosocial programs because youth rarely seek help on their own initiative (Jonson-Reid, Kontak, Citerman, Essma, & Fezzi, 2004). In contrast to community-based settings, where young people most often enter services because of their parents' initiative, teachers, administrators and grade-level counselors serve as the primary referral source for health and social service programs in schools (Foster et al., 2005; Jonson-Reid et al., 2004; Srebnik et al., 1996). Parents of adolescents and school staff members often have different views of student behavior and likely have different motivations for encouraging youth to seek health or psychosocial services, so it follows that referral patterns might be different in school health programs than in community-based organizations or public hospitals (Lau et al., 2004; Takeuchi, Bui, & Kim, 1993; Yeh et al., 2002).

Many have argued that the relationship between teacher referrals and disproportionalities in school-based support services reflects higher rates of poverty and special needs among Black and Latino students (O'Conner & Fernandez, 2006). However, a growing body of empirical literature has also established that school staff members' perceptions of students' health concerns are often racially and culturally biased. These biases manifest most often in school staff members' identification of subjective categories of need, such as social and emotional problems, in contrast to more objectively identifiable physical, hearing or visual impairments (Coutinho & Oswald, 2000; Eitle, 2002; Gaviria-Soto & Castro-Morera, 2005; Skiba et al., 2006; Snowden, 2003). For example, researchers found the differences between teachers and youths' scores on the Child

Behavior Checklist, which is used to assess for psychopathology, were significantly larger for students of color, even after controlling for gender, age and income (Lau et al., 2004). In other words, when compared to their assessments of White students, teachers have greater difficulty identifying the emotional and social needs of youth of color accurately (Lau et al., 2004).

Moreover, school staff members tend to initiate referrals in response to disruptive behavior, learning difficulties, and truancy, not the full range of problems that constitute need for health services (Chang & Sue, 2003; Costello & Janiszewski, 1990; Johnson-Reid, Kontak, Citerman, Essma, & Fezzi, 2004; Pearcy, Clopton, & Pope, 1993; Zwaanswijk, Van Der Ende, Verhaak, Bensing, & Verhulst, 2007). This tendency may also shape disparities in service use. For example, only externalized behaviors predict the use of mental health services by youth of color in educational settings, and racial group differences in service use appear to be more pronounced among youth with internalized[2] symptoms (Gudino et al., 2009). Emerging research suggests that teachers expect Asian youth to be anxious, perfectionist and timid. Using hypothetical vignettes with teachers, one study found that teachers expect Asian youth to exhibit internalizing symptoms and behave in an over controlled manner, defined as being anxious to please, afraid of making mistakes, concerned with perfection, and shy or timid (Chang & Sue, 2003). Teachers' expectations that Asian students will be over controlled may reflect dominant stereotypes of the "model minority" and could lead school staff members to overlook Asian students' distress, leaving their physical, social, and emotional needs more likely to go unmet (Leong & Lau, 2001; Sue, Sue, Sue, & Takeuchi, 1995).

On the other hand, multiple studies demonstrate that school staff tend to perceive Black and Latino youth as aggressive, oppositional and threatening, all behaviors that fall in the "externalizing" category (Morris, 2005; Neal, McCray, Webb-Johnson, & Bridgest, 2003; Skiba et al., 2002). Therefore, Latino and Black students may also be more apt to enter school-based services because of referrals based on problematic behavior in the classroom. Such an analysis is supported by evidence that Latino and Black youth are overrepresented in coercive mental health services offered in community settings (Takeuchi et al., 1993; Yeh et al., 2002). Other research has demonstrated that Black and Latino youth, regardless of socioeconomic status, are disproportionately disciplined in schools because of differential teacher treatment of behavioral infractions in the classroom (Gordon, Della Piana, & Keleher, 2000; Skiba et al., 2002). Rather than objectively identified need, it is possible that these decisions and referrals stem from subjective responses to unfamiliar, feared or forbidden student behaviors which school professionals perceive to be abnormal or unreasonable. Indeed, Skiba found Black students were more likely to be referred for subjective reasons such as "excessive noise," "disrespect," "loitering," and "threat," compared to White students, who were more often referred for objective concerns like, "smoking," "left without permission," "vandalism," and "obscene language" (Skiba et al., 2002).

This perspective is bolstered by research in special education that suggests student support programs can serve a social control function in schools as they legitimize the removal of "deviant" students from regular classrooms in order to minimize behaviors school staff members find challenging (Barton & Tomlinson, 1981). School staff members tend to prefer students who behave in ways that reflect the values, attitudes and expressive patterns of dominant racial and

---

[2] In the mental health research literature, psychosocial problems among adolescents are usually categorized as either internalizing (e.g. depression and anxiety) or externalizing (e.g. attention deficit–hyperactivity and oppositional defiance).

class groups (Carrier, 1983). Education professionals who do not share the same background as their students may view the behavior of racial minority adolescents as maladaptive rather than simply different (O'Conner & Fernandez, 2006) It also may be that the same student behaviors school staff members interpret as problematic, or indicative of mental health need, actually represent disengagement from culturally unresponsive teaching (Downey & Pribesh, 2004). The quality of teaching matters in the identification of children for special education; when instruction is poor, more students are identified as learning disabled, but if those same students are placed in classrooms with better teachers who focus their instruction on problem areas, these same students are able to succeed (Dudley-Marling & Dippo, 1995; Ysseldyke, 2001). This suggests that referral patterns and service use in educational settings are interconnected with other aspects of schooling, such as instructional capacity.

Studies have also considered how disproportionalities in special education may reflect broader challenges faced by schools in meeting the needs of an increasingly diverse student body. Research has demonstrated that the presence of a court order for integration in mixed race districts (less than 57% minority) is positively correlated with the overrepresentation of students of color in special education (Eitle, 2002). In other words, as schools are forced to integrate, they re-segregate Black students through assignment to special education. Furthermore, as individual schools become more integrated, they also are more likely to reflect racial disproportionality in their special education programs (Eitle, 2002). Finally, when schools are accountable to high stakes tests, referral and enrollment rates for special education increases (Ysseldyke, 2001). Although this research is specific to special education, it seems likely that these same dynamics will have some impact on health and social services provided in school settings.

In light of these findings, theorists have argued that exclusionary practices, such as special education assignment or enrollment in mental health treatment, mask the inability of public school systems to serve students of color equitably and instead locate the problem in the behaviors and minds of individual children (Dudley-Marling & Dippo, 1995). As the consequences of student failure increase for schools, the identification of students with learning disabilities and, potentially, mental health problems, serves to transfer "the blame [from schools] to students through medicalizing and objectifying discourses" (Skirtic, 2005, p. 149). The implicit discourses underlying student support services can serve to absolve schools from acknowledging their failure to teach all students effectively (Dudley-Marling, 2004). As such, higher referrals of Latino and Black youth to school-based mental health services may partly reflect schools' attempts to cope with growing demands to raise standardized achievement among an increasingly diverse student body.

The nature of services provided.

The nature of health and social programs, their outreach efforts and types of services offered, shape young people's help-seeking behaviors and also influence referral practices (Cauce et al., 2002; Power et al., 2005; Pumariega & Winters, 2003). Messages about available services and what it means to utilize them likely inform students' and school staff members' perceptions of service need. Some categories of services have greater legitimacy in schools because of state mandates and funding availability (e.g., physical and mental health services, compared to health education or other prevention services) (Slade, 2003), but even these trends are informed by adults' ideas about the problems facing low-income youth of color and their families (Lin & Harris, 2008). Traditional medical models of healthcare are not necessarily aligned with minority youths' tolerance for stigma, explanatory models for health and psychosocial concerns, or

12

perceived efficacy of treatment. Therefore, the categories of services provided in schools may constrain or enable voluntary help-seeking and referrals across race, depending on the degree to which school-based services are universal[3], preventive or strengths-based versus more problem-focused, intervention-oriented and stigmatized. When services are universal or emphasize positive youth development, their stigma may be reduced, along with the impact of school staff members' biases in referrals (Chandra & Minkovitz, 2007).

Prevention programs offered by school-based social and health programs may also be more attractive to students of color because of their mistrust of formal healthcare providers (Goldston et al., 2008; Leong & Lau, 2001; Schnittker, 2004; Whaley, 2001). Scholars have theorized that when youth of color voluntarily seek support for sensitive health and psychosocial problems, they are more likely to turn to informal service providers, such as youth workers and clergy, with whom they already know and have a relationship (Power et al., 2005). Universal or strengths-based services can foster relationships between youth and practitioners, which may help students overcome their discomfort with psychosocial intervention programs and provide some assurance that sensitive information shared with these adults will be kept confidential (Grossman & Bulle, 2006).

Taken together, the existing research on school context and service use suggests that 1) as referrals by school staff members to school-based health and social services increase, so will racial group differences, 2) when compared to referrals of Asian and White adolescents, referrals of Black and Latino youth will more often be for problematic classroom behavior, and 3) in contrast to psychosocial intervention programs, services that are universal, strengths-based, or preventive in nature will have less pronounced racial group differences.

Need for the Current Study

A review of the literature on the influence of school context on service delivery patterns in schools provides evidence that teacher and administrator referral practices, perhaps in part a response to larger organizational dynamics, exacerbate racial group differences in school-based services. Although gaps in the literature necessitated that I draw on studies of special education and discipline for empirical examples of how and why service utilization varies across race in schools, it is unlikely that school staff member referrals to school-based health and social services mirror those processes exactly. These programs are probably perceived as less stigmatized or punitive than special education and disciplinary interventions, and school community members' conceptions of what behaviors and conditions are evidence of students' need for this support may also be different (Skiba et al., 2006). Similarly, existing research indicates that referral practices of school staff for mental health and disciplinary concerns are often culturally biased, but appear less so for health problems and may be very different for programs that are universal or strengths-focused, such as health education or youth development activities. These kinds of considerations – how different categories of services and conceptions of need in the school community inform referral and service use patterns – are not addressed in the school-based services literature. Without this type of inquiry, researchers and practitioners may incorrectly view the problem of disproportionalities as somehow reflective of young peoples' cultural and behavioral norms, rather than resulting from the attitudes and shared

---

[3] The term universal refers to services that are available to all students and do not involve a screening process (Gilbert & Terrell, 2004). In contrast, intervention programs are targeted to a sub-population of youth who meet particular eligibility criteria. For example, drop-in first aid services in schools are usually universal, whereas mental health treatment is intervention oriented.

practices of adults within schools. Research that explores the role of the school context in school-based health and social service utilization is needed in order to fully understand and address the phenomenon of racial group differences.

Chapter 3: Theoretical Framework

In the introduction, I provide an overview of the problem this study addresses: racial disproportionalities in school-based health and social services, specifically the overrepresentation of Black and Latino youth and the underrepresentation of Asian students. Chapter 2, I outline the multiple contexts that shape adolescent help-seeking and contribute to differential patterns of service use by race. Although previous research in this area has focused on cultural and logistical barriers to access, I provide evidence that the organizational context in which health and social service programs are delivered also matters for who receives services. In particular, a review of the relevant literature indicates that school staff referral practices inform patterns of service use in educational settings. I also reviewed studies from the adolescent health literature that suggests the nature of the services offered has significance for referral and utilization patterns. In this chapter, I discuss how institutional theory is a useful analytic framework for making sense of these trends and understanding the phenomenon of racial group differences in use of school-based health and social services.

Overview of Institutional Theory

Institutional theory emphasizes the role of societal context in understanding individual and organizational behavior (Friedland & Alford, 1991; Thornton & Ocasio, 2008). This approach looks to institutions in the societal environment as the primary source of organizing principles or logics that govern individual and collective action, which is often nested within organizations (Friedland & Alford, 1991; Scott & Davis, 2006). From this perspective, institutions are not physical places or even organizations, as the term is commonly employed in everyday language. Instead, the concept of institutions references *social and cultural* structures – norms and relationships that are resilient, durable and resistant to change, such as the institution of marriage (Scott, 2001). Over time, as both process and outcome, institutions "come to take on a rule-like status in social thought" through repeated interpersonal interactions in the context of structural inequalities (Meyer & Rowan, 1977, p. 341). Institutions in the environment are then carried into organizations through "symbolic systems, relational systems, routines and artifacts" (Scott, 2001, p. 76). In the case of this study, individual schools are understood as organizations nested within various institutions in society. Of particular relevance is the institution of education or "schooling," which involves formal and informal rules about educating youth that govern the actions of teachers, administrators, students and service providers within schools (Hanson, 2001).

Institutional theory therefore shifts attention away from an isolated focus on formal goals and structures within singular organizations, such as schools, to prevailing institutions and related logics in the larger societal environment that shape individual relationships and organizational practices. For example, the formal goal of school health programs is to reduce unmet need and risk taking behaviors for all students through intervention, prevention and health promotion. However, institutional theory suggests that the nature of services provided and who receives them may also be influenced by institutional logics in education, such as dominant explanatory paradigms for racial inequalities in schools that frame youth of color as deficient or pathological (Lewis, James, Hancock, & Hill-Jackson, 2008; O'Connor, Hill, & Robinson, 2009). Therefore, in contrast to rational theories of organizational decision making and development, this approach emphasizes that the delivery of health services in schools is not necessarily adaptive or efficient,

but is socially constructed and historically situated (DiMaggio & Powell, 1991; Meyer & Rowan, 1977; Scott & Davis, 2006).

My study draws upon institutional theory to examine schools as organizations that are shaped by distinct social and cultural structures (institutions), rather than viewing schools simply as a different location or physical place where health programs are provided. From this perspective, schools are not neutral settings for service delivery; rather, their function and relationship to larger societal structures shape the actions of school staff and service providers. Therefore, one must consider how ideas in the school community about student need and appropriate support services are linked to institutional logics in the organizational fields of public education, health and social services. These include taken-for-granted notions about Black and Latino youth as "at-risk" or "troublemakers," and Asian and White youth as "achievement oriented" or "self-sufficient" (Lewis et al., 2008; Lin & Harris, 2008; Scott, 2001). Institutional theory suggests that referral routines in particular are a rich source of data reflecting dominant ideas in the school community about students' needs, and appropriate or legitimate responses to them (Colyvas & Powell, 2006).

The Three Pillars of Institutions: Regulative, Normative and Cultural-Cognitive

Scott (2001) provides a useful framework for conceptualizing institutions as being supported by three pillars: regulative, normative and cultural cognitive. The three pillars are symbolic, but they interact with material conditions and human activities to give rise to institutions (Friedland & Alford, 1991; Scott, 2001). This three-pronged, interconnected and symbolic conception of institutions builds on Bourdieu's theory of practice, in particular his notion of the *habitus* (DiMaggio & Powell, 1991). The habitus is a system of internalized, durable dispositions (patterns of thoughts, beliefs, values, attitudes and perceptions of reality) that regulate behavior or practice, including one's use of language, conduct, speech, dress and manners (Bourdieu, 1977). Unspoken and subconscious rules or principles govern these schemes, which are viewed as historically bound to social positions, defined by one's access to capital. Here, capital is not limited to economic or material forms, but is also cultural, social and linguistic (Bourdieu, 1977; Bourdieu & Passeron, 1990). Like the habitus, institutions serve as the link between material conditions and individual agency. Clearly, there is much overlap between these ideas, but the notion of institutions has been applied much more widely in the study of organizations, so it is the focus of this chapter.

Returning to Scott's framework, regulative aspects of institutions include rules and laws, enforcement and monitoring systems, and associated rewards and sanctions that explicitly delineate the way things *must* be done. They induce organizational and individual behavior using coercive mechanisms of authority, force, fear and shame, and their influence can be observed in governance systems, protocols and required reports to demonstrate compliance (Scott, 2001). In education, predominant regulatory mechanisms include high stakes assessment and reporting policies, standards-based reforms, and mandates to provide students with special education services. For school-based health and psychosocial service programs, regulatory examples include interagency contracts and funding initiatives with related reporting or reimbursement requirements.

In contrast, the normative pillar encompasses values and norms regarding the way things *should* be done, shaping expectations and considerations for suitable behavior for actors in particular roles and circumstances (DiMaggio & Powell, 1991; Scott, 2001). Indicators of normative forces in school and service contexts include professional codes of ethics and the

content of teacher or provider certification programs, each of which delineate conventional roles, expectations and standards for professionals. The norms and values conveyed therein shape school staff members' and providers' ideas about the types of student needs (academic, social, emotional, physical) that require special attention, the categories of activities that will successfully address them, and who should be involved in support service provision.

Finally, the cultural cognitive element refers to the way things *are* done; shared understandings, meanings and ways of seeing that are unconscious and taken-for-granted until they are transgressed (DiMaggio & Powell, 1991; Scott, 2001). These include school staff members' subjective interpretations of what constitutes problematic behavior on the part of students, and the classification of young people into categories based on their performance on standardized tests or psychosocial assessments.

Legitimacy

A central function of institutions is creating the symbolic conditions of legitimacy, under which some means and ends are considered appropriate and desirable, while others are rendered invisible or illicit (DiMaggio & Powell, 1991; Friedland & Alford, 1991; Meyer & Rowan, 1977; Scott, 2001). In this way, institutions "control and constrain" certain activities, as they also "support and empower" other types of actions, shaping common understandings of what objectives, roles, and behaviors are legitimate (Scott, 2001, p. 50). Taken-for-granted notions of legitimate activities serve to render inequality natural or justified, preserving privilege and maintaining myths of equality of opportunity, thereby contributing to the reproduction of the social order (Bourdieu, 1977). Still, notions of legitimate activities are often contested across organizations, particularly when agencies are responsible to multiple stakeholders who have different values, goals or norms (Colyvas & Powell, 2006; Scott, 2001). In the case of school-based health and psychosocial programs, for example, the values and goals of service providers may be quite different than those of teachers and administrators. These clashing views may result in conflict about what types of services should be provided in educational settings and which types of students are most in need of services.

Institutional theorists have considered the particular role of education, or "schooling," as an institution that has historically reproduced inequality by legitimizing particular forms of knowledge, language, and behavior over others (Bourdieu & Passeron, 1990). From this perspective, schools impose rules regarding behavior, language and other expressions of social reality that are aligned with the practices of the dominant group in control of economic and social resources (Mudimbe, 1993). Dominant norms are reified through official program or graduation requirements and communications between school staff and students regarding legitimate sources of information, uses of vocabulary, styles of presentation, and demonstrations of subject mastery. According to institutional theorists, normative standards of student achievement or behavior are often implicit and are actually culture-bound; they do not necessarily reflect rational notions of merit, efficient approaches to instruction, or fair forms of assessment of student capacity or motivation to learn. However, success and inclusion is awarded only to students (and school staff) who have the linguistic and cultural capital necessary to decode and comply with such criteria (Bourdieu & Passeron, 1990). Other types of linguistic, cultural and intellectual behaviors are marginalized, and, in the case of referrals to school-based mental health services, made deviant or pathological (Harker, 1984; Mills, 2008). In this way, students and their families can be blamed for the failure of teachers and schools to be responsive

to the diversity of linguistic and cultural capital students bring to the classroom (Bourdieu & Passeron, 1990).

The categories of health and psychosocial services ultimately delivered in schools may similarly reflect the social power of particular groups to determine legitimate activities, rather than the demonstrated ability of particular services to meet students' needs (Scott, 2001). This social power can have a material or legal basis, as in the case of a school principal who refuses to allow certain programs to operate on campus because he or she disagrees with their aims, or the limited availability of funds for particular categories of activities. But the foundations of legitimacy are symbolic, related to prevailing normative ideas about what types of services should be offered in schools and cultural-cognitive notions about what types of students and issues constitute problems that warrant the attention of program providers.

Institutional Logics

Institutional logics serve as the primary mechanisms by which institutions influence individual and organizational action, providing a bridge between macro and micro processes (Thornton & Ocasio, 2008). They are historically situated, socially constructed "belief systems and associated practices…that provide the organizing principles" guiding and governing human activity, enabling certain kinds of action and not others (Scott, Ruef, Mendel, & Caronna, 2000, p. 171). Institutional logics are not personal beliefs, but they do inform the taken-for-granted notions of individuals. They are collective ideas or frameworks that emerge from societal sectors in specific historical periods, available to individuals to elaborate on, often enacted and further developed in organizational fields (Friedland & Alford, 1991; Thornton & Ocasio, 2008). Here, the term organizational field refers to a network "of interdependent organizations operating with common rules, norms, and meaning systems," usually with shared governance and financing structures (Scott & Davis, 2006, p. 118). For example, the logic of program improvement through accountability and assessment of client outcomes has played out in the fields of public education, health services, and social welfare (Feuer, Towne, & Shavelson, 2002; Holmes, Murray, Perron, & Rail, 2006). Other examples of institutional logics include ways of understanding the origins and solutions to the racial achievement gap in education, or systems for identifying youth "at risk" (Lewis et al., 2008; O'Connor et al., 2009). Multiple logics often exist at once in an organizational field, often with a hierarchical order, competing over time for dominance (Thornton & Ocasio, 2008).

There is growing evidence that school improvement logics influence the practices of teachers and administrators, along with their perceptions of students (Anagnostopoulos, 2003; Anagnostopoulos & Rutledge, 2007; Russell, 2008b). Institutional logics shape cognition through socially constructed classification systems that give meaning to existing categories of people and their actions (Thornton & Ocasio, 2008). In schools, classifying students and schools according to their performance on standardized tests provides a specific lens for understanding issues of racial equity in education and the problem of the achievement gap for low-income, Latino and Black students. Without measures that comparably hold schools accountable for creating equitable conditions for student learning, classification systems that focus on equity in student outcomes foster the assumption that the achievement gap reflects deficits in students' cultural and family backgrounds, rather than their school environments (Lewis et al., 2008).

In health and psychosocial programs, targeting "at-risk" youth based on the probability that they have problems may set up a narrow understanding of service needs and who has them, heightening existing stereotypes of who is poor and uses social services in the United States,

namely Black and Latino families (Bullock, 2008; Pager, 2008). Institutional logics also direct the attention of individuals and organizations by providing them "with a set of rules and conventions – for deciding which problems get attended to, which solutions get considered and which solutions get linked to which situations" (Thornton & Ocasio, 2008, p. 114). In this way, institutional logics may draw the attention of school staff to particular types of problems and groups of students, while shaping individual and organizational preferences and interests in providing certain categories of services over others.

Critiques of Institutional Theory

A common critique of institutional theory is that it tends to overshadow the role of individual agency in creating and mediating social structures, emphasizing top-down (macro to micro), rather than bottom-up processes of change (Burch, 2007). That is to say, the theory tends to be overly mechanical in its view of how social structures are reproduced, with insufficient attention paid to the ways in which people resist and mobilize against dominant institutions. This concern is tempered by a growing recognition of institutions as probabilistic, rather than deterministic – they can be reinterpreted in unexpected ways and manipulated by individuals and groups to serve their own interests[4] (DiMaggio & Powell, 1991; Friedland & Alford, 1991; Thornton & Ocasio, 2008). Contradictions and competition between dominant and secondary institutional logics are particularly important sources of change over time, as they are openings for actors to have greater impact on prevailing paradigms (Scott et al., 2000; Thornton & Ocasio, 2008).

Such an understanding of institutions reflects the assumption of embedded agency – that personal motivations, aspirations and values are never fully autonomous or discrete from social context – embraced by institutional theory in recent years (Thornton & Ocasio, 2008). From this perspective, theories emphasizing agency and subjectivity are seen as complementary to, rather than in contradiction with institutional theory. Institutional theorists do not deny the possibility of individual mobility across social strata, or the power for collective movements to redress historical injustices, but they do highlight the way inequalities are reproduced by organizations and institutions, like schools and formal education systems, despite good intentions and actions on the part of individual agents, such as teachers (Bourdieu & Passeron, 1990). In general, institutional theory accentuates how personal agency is constrained by the historical distribution of resources and capital within a society and the influences of social structures on individual experiences (Lau, 2004).

Given this focus, institutional theorists pay less attention to the ways in which institutions are actively, in present time, produced or modified by people. In no small way, this is a response to the dominance of micro, behavioral and individually oriented theories that have long dominated the social sciences (Bourdieu, 1977). Dorothy Holland and Jean Lave attempt to bridge this divide, and address the aforementioned critiques of institutional theory, in their book, *History in Person* (2001). They argue that long-standing inequitable social structures are not always predictive of individual or collective outcomes. Instead, they propose that the relationship between institutions and individuals or communities is always mediated by changing cultural, social, political and material resources available to different social agents. To make such a claim does not deny that resources have long been allocated in ways that disproportionately benefit members of powerful and privileged "racial, ethnic, class, [religious] and gendered groups" (Holland & Lave, 2001, p. 13). Rather, they propose that people take "active stances" towards

---

[4] Though these individual or group interests are also viewed by institutional theorists as socially constructed (Friedland & Alford, 1991).

these social structures and various cultural forms[5] in the world around them. In other words, people are always making meaning in their lives, while at the same time interacting with enduring power relations that privilege some identities and social practices over others. Historically oppressed groups are never simply receivers of the status quo. Likewise, historically privileged groups do not always act in ways that maintain their power. In both cases, social position and cultural forms persist not because they are essential aspects of individual or group identities, but because the contexts that gave rise to them are recreated by people over time and space.

In contrast to early institutional theory, Holland and Lave's view of human behavior and identity recognizes that peoples' perceptions and uses of cultural forms depends on their identification with (or against) others' social practices, not just the dominance of particular institutions. Processes of appropriation, reproduction, generation, or negotiation of cultural forms never unfold in exactly the same way across individuals or communities, despite long-standing patterns of power and privilege. Categories such as "the privileged" or "the oppressed" are often blurred in everyday life, as are the social boundaries between them. In the case of racial disproportionalities in school-based health and psychosocial services, Holland and Lave might caution researchers to attend to the ways in which students, school staff, and program providers work against the influences of inequitable schools and social contexts, even when overall trends indicate these forces are generally strong. In other words, it is unlikely that all school staff members make culturally biased referrals or that all schools blame students' health or psychosocial challenges, rather than their instructional strategies, when youth do not perform well on standardized tests. Scholars have as much to learn from these "outlier" places and people as they do from those that act in an expected manner, given dominant institutions. Holland and Lave propose the observation of local contentious practice, viewed as historically situated conflicts, is necessary to attend to the unanticipated ways in which enduring struggles unfold everyday in the lives of individuals and communities

Application to Dissertation Topic

To understand patterns of human behavior, institutional theory suggests that attention to relationships between individuals, organizations, and their institutional contexts is necessary. From this perspective, the actions of school health providers, teachers, administrators and students must be understood within the broader context of the institution of education and related logics about groups of youth who are understood to be "at risk," with problematic behavior, or generally in need of support at school (Lewis et al., 2008; O'Connor et al., 2009). The lens of institutional theory helps to make visible the ways in which patterns of utilization across race are shaped by their location within schools as organizations and the institution of education.

Institutional theory suggests that as service providers and school staff negotiate their roles and responsibilities, particular forms of services gain legitimacy, presumptions about their purpose and appropriateness become more widely shared, and associated coordination practices become habitualized (Colyvas & Powell, 2006). Indicators of the legitimacy of particular types of activities within organizations can be observed in the frequency of their conduct, and the degree to which there is clarity (or lack of ambiguity) around related concepts and classifications

---

[5] Holland and Lave use the term cultural forms to reference a variety of historically situated social activities and practices, from discourses to dialects, constructed by people in relationship with one another over time. This concept is similar to the cultural cognitive pillar of institutions outlined earlier, but Holland and Lave's emphasis is on cultural forms created in local communities of practice, rather than those dominant in society at large.

in standard procedures created to manage these activities (Colyvas & Powell, 2006). Empirical research by institutional theorists has demonstrated that coordination and communication processes within organizations can elucidate the commonly held ideas of institutional actors and demonstrate what activities have legitimacy within an organization (Colyvas & Powell, 2006).

In the case of school health programs, referral routines may illustrate whether prevention, medical or psychosocial interventions have greater legitimacy in the school community, and if ideas about their appropriateness for Black and Latino youth are widely shared. Some categories of services also have greater legitimacy because of state mandates and funding availability (Slade, 2003). Yet even these regulative structures are determined by the context of inequitably distributed resources and by dominant ideas among policy makers, administrators and health service providers about the problems youth face and the types of services they need. Still, in the case of school-based support programs, referral routines between school staff and school health providers can provide evidence of the legitimacy of certain beliefs about who has unmet need in schools and appropriate support services. Therefore, I predict that as conceptions of student needs vis-à-vis school health programs become taken-for-granted by members of the school community, referral practices will reflect these shared understandings, and become more embedded in organizational routines (Colyvas & Powell, 2006). My dissertation therefore examines routines created to coordinate referrals between school staff and providers to reveal the legitimacy of certain types of school health services over others among teachers and administrators. Completed referral forms are a particularly rich source of data about the degree to which various service activities have legitimacy in the school community and are associated with need among particular groups of students.

.

Chapter 4: Methodology

In Chapter 2, I outlined findings from empirical studies that demonstrate the contribution of teacher and administrator referral practices to the overrepresentation of Black and Latino youth in school-based services such as special education and discipline. In Chapter 3, I discussed how institutional theory can be a useful analytical framework for understanding why school staff may be more likely to identify and refer some groups of students over others, given dominant institutional logics in education about Black and Latino youth being "at risk" in school. Institutional theory also suggests that referral routines can provide evidence of commonly held ideas among institutional actors and the legitimacy of particular activities within organizations. Building on this research, my study explored the relationship between referral routines and racial group differences in use of school-based health and psychosocial services. To do so, I drew on archival referral forms, administrative data and program evaluation surveys from fifteen comprehensive school health programs serving over 6,000 students in a large urban school district. I triangulated multiple data sources in order to strengthen my ability to draw conclusions about my research questions from available data, as none of the data employed in this dissertation were collected specifically for the purpose of this study (Denzin, 1978; Mathison, 1988). This exploratory design was appropriate for the study topic, which has not been considered or theorized in the literature on school-based health and social services.

To answer my first research question, considering whether group differences are more pronounced in mental health services than other types of services, I analyzed administrative data generated by school health programs at 15 urban high schools. School social work research indicates that archival data from school-based services can be relied upon to answer basic questions about the dynamics of service use in schools, such as the types of services offered at school sites, the number of students who use them, and their racial backgrounds (Jonson-Reid et al., 2004). To answer my second research question, whether racial group differences in service use can be explained by differential need, I used a district-wide epidemiological survey of students regarding their risk behaviors and use of their school health program. To assess whether school staff member referral rates are associated with service use for overrepresented youth only, I linked school-level data regarding school staff members' referral practices to the student survey. To gain further insight into the role of referrals in school-based service use across race, I analyzed data from completed referral forms. Prior work by Skiba (2002) demonstrates the analytic utility of student referral forms, and institutional theory suggests referral routines are a rich source of data reflecting dominant ideas in the school community about students' needs, and appropriate or legitimate responses to them (Colyvas & Powell, 2006).

Study Site

This research focuses on fifteen comprehensive school health programs at high schools in the Metro Unified School District, allowing for comparisons of utilization patterns across varying school contexts. The school health movement began in Metro in response to the findings of youth-led surveys conducted in the late 1990's that documented an overwhelming need and desire among students for more caring adults at school who would promote their health and well-being. The community responded with the Metro Student Health Initiative, led by the Department of Children and Families, the Department of Public Health, and School Health Programs at the School District. The mission of the initiative is to support student health and well-being through primary care, health education, assessment, counseling and other support

services. Since the inception of this Metro Student Health Initiative, tens of thousands of students have utilized these school-based health and social services. Although the comprehensive nature of this program is relatively unique, the provision of multiple types of services in schools is not uncommon. Approximately 60% of school health programs provide both primary care and psychosocial services, and a growing number of schools provide a multitude of youth services on site (Blank, Quinn, & Kim, 2003; Slade, 2003; The Center for Health and Health Care in Schools, 2003).

Study Population

The great diversity of Metro's student population also makes this school district a compelling place to do research on racial group differences in service use; the city's public high school student population includes adolescents from a range of socioeconomic and cultural backgrounds. In the 2008-2009 school year, the Metro high school population was primarily composed of Asian (49%), Latino (20%), Black (12%), and White (8%) and Other-identified students (11%). Fifty-one percent of the student population was female and 49% were males. Students whose first language is not English are classified as English language learners (ELL) and made up 20% of high school students, and 43% of district students received free or reduced lunch, which is often used as an indicator of lower socioeconomic status.

Samples

Dataset A: Administrative data.

In the 2008-2009 school year the Metro Student Health Initiative served 6,696 youth, representing 42% of total student enrollment across sites. In the student population served by the school-based support programs, 37% were Asian, 28% were Latino, 21% were Black, 5% were White, 2% were Pacific Islander and 7% were Multiracial or from other racial groups. Forty seven percent were male and 50% were female. Eighty seven percent of youth were fluent in English, though the proportion of students who were fluent was lower among Latino (77%) and Asian (85%) youth. The mean age of participants was 16.4.

Fifty six percent of participants lived in zip codes where violence is among the top five causes of death. Pacific Islander (85%), Black (73%), and Latino (74%) youth were more likely to live in neighborhoods with high violence than were Asian (39%), White (22%), or Multiracial/Other (38%) students. The mean proportion of residents living in poverty in students' zip codes was 13.2%. On average, Latino (14%), Black (16%) and Pacific Islander (17%) youth lived in higher poverty communities than White (9% poverty rate), Asian (11%) or Multiracial/Other (12%) youth. The most common category of services received was psychosocial interventions (68%, e.g. counseling, therapy and case management), followed by medical care (47%, first aid, vision and dental) and prevention services (30%, health education, youth leadership development, recreation). Black students were more likely than other students to participate in prevention services, whereas White students were least likely to receive these services. Black students were also most likely to receive medical care. Latino, Black, Pacific Islander and Multiracial/Other youth were more likely than Asian and White students to receive psychosocial interventions. Students received a mean of 3.3 hours of prevention services, 3.4 hours of psychosocial interventions, and .32 hours of medical care. Pacific Islander (7.2, 6.4) and Multiracial/Other (8.5, 7.6) youth received a higher mean number of prevention and

psychosocial interventions, respectively, than other youth. These indicators are summarized in Table 1.

Dataset B: Student survey linked to staff survey

Student survey.

A census survey of students' protective factors and health risk behaviors provided the epidemiological data used in this dissertation. The survey was administered to all Metro high school students during the spring of the 2008-2009 school year. The survey yielded a 71% response rate, resulting in a sample size of 8,466 students. The sample was 58% Asian, 3% Pacific Islander, 9% Black, 15% Latino, 6% White and 11% identified with multiple, or other, racial groups. Compared to the general student population, survey participants were more likely to be Asian and less likely to be Latino or Black. Forty six percent of the sample population was male and 54% was female, though the representation of males was somewhat higher among Pacific Islander students. The mean age of survey respondents was 15.9. Thirty four percent of the sample did not live with both of their parents. Black students were most likely to report not living with both parents (69%), whereas Asian students were least likely to live in a living situation other than two parents at home (24%).

Forty two percent of the sample reported accessing their school health program. Black (63%) and Latino (60%) students were most likely to use services, whereas Asian (34%) and White (44%) youth were least likely to use services. Sixty eight percent of the entire sample reported at least one externalizing behavior, though this was true only for 59% of Asian students. Seventeen percent of the population reported engaging in a high number of different externalizing behaviors (one standard deviation above the mean), but this was true only for 7% Asian students, compared to 37% of White youth, 29% of Latino youth, 26% of Multiracial students and 22% of Black youth. The most common externalizing behavior was truancy and use of multiple substances, but rates varied tremendously by racial subgroup, with Asian students notably least likely to report using substances and ditching classes. Latino (56%) and White (54%) youth were most likely to report using multiple substances, and Latino (67%) students also had the highest rates of truancy. Black (10%) and Latino (10%) youth were most likely to report they received mostly failing grades over the past year. Students reported generally similar rates of damaging school property, though this was less common among Asian (8%) youth. Overall, 27% of the sample reported internalizing symptoms, with Latino (34%), Pacific Islander (32%) and Multiracial/Other (31%) students most likely to experience such depressive symptoms. These indicators are summarized in Figure 4.

Table 1.
Descriptive Data for Administrative Sample of School Health Program Participants.
(Dataset A: Administrative Data, n=6,696)

Demographic Variables	Asian (n=2,423)	Latino (n=1,854)	Black (n=1,334)	White (n=348)	Pacific Islander (n=155)	Other/ Multiracial (n=582)	Total
Race	36%	28%	20%	5%	2%	9%	6,696
Mean Age	16.3	16.2	16.1	16.2	16.0	16.8	16.4
Gender (Male)	47%	48%	46%	47%	49%	50%	47%
English Fluency (Fluent)	85%	77%	100%	98%	98%	92%	87%
Lives in Zip Code where Violence is among Top 5 Causes of Death	39%	74%	73%	22%	85%	38%	56%
Mean Proportion of Residents Living in Poverty in Students' Zip Code	11%	14%	16%	9%	17%	12%	13%
Received Prevention Services	26%	31%	36%	21%	44%	28%	30%
Received Medical Care	43%	46%	55%	49%	48%	47%	47%
Received Psychosocial Interventions	59%	74%	73%	67%	81%	73%	68%
Mean Hours of Prevention	3.1	3.5	3.6	3.4	7.2	8.5	3.3
Mean Hours Psychosocial Intervention	2.6	3.8	3.8	2.8	6.4	7.6	3.4
Mean Hours Medical	.25	.30	.45	.37	.37	.32	.32

Figure 4. *Prevalence of Risk Behaviors by Racial Group.*
(Dataset B: Student Survey, n=8,466)

	Depressive symptoms	Use of Multiple Substances	Failing Grades	Truancy	School Property Damage
Asian	25%	14%	1%	47%	8%
Black	25%	43%	10%	58%	20%
Latino	34%	56%	10%	67%	17%
Pacific Islander	32%	37%	5%	61%	16%
Other/Multiracial	31%	41%	5%	63%	16%
White	27%	54%	2%	64%	20%
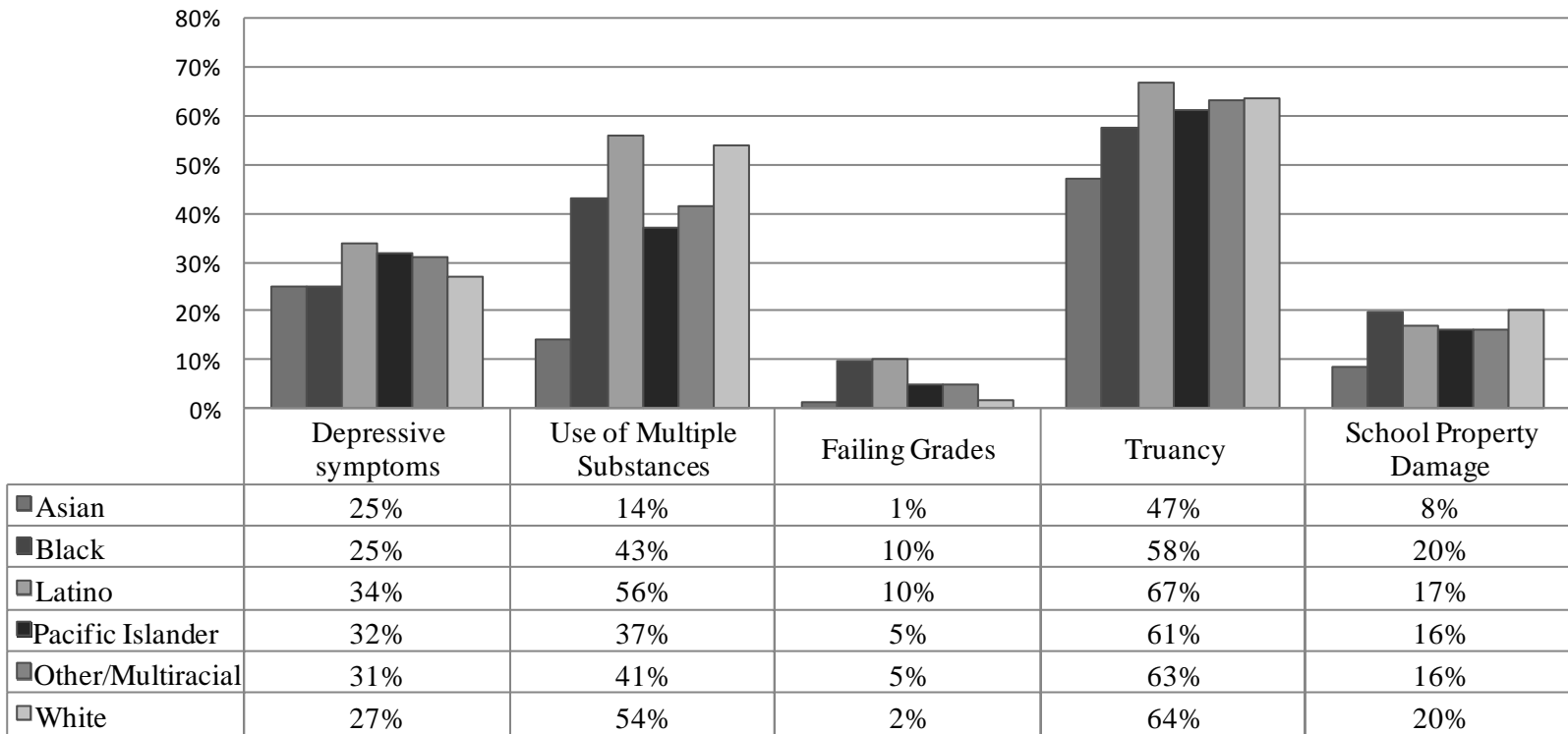
Staff survey.

A census survey of school staff at participating sites (n = 669, response rate 79%) provided estimates of school-level rates of referrals to their school's health program. The subject population included all school staff members (teachers, administrators, school counselors, etc.) at the 15 high schools participating in the Metro Student Health Initiative in the 2008-2009 school year. Teachers (82%) comprised the vast majority of those surveyed, followed by administrators (12%, e.g. dean, counselor, or principal), support staff (4%, e.g., parent liaison or librarian) and paraprofessional staff (2%, e.g. secretaries, security guards or attendance officers). A slight majority of those surveyed (54%) had worked in the school district for 1-5 years, whereas the rest of the sample had longer careers in this district. Although the survey did not ask staff about their racial background and gender, publicly available data from the school district indicates approximately 54% of the school staff members at these sites were White, 16% were Asian or Pacific Islander, 8% were Latino, 5% were Black, and 17% declined to state. Fifty four percent were male and 46% were female. The mean referral rate for all schools was 71%, with a low of 49% of staff making a referral and a high of 95% of staff reporting making a referral. Overall, thirty seven percent of the school sites were categorized as having low referral rates, whereas 48% had mid-range referral rates and 15% had high rates of referrals to the school health program. A school was coded as having a low referral rate if the proportion of school staff members who made a referral was one standard deviation below the mean. A school was coded as having a high referral rate if the proportion of school staff members who made a referral was one standard deviation above the mean for the fifteen schools included in the analysis (mean = .71, SD=.12, min=.49, max=.95).

Dataset C: Referral forms.

De-identified archival student referral forms were obtained from three high schools over two school years (2008-2009 and 2009-2010). These high schools were purposively selected to reflect differential service patterns, school contexts, and school-level referral practices. Overall, 690 referral forms comprise dataset C, with 105 (15%) from School A, 335 (49%) from School B and 250 from School C (36%). School A had a low referral rate (49% of staff reported making a referral), School B had a medium referral rate (80% of staff reported making a referral) and School C had a high referral rate (87% of staff reported making a referral). Mirroring trends across this urban school district, the student population at the three participating schools was 49% Asian, 19% Latino, 10% White and 8% Black and 14% Other. In contrast, the racial composition of students referred to services was 18% Asian, 49% Latino, 3% White, 25% Black, and 6% Other. Referrals were most commonly made by Teachers (40%), followed by grade-level counselors (21%), school-based health providers or the young person themselves (22% - it was not possible to separate out these two categories), administrators (12%), parents (4%), and peers (1%).

Overwhelmingly, the most common reasons for referral were emotional concerns (66%), followed by family concerns (37%), peer/relationship issues (17%), substance abuse (17%), medical concerns (14%) and reproductive health issues (4%) (Table 2). When comparing reasons for referral by racial group, Black students were least likely to be referred for substance abuse (8%) and medical concerns (9%), and were somewhat more likely than other youth to be referred for emotional concerns (78%). Compared to other subgroups of youth, Latino youth were the least likely to be referred for emotional concerns (56%) and peer issues (9%), but were more

likely to be referred for substance abuse (28%) and reproductive health issues (6%). Asian students were the most likely to be referred for family (45%) or peer issues (37%), but were among the least likely to be referred for substance abuse (6%). White youth were more likely to be referred for emotional concerns (90%), peer issues (36%), and substance abuse (18%), but less likely than other groups of students to be referred for family concerns (27%). Pacific Islander youth were also more likely to be referred for emotional concerns (89%), but less likely to be referred for family issues (26%), peer concerns (26%) or substance use (6%). Students who did not fall in these racial categories were least likely to be referred for peer concerns (0%) and less likely to be referred for family issues (25%).

Measures

Dataset A: Administrative data.

The administrative dataset included demographic information for all students who participated in the Metro Student Health Initiative during the 2008-2009 school year, including the following variables: race, gender, age, zip code, English language fluency, primary language spoken at home, service category, and program/school name. The variable race included the values Black, Asian, Pacific Islander, Latino, White, Other, and Declined to State. Gender included the values Male, Female and Transgender (transgender students were dropped from the data due to low numbers). English language fluency included the categories fluent, somewhat fluent, and not fluent in English. Primary language spoken at home included 17 languages. Service types included case management, behavioral health counseling, general counseling, health/violence prevention education, job development and placement, medical/dental/vision care, mentoring, sports and recreation, and youth leadership development. The administrative dataset included information about the number of minutes of services received within each category. In order to reduce variation across sites in the use of particular service categories, and improve ease of data presentation/interpretation, service types were combined into three overarching categories based on information from the Metro Student Health Initiative's data entry guide, and in consultation with several administrators, evaluators and program staff. The categories of service were as follows:

1. *Prevention Services:* Mentoring, sports and recreation, youth leadership development, health/violence prevention education, and job development and placement.
2. *Medical Services:* First aid, dental and vision care.
3. *Psychosocial interventions:* Case management, behavioral health counseling, general counseling, and sensitive services (for legally protected mental health or reproductive health concerns that do not require parental assent in order to receive treatment).

Student-level control variables were age, gender, family poverty rate in the students' zip code (a rough proxy for socioeconomic status), violent crime rate in students' zip code (a rough proxy for exposure to community violence), and English language fluency. I gathered data on violent crime rate and the concentration of poverty in each zip code from publicly available sources and linked this information to the zip code variable in the database (Metro Department of Public Health).

Table 2.
Descriptive Data for the Referral Sample: Reasons for Referral.
(n=643 over two years, from 3 school health programs)

Race/Ethnicity	Emotional Concerns (n=372)	Family Issues (n=202)	Peer or Relational Issues (n=99)	Substance Abuse (n=96)	Medical Concerns (n=74)	Reproductive Health (n=18)
All (643)	66%	37%	17%	17%	14%	4%
Black (161)	78%	35%	22%	8%	9%	1%
Latino(317)	56%	35%	9%	28%	15%	6%
Asian (112)	72%	45%	37%	6%	14%	1%
White (16)	90%	27%	36%	18%	18%	0%
Other (16)	75%	25%	0%	8%	17%	0%
Pacific Islander (21)	89%	26%	16%	5%	16%	0%

Percentages add up to more than 100 because it was possible to mark more than one referral reason.

Dataset B: Student survey linked to staff survey.

Dependent variable.

The evaluator of the Metro Student Health Initiative was invited to add a customized question to the student survey. To assess participation in school-based health /mental health services, a question was added to the survey which read, "During the past school year, how often have you visited your school's health program for information or services?" Responses included: "never," "one or two times," "three to five times," "six to ten times," and "more than ten times." For this study, I recoded the dependent variable to be dichotomous, indicating whether a student used school-based services at least once or never.

Independent variable.

The student-level independent variable was race. I used the following item from the student survey to classify student race:

1. *Race.* "How do you describe yourself? (Mark All That Apply.)" Responses included, "American Indian or Alaska Native," "Native Hawaiian or Pacific Islander", "Asian or Asian American," "Black or African American (non-Hispanic)," "Hispanic or Latino/Latina," "White or Caucasian (non-Hispanic), " and "Other". For the purposes of this study, each racial category was recoded into dummy variables. The "Other" dummy variable included students who marked multiple racial categories.

The school-level independent variable was the proportion of school staff members who reported making a referral to their school health program, recoded into the categories of high, medium and low. The proportion of school staff who reported making a referral was assessed through a program evaluation survey intended to assess school staff members' perceptions of the efficacy of school health services, satisfaction with referral and follow-up process, school-wide impact of the school health program. One item from the survey was of interest:

1. *Referral practices.* "This year, did you refer a student to the school health program at your school?" (yes/no). Data from this item was aggregated at the school-level to create a referral rate for each site. For the purposes of this study, a school was dummy coded as having a high referral rate if the proportion of school staff members who made a referral was one standard deviation above the mean for the fifteen schools included in the analysis (mean = .71, SD=.12, min=.49, max=.95). A school was dummy coded as having a low referral rate if the proportion of school staff members who made a referral was one standard deviation below the mean.

A series of indicator or dummy variables (high, med, low referral rates) was employed because it was not reasonable to assume that there was a linear relationship between referral rates and service use. In other words, it could not be assumed that each percent increase in referral rate would have the same magnitude of effect on service use. Moreover, coding this variable as a dummy allowed for easier interpretation across all the independent variables in this model, which are also dummy variables. This variable is an indicator of the degree to which: a) referrals were a common practice among school staff members, and b) presumptions about the appropriateness of school-health services for the student body were widely shared or ingrained in the school culture. It is also a rough proxy for the volume of referrals made to the school health program.

Control variables.

Student-level control variables were correlates of adolescent health service utilization including age, gender, and living situation (Amaral, Geierstanger, Soleimanpour, & Brindis, 2011; Cauce et al., 2002; Srebnik et al., 1996). I used the following items from the student survey as controls:

1. *Age.* "How old are you?" Responses included "10 years old or younger," "11 years old," "12 years old," "13 years old," "14 years old," "15 years old", "16 years old" "17 years old," or "18 years old or old."

2. *Gender.* "What is your sex?" Responses included "male" or "female."

3. *Living situation.* "What best describes where you live?" Responses included "A home with both parents," "a home with only one parent," "other relative's home," "a home with more than one family," " friend's home," "foster home, group care, or waiting placement," "hotel or motel," "migrant housing," "shelter," "on the street (no fixed housing), car or van, campground or abandoned building," "other transitional or temporary housing," or "other living arrangements." I recoded this variable into a dichotomous form, indicating whether a student lived in a home with both parents or not.

I operationalized service need as student self-report of engagement in 5 types of risk behaviors that are associated with school health program use, including substance use, failing grades, truancy, school property damage and depressed mood (Amaral et al., 2011; Brindis et al., 2003; Soleimanpour, Geierstanger, Kaller, McCarter, & Brindis, 2010). The following items from the student survey were used to assess risk behaviors. These particular items were selected because they occurred in the past (not necessarily during service use) and due to their widespread use in the empirical literature on prevalence of youth risk behaviors (Centers for Disease Control and Prevention, 2004; Grunbaum, 2000):

1. *Depressed Mood.* "During the past 12 months did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?" Responses included, "yes" and "no."

2. *Failing Grades.* "During the past 12 months, how would you describe the grades you mostly received in school?" Responses included, "A's and B's," "Mostly B's", "B's and C's", "Mostly C's," "C's and D's," "Mostly D's," and "Mostly F's." For my dissertation, I recoded this variable to be dichotomous, indicating whether a student had received mostly D's and F's – suggesting functional impairment.

3. *Truancy.* During the past 12 months, how many times did you skip school or cut class? Responses included, "0 times," "1-2 times," "A few times," "Once a month," "Once a week," and "More than once a week." I recoded the variable to be dichotomous, indicating whether a student had been truant more than a few times.

4. *Property Damage.* "During the past 12 months, have you damaged school property on purpose?" Responses included: "never," "once," "two or three times," "more than three times". I recoded this variable to be dichotomous, indicating whether a student had damaged school property on purpose at least once in the last 12 months.

5. *Substance Use.* For the purposes of this study, the variable substance use included a sum of the number of the following substances the student used in his or her lifetime. Other substances, such as inhalants and "hard" drugs were not included because they were negatively associated with service use.
   a. *Tobacco.* "During your life, how many times have you used or tried cigarettes?" Responses included, "0 times", "1 time," "2 times," "3 times," "4-6 times," or "7

or more times." I recoded the variable to be dichotomous, indicating whether a student reported smoking at least once.

b. *Alcohol.* During your life, how many times have you had at least one full drink of alcohol (such as a can of beer, glass of wine, wine cooler, or shot of liquor)?" Responses included, "0 times", "1 time," "2 times," "3 times," "4-6 times," or "7 or more times." I recoded the variable to be dichotomous, indicating whether a student reported drinking alcohol at least once.

c. *Marijuana. "*During your life, how many times have you used marijuana (pot, weed, grass, hash, bud)?" Responses included, "0 times", "1 time," "2 times," "3 times," "4-6 times," or "7 or more times." I recoded the variable to be dichotomous, indicating whether a student reported using marijuana at least once.

Extensive psychometric analysis of this survey has demonstrated that the secondary school scales exhibit good internal consistency ($\alpha > .70$), moderate reliability and construct validity ($\alpha > .50$), and measurement equivalence across racial groups; the authors conclude that the survey is "appropriate as an epidemiological tool" to assess general prevalence rates of risk and resilient behavior.

Selection of scale for risk taking behavior/service need variable.

I fit several random-effects logistic regression models to examine the relationship between risk behavior and participation in services offered by the Metro Student Health Initiative, using different scales for risk behavior. Likelihood Ratio Tests provided no evidence that a model using separate indicator variables (see Tables 14-19, Appendix) fit the data better than a simple trend variable (counting the number of risk taking behaviors students engaged in) or two binary variables for externalizing (at least one externalizing behavior present or not) and internalizing (depressive symptoms present) risk behaviors. I selected the two binary variables separating internalizing and externalizing behaviors for ease of interpretation, and based on previous studies indicating that youth with externalizing symptoms are more likely to receive treatment than those with internalizing disorders, particularly in the school context (Gudino et al., 2009).

Dataset C: Referral forms.

Across the three school sites, all the referral forms included the following items:

1. *Student Race.* Each referral form included an open ended space to note a students' ethnicity. I organized responses into the following categories: "Pacific Islander", "Asian," "Black," "Latino/Latina," "White, and "Other". For the purposes of this study, I coded each racial category was into dummy variables. The "Other" dummy variable included students who were identified as Multiracial.

2. *Gender.* Each referral form included an open ended space to note a students' gender. I organized responses into a dummy variable for "Male" and "Female."

3. *Student Race.* Each referral form included an open ended space to note a students' grade level. The range was 9th-12th grade.

4. *Role of Person Making the Referral.* Each referral form included an open ended space to note the name and/or role of the person making the referral. I organized these responses into a categorical variable with the following options: teacher, academic counselor, administrator, parent, peer or self/school health provider (it was not possible to separate these two categories on half of the forms).

5. *Referral reason.* Each form listed a series of pre-determined categories of referral reasons with empty boxes that could be marked by the person making the referral. I created a series of dichotomous indicators, grouping referral reasons in the following categories that were available across all three sites (the sub-codes were not available on all versions of the forms from the three different sites):

   a. *Emotional Concerns.* Reasons included, "grief and loss," "Stress/anxiety/nervous/frightened," "Depressed/withdrawn/isolated," "Suicide risk/self-harm, "Cutting," "Eating/nutrition/body," "Delinquency/behavioral acting out/aggressive/defiant/angry/anger management," and "Unpredictable and irregular behavior."

   b. *Family Issues.* Reasons included, "Family concerns," and "Domestic Violence/Abuse/Neglect."

   c. *Peer/Relational Issues.* Reasons included, "Peer/relationship/social," "relationship issues, "peer relations," and "interpersonal skills."

   d. *Medical Issues.* Reasons included, "medical" and "physical health."

   e. *Reproductive Health.* Reasons included, "pregnancy, and "birth control."

A note about reliability and validity.

Whenever possible, reliability and validity data were noted above. As is commonly the case, this information was not available for many of the administrative and program evaluation data sources (Iezzoni, 1997). However, it is worth noting that during the 2008-2009 and 2009-2010 school year, the Metro Student Health Initiative engaged in an effort to improve the quality of their administrative data. In addition to professional development activities focused on improving reliability in the process of documenting services, data entry clerks relieved program staff of the task of entering service data into CMS and were also responsible for identifying inconsistencies in documentation. School health program coordinators have been provided with incentives to improve the response rate of the program evaluation surveys.

Procedures and Data Collection Techniques

Dataset A: Administrative data.

The data were originally collected as part of quality assurance and improvement efforts for the Metro Student Health Initiative, managed by the Metro Department of Children and Families (DCF). Administrative data were generated at the fifteen school health program sites through the "Contract Management System" (CMS), overseen by DCF. Prior to receiving services offered by the health program at their school, students completed a "registration form" on which they provided demographic information. School health program and evaluation staff then entered this information into CMS. All school health providers were also responsible for documenting drop-in and ongoing services to individuals and groups by completing daily services and encounter logs, either by hand or using a word processing program. All types of interactions and activities with students, their families and school staff were recorded on these logs, including education and outreach activities, and providers' participation in school, teacher or family meetings. Data entry staff members were responsible for inputting information from these service logs into CMS during semimonthly site visits. For the purposes of this research, DCF provided a de-identified dataset for students served in the 2008-2009 school year that included students' racial background, age, school site, English language proficiency, categories and minutes of services

received, and zip code of their home address. In order to ensure data accuracy, I compared the data provided by DCF to reports generated by the Metro Student Health Initiative regarding the number and racial composition of students at each site. Summary statistics from the first two datasets provided by DCF revealed markedly different trends from those reported by sites, suggesting problems with the download from CMS. After consulting the data manager at the Metro Student Health Initiative, the correct download parameters were identified and the final download resulted in a dataset that matched the numbers reported by each program site.

Dataset B: Student and staff surveys.

The 2009 Metro student survey targeted all students attending high schools in the district. Using a passive consent process, parents' were notified of the date the survey would be administered and could opt their children out of taking it. Each student's participation was voluntary and anonymous.

Estimates of school-level referral rates are from a census survey of school staff at participating sites that school health program coordinators distributed in hard copy to all teachers and administrators at their school site and was completed anonymously.

Dataset C: Referral forms.

All school-based health program that participate in the Metro Student Health Initiative encourage referrals from teachers, administrators, parents, grade level counselors, peers, and service providers as a way to identify students in need of support. School health program staff members then schedule an intake assessment with the student referred, during which the staff member describe available services, including confidentiality information and the voluntary nature of services. They ask the student if they are currently receiving community-based health services and determine if the student is interested in participating in ongoing school-based services. If the student is interested in services they are assigned to a provider. At some sites, the staff member who conducts the intake will be the provider and at other sites the intake staff assigns a provider. Service use is voluntary unless the student has been referred by a school administrator for using illicit substances on school grounds.

In consultation with the Metro Student Health Initiative administrator and the lead evaluator, I identified three program sites from which I collected completed referral forms for the 2007-2008 and 2008-2009 school year. I collected two years of forms in order to increase the sample size. The lead evaluator then contacted the program coordinators from these three sites to request their participation in the study and grant access to the forms. Once permission was granted, the Community Health Outreach Worker at each site redacted identifiable student information from the forms and provided me with hard copies. Each form was slightly different, so I created a codebook that identified and classified shared categories from each form (see Appendix). I then contracted with Advanced Data Entry Services, due to their history of working with Metro Student Health Initiative data, to enter the quantitative data from the referral forms (everything on the form except for the narrative/qualitative reasons for referral). They provided me with an initial dataset, which I checked for quality using a random sample of forms. After correcting minor errors, ADE sent me a final dataset in Excel that I uploaded into Stata 11 for analysis.

Human Subjects

This study was approved by the Committee for the Protection of Human Subjects (CPHS) at the University of California at Berkeley (Protocol number: 2010-11-2484). A Child Assent

Waiver was granted for this study because the research involves no more than minimal risk of harm, as the data had already been collected for program evaluation or administrative purposes. The evaluators requested individual service utilization data in raw form from DCF for the 2008-2009 and 2009-2010 school years, along with archival referral forms from three program sites. On the data use agreement, I, Yolanda Anyon, am listed as an individual permitted to receive and use these data. No financial transaction or payment was involved. DCF approved this request in October 2010. Student-level data from the archival administrative database and referral forms were removed of identifiers such as name, address, phone number, birth date and client record numbers. Other data sources, such as the staff and student surveys, were completed anonymously and did not include identifying information. All presentations of the data analysis are at the aggregate level (trends across sites) and do not contain any individually identifying information, assuring specific school health program sites, staff members or participants cannot be identified.

Analysis

Dataset A: Multilevel modeling of administrative data.

Using the administrative data on service utilization, I conducted random effects logistic regression analyses predicting participants' use of three different categories of school health program services (prevention, medical and psychosocial intervention) by race, with Asian students as the reference group. I selected Asian students as the reference group because they are the largest racial group in the district and are uniquely underrepresented in services. In these models, I controlled for gender, age, community violence, community poverty and English language fluency. Research has demonstrated school effects on students' physical, social and emotional outcomes, indicating that schools also shape students' need for support services (Anderman, 2002; Eccles & Roeser, 1999). Therefore, I used multilevel modeling, for this analytic approach accounts for the dependence among observations that occurs when research subjects are nested within clusters, as students are within schools (Rabe-Hesketh & Skrondal, 2008). Indeed, my analyses of the data revealed statistically significant variation in service use among schools, with an intraclass coefficient of .17 for use of psychosocial interventions, .07 for medical care, and .31 for prevention services. Since my interest was primarily regarding the effect of race on use of different service categories, I did not model for school effects, only utilizing the random effects approach to account for the correlated nature of the data and ensure accurate significance tests.

Using Stata SE 11, I estimated the following model for each category of service (prevention, medical, and psychosocial intervention):

$$\text{Logit}[Pr(Yij=1)] = \beta_{0j} + \beta_{1j}(\text{White})_{ij} + \beta_{2j}(\text{Black})_{ij} + \beta_{3j}(\text{Latino})_{ij} + \beta_{4j}(\text{PI})_{ij} + \beta_{5j}(\text{Other})_{ij} + \beta_n X_{ij} + r_{ij}$$

Where $\text{Logit}[Pr(Yij=1)]$ represents whether student i in school j received school-based services and $\beta_n X_{ij}$ represents a vector of student control variables.

Dataset B: Multilevel modeling of student and staff survey data.

I propose that patterns of student participation in services are not solely a result of need, but are also linked to school-level referral practices. The most appropriate method to consider this type of school effect is multilevel modeling (Lee, 2000; Raudenbush & Bryk, 2002). To my knowledge, no study of school-based service use has used multilevel modeling or otherwise considered school effects on service utilization. In Dataset B the unconstrained model of service use had a statistically significant intraclass correlation of .09, warranting the use of multilevel

modeling techniques (Luke, 2004). Therefore, I conducted random effects logistic regression analyses predicting students' use of school-based health services by race, first controlling for risk behaviors at the student-level, then adding referral rates to the school-level model (Rabe-Hesketh & Skrondal, 2008).

Using Stata 11, I estimated the following series of two-level models:

Student Model: $\text{Logit}[\text{Pr}(Y_{ij}=1)] = \beta_{0j} + \beta_{1j}(\text{White})_{ij} + \beta_{2j}(\text{Black})_{ij} + \beta_{3j}(\text{Latino})_{ij} + \beta_{4j}(\text{PI})_{ij} + \beta_{5j}(\text{Other})_{ij} + \beta_n X_{ij} + r_{ij}$

Where $\text{Logit}[\text{Pr}(Y_{ij}=1)]$ represents whether student i in school j received school-based services and $\beta_n X_{ij}$ represents a vector of student control variables.

School-Level Model:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{Referral Rate})_j + \mu_{0j}$$
$$\beta_{1j} = \gamma_{10} + \gamma_{11}(\text{Referral Rate})_j + \mu_{ij}$$
$$\beta_{2j} = \gamma_{20} + \gamma_{21}(\text{Referral Rate})_j + \mu_{ij}$$
$$\beta_{3j} = \gamma_{30} + \gamma_{31}(\text{Referral Rate})_j + \mu_{ij}$$

Where β_{0j} represents the service utilization rate in school j, β_{1j} - β_{3j} represent specific racial group effects (slopes), and γ_{31} represents the effect of school-level referral rates.

I conducted the multilevel models in three steps, controlling for family living situation, gender and age in each model. In model 1, I entered internalizing and externalizing behaviors to the equation. In model 2, I entered students' race into the equation. Finally, in model 3, I entered the school-level referral rate variable. I then stratified the models by race in order to examine interactions between race, risk behaviors, referral rates and service use. This was preferable to including interaction terms because the number of interaction terms would have resulted in an overly complex model with results that would be difficult to interpret. Conceptually, it is also appropriate that these analyses were conducted separately for each racial and ethnic group, given evidence outlined in the literature review that school staff members' perceptions of students and their service needs vary by race and ethnicity.

Dataset C: Multinomial logistic regression modeling of referral data.

Building on Skiba's (2002) analytic approach to analyzing referral data for race effects, I used multinomial logistic regression to identify the reasons that were associated with the referral of students from different racial backgrounds, controlling for gender and grade level. For example, higher rates of referral for social and emotional concerns among referrals for a particular racial group, rather than more objective physical health issues, could reflect some systemic bias. Unlike Skiba, I used multinomial logistic regression instead of discriminant factor analysis because it has less strict assumptions regarding normal distribution of predictors and variance within each group (Tabachnick & Fidell, 1996). I used Stata 11 to conduct multinomial logistic regressions to identify the types of problems that differentiate referrals to school-based services on the basis of student race. For the purposes of this analysis, only referrals made by teachers, administrators and grade-level counselors were kept in the sample (n=483).

Using Stata SE 11, I estimated the following model:

$$\text{Pr}(y_i=k) = \exp(X_i \beta_k) / 1 + \sum_{j=1}^{j} \exp(X_i \beta_j)$$

Where y_i is the dependent variable for any observation i being in that category, k is 6 because there are six racial categories, j is the reference category of being Asian and X_i is a vector of explanatory variables (referral reasons, grade and gender). β_j is the odds of belonging to group j versus 0 resulting from a one unit increase in covariate *x*, holding the other covariates constant. Relative risk ratios are reported as measures of associations between the predictor variables

(referral reasons) and outcome categories (referral of a student from a particular racial background). Again, I set Asian students as the reference group because they are uniquely underrepresented in services and referrals, and to maintain consistency with other analyses performed as part of this dissertation. An insufficient number of referrals were made for reproductive health reasons to calculate relative risk ratios for each racial group.

Chapter 5: Results

In chapter 4, I outlined descriptive statistics about the samples from the three datasets included in my study. At the bivariate level, several trends are worth noting before outlining my findings from the multivariate analyses. First, Dataset A (administrative data) revealed that most school health program participants live in neighborhoods with high violent crime rates and above-average poverty rates, though White and Asian youth were less likely to live in these areas (Table 1). This could be interpreted as evidence that higher exposure to poverty and violence explain why Black and Latino youth participate in psychosocial interventions, although it is also possible that non-participants also live in high crime neighborhoods (I did not have access to geographic information about non-participants). Descriptive information from Dataset B (student survey) also indicated a clear trend aligned with patterns of service use by race: Asian youth were most likely to report living with both parents and were simultaneously least likely to report engaging in multiple risk behaviors (Figure 4). Perhaps these lower levels of risk account for the underrepresentation of Asian students in school health services? Finally, Dataset C (referral forms) revealed that Black and Latino youth made up the vast majority of students referred to school health services and that the most common reasons for referral were emotional concerns and family issues (Table 2). These disproportionate patterns of referral by race parallel those observed in the population served by school health programs. The high number of referrals for emotional or family concerns may also be related to the high use of psychosocial interventions. Together, these trends suggest the influence of institutional logics regarding who is "at risk" in school and the legitimacy of problem-focused services.

Research Question 1: Are Group Differences More Pronounced in Psychosocial Interventions?

I conducted random-effects logistic regression analyses of Dataset A to examine the relationship between demographic variables and use of three categories of school-based health services (prevention, medical and psychosocial intervention) among all students who had accessed their school health program in the 2008-2009 school year (see Table 3). Boys were significantly less likely than girls to use prevention (OR=.81, p<.001) or psychosocial interventions (OR=.68, p<.001), but they were more likely to access medical care (OR=1.11, p<.05). Older students were significantly less likely than younger youth to use prevention (OR=.92, p<.001) and medical services (OR=.93, p<.001), but were equally likely to use psychosocial interventions (OR=1.01, p>.10). Community violence and concentration of poverty had no significant effect on service use of any kind. English language fluency was significantly associated with receipt of medical care (OR=1.47, p<.001), but had no significant effect on use of prevention services (OR=96, p>.10) or psychosocial interventions (OR=1.04, p>.10).

As predicted, race effects were more pronounced for use of psychosocial interventions than prevention or medical services, after controlling for gender, age, neighborhood violence and poverty, and English language fluency. All other youth were significantly more likely than Asian students to use psychosocial interventions, such as counseling and case management, with the strongest effects associated with Black (OR=2.25, p<.001), Pacific Islander (OR=3.3, p<.001) and Multiracial/Other youth (OR=2.20, p<.001). In the case of medical care, only Black (OR=1.61, p<.001) and White students (OR=1.41, p<.01) were significantly more likely than Asian youth to access first aid, vision or dental care at school. Latino, Pacific Islander and Other/Multiracial youth were equally likely as Asian students to access medical care. This trend was reversed for prevention services, with Asian youth being more likely than Black (OR=.89,

p>.10), Latino (OR=.67, p<.001) and White (OR=.65, p<.001) youth to access prevention programs like health education, youth leadership and mentoring. Only Pacific Islander students (OR=1.48, p<.10) were more likely than Asian youth to access prevention services.

Research Question 2: Are Racial Group Differences Explained by Risk Taking Behaviors?

Random-effects logistic regression analysis of the Dataset B, the student survey, demonstrates that key demographics and risk taking behaviors were positively associated with the likelihood of using of school health program services (see Table 4). Results from the full sample indicate that not living with both parents at home (OR=1.35, p<.001) was positively associated with service use, whereas male gender is negatively associated (OR=.71, p<.001) and age had no effect on program utilization. Both externalizing (OR=1.9, p<.001) and internalizing (OR=1.26, p<.01) behaviors were positively associated with service use (Table 4). In a separate analysis (see appendix, Table 13) all sub-categories of risk-taking behaviors were positively associated with service use in the full sample: failing grades (OR=1.89, p<0.01), truancy (OR=1.28, p<0.01), substance use (OR=1.29, p<0.001), school property damage (OR=1.35, p<0.01), and depressed mood (OR=1.22, p<0.001).

However, patterns of service use across race were not explained by epidemiologically defined need. Even after taking risk taking behaviors, age, gender and student's living situation into account, Black, Latino, Pacific Islander, White and Other youth were significantly more likely to use services than Asian students. In other words, the effect of race remained despite controlling for need. Black (OR=2.62, p<0.001), Latino (OR=2.31, p<0.001), Pacific Islander (OR=1.88, p<0.01), White (OR=1.47, p<.01) and students from other backgrounds (OR=1.69, p<0.001), were all significantly more likely than Asian students to use services after accounting for risk taking behaviors. Adding race to the model also reduced the coefficient for externalizing behaviors by 14.8% (Model 1 β=.63, Model 2 β= .54), suggesting race may be a confounder in the relationship between externalizing behaviors and service use (Jewell, 2004).

Research Question 3: Are School Staff Referral Rates Associated with Service Use Only for Overrepresented Youth?

In a random-effects logistic regression of Dataset B (Table 4) controlling for student's living situation, gender, age, and risk behaviors, only high referral rates were significantly associated with service use in the overall sample (OR=1.73, p<.05). Analyses by sub-group revealed the differential impact of referral practices on students' service use.

Asian students.

For Asian students, not living in a two-parent household (OR=1.25, p<.05) was significantly associated with service use (Table 5). Asian males were significantly less likely than females to use services (OR=.75, p<.001) and older age was negatively associated with service use (OR=.94, p<.10). Both externalizing (OR=1.64, p<.001) and internalizing (OR=1.38, p<.001) behaviors were significantly associated with service use. Referral rates had no significant effect on these students' service use (med, OR=1.43, p>.10; high, OR=1.18, p>.10).

Black students.

Among Black students, no associations between demographic covariates and service use reached significance, though the direction of the relationship between these variables and service

Table 3.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting Categories of Service Use.
(Dataset A: Administrative Data, n=6,696)

	Prevention Services		Medical Services		Psychosocial Intervention	
	Adj. OR	(95% CI)	Adj. OR	(95% CI)	Adj. OR	(95% CI)
Demographic Covariates						
Gender (Male)	.81***	(.71, .91)	1.11*	(1.0, 1.23)	.68***	(.61, .78)
Age	.92***	(.88, .97)	.93***	(.89, .97)	1.01	(.97, 1.1)
Zip Code: High Violence	.94	(.81, 1.1)	1.01	(.89, 1.1)	1.03	(.91, 1.2)
Zip Code: Proportion in Poverty	1.01	(.99, 1.0)	1.00	(.98, 1.1)	1.01	(.99, 1.0)
English Language Fluency	.96	(.79, 1.2)	1.47***	(1.2, 1.8)	1.04	(.86, 1.3)
Race (reference group =Asian)						
Black	.89	(.73, 1.1)	1.61***	(1.4, 1.9)	2.25***	(1.9, 2.7)
Latino	.67***	(.56, .80)	1.06	(.92, 1.2)	1.98***	(1.7, 2.3)
White	.65**	(.47, .89)	1.41**	(1.1, 1.8)	1.70***	(1.3, 2.2)
Pacific Islander	1.48+	(.97, 2.3)	1.06	(.74, 1.5)	3.32***	(2.1, 5.2)
Multiracial/Other	1.08	(.82, 1.4)	1.07	(.86, 1.3)	2.20***	(1.7, 2.8)

+p<0.1   *p<0.05   **p<0.01   ***p<0.001

Table 4.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use.
(Dataset B: Student Survey, n=8,466)

	Model 1		Model 2		Model 3	
	Adj. OR	(95% CI)	Adj. OR	(95% CI)	Adj. OR	(95% CI)
Demographic Covariates						
Does Not Live with Both	1.35***	(1.2, 1.6)	1.19*	(1.0, 1.4)	1.18*	(1.0, 1.4)
Gender (Male)	.71***	(.61, .81)	.71***	(.62, .81)	.71***	(.62, .81)
Age	0.96	(.91, 1.0)	-	-	-	-
Service Need: Risk Behaviors						
Externalizing (yes)	1.9***	(1.7, 2.2)	1.71***	(1.5, 2.0)	1.70***	(1.5, 2.0)
Internalizing (yes)	1.26**	(1.1, 1.6)	1.27**	(1.1, 1.5)	1.28**	(1.1, 1.5)
Race (reference group =Asian)						
Black	-	-	2.62***	(1.9, 3.5)	2.58***	(1.9, 3.5)
Latino	-	-	2.31***	(1.8, 2.9)	2.29***	(1.8, 2.9)
White	-	-	1.47**	(1.1, 1.9)	1.47**	(1.1, 1.9)
Pacific Islander	-	-	1.88**	(1.2, 2.8)	1.86**	(1.2, 2.8)
Multiracial/Other	-	-	1.69***	(1.3, 2.1)	1.69***	(1.3, 2.1)
School Level (reference group = low referral rate)						
High referral rate					1.73*	(1.0, 3.0)
Med referral rate	-	-	-	-	1.49	(.91, 2.4)
+p<0.1 *p<0.05 **p<0.01 ***p<0.001						

Table 5.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use for Asian Students.
(Dataset B: Student Survey, n= 4,876)

Asian Students	Student Level		School Level	
	Adj. OR	(95% CI)	Adj. OR	(95% CI)
Demographic Covariates				
Do Not Live with Both Parents	1.25*	(1.0, 1.5)	1.24*	(1.0, 1.5)
Gender (Male)	0.74***	(.62, .88)	0.74***	(.61, .88)
Age	0.94+	(.88, .1.0)	0.94+	(.88, .1.0)
Service Need: Risk Behaviors				
Externalizing (yes)	1.64***	(1.4, 2.0)	1.64***	(1.4, 2.0)
Internalizing (yes)	1.38**	(1.1, 1.7)	1.38**	(1.1, 1.7)
School Level (reference group = low referral rate)				
High referral rate	-	-	1.18	(.55, 2.5)
Med referral rate	-	-	1.43	(.75, 2.8)
+p<0.1 *p<0.05 **p<0.01 ***p<0.001				

Table 6.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use for Black Students.
(Dataset B: Student Survey, n=725)

Black Students	Student Level		School Level	
	Adj. OR	(95% CI)	Adj. OR	(95% CI)
Demographic Covariates				
Does Not Live with Both Parents	1.78*	(1.0, 3.2)	1.76*	(1.0, 3.1)
Gender (Male)	0.76	(.43, 1.4)	-	-
Age	1.0	(.79, 1.3)	-	-
Service Need: Risk Behaviors				
Externalizing (yes)	1.57	(.80, 3.1)	1.46	(.78, 2.7)
Internalizing (yes)	1.67	(.84, 23.3)	1.69	(.87, 3.3)
School Level (reference group = low referral rate)				
High referral rate			2.59*	(1.1, 5.6)
Med referral rate	-	-	2.23*	(1.1, 4.7)

+p<0.1   *p<0.05   **p<0.01   ***p<0.001

Table 7.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use for White Students.
(Dataset B: Student Survey, n= 528)

White Students	Service Need		School Level	
	Adj. OR	(95% CI)	Adj. OR	(95% CI)
Demographic Covariates				
Does Not Live with Both Parents	1.35	(.81, 2.3)		-
Gender (Male)	.62+	(.38, 1.0)	.63+	(.39, 1.0)
Age	1.08	(.88, 1.3)		-
Service Need: Risk Behaviors				
Externalizing (yes)	2.72**	(1.3, 5.5)	2.82**	(1.4, 5.7)
Internalizing (yes)	.77	(.44, 1.3)	.80	(.46, 1.4)
School Level (reference group = low referral rate)				
High referral rate	-	-	4.94	(.55, 43.9)
Med referral rate	-	-	1.02	(.63, 1.7)
+p<0.1 *p<0.05 **p<0.01 ***p<0.001				

Table 8.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use for Latino Students.
(Dataset B: Student Survey, n= 1,228)

Latino Students	Service Need		School Level	
	Adj. OR	(95% CI)	Adj. OR	(95% CI)
Demographic Covariates				
Does Not Live with Both Parents	.79	(.54, 1.2)	-	-
Gender (Male)	0.70+	(.48, 1.0)	0.70+	(.48, 1.0)
Age	1.0	(.88, 1.2)	-	-
Service Need: Risk Behaviors				
Externalizing (yes)	2.21***	(1.4, 3.6)	2.19***	(1.4, 3.5)
Internalizing (yes)	1.0	(.68, 1.5)	.96	(.64, 1.4)
School Level (reference group = low referral rate)				
High referral rate	-	-	1.61	(.84, 3.1)
Med referral rate	-	-	1.24	(.72, 2.2)
+p<0.1 *p<0.05 **p<0.01 ***p<0.001				

Table 9.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use for Pacific Islander Students.
(Dataset B: Student Survey, n= 247)

Pacific Islander Students	Service Need		School Level	
	Adj. OR	(95% CI)	Adj. OR	(95% CI)
Demographic Covariates				
Does Not Live with Both Parents	1.05+	(.39, 2.8)	-	-
Gender (Male)	.54	(.22, .1.3)	-	-
Age	1.53*	(1.0, 2.3)	1.49*	(1.0, 2.2)
Service Need: Risk Behaviors				
Externalizing (yes)	1.12	(.35, 3.5)	1.04	(.34, 3.1)
Internalizing (yes)	1.38	(.51, 3.7)	1.52	(.56, 4.1)
School Level (reference group = low referral rate)				
High referral rate	-	-	5.24**	(1.6, 17.7)
Med referral rate	-	-	2.00	(.60, 6.7)

+p<0.1   *p<0.05   **p<0.01   ***p<0.001

Table 10.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use for Multiracial and Other-Identified Students.
(Dataset B: Student Survey, n= 862)

Multiracial/Other Students	Service Need		School Level	
	Adj. OR	(95% CI)	Adj. OR	(95% CI)
Demographic Covariates				
Does Not Live with Both Parents	1.55*	(1.9, 2.4)	1.44+	(.94, 2.2)
Gender (Male)	.66+	(.44, .1.0)	.65*	(.43, .99)
Age	.99	(.83, 1.2)		-
Service Need: Risk Behaviors				
Externalizing (yes)	2.39***	(1.4, 4.0)	2.17**	(1.3, 3.6)
Internalizing (yes)	1.43	(.90, 2.3)	1.42	(.90, 2.3)
School Level (reference group = low referral rate)				
High referral rate	-	-	2.79**	(1.3, 6.0)
Med referral rate	-	-	1.30	(.84, 2.0)
+p<0.1 *p<0.05 **p<0.01 ***p<0.001				

use was similar to that observed for Asian students (Table 6). Black youth who did not live in a two-parent household (OR=1.78, p>.10) were more likely to use services. Black males were less likely than females to use services (OR=.76, p>.10), but age had no effect (.96, p>.10). Both externalizing (OR=1.57, p>.10) and internalizing (OR=1.67, p>.10) behaviors were positively associated with service use, but this relationship was not statistically significant. The effect of both high and medium referral rates at the school level were statistically significant (med, OR=2.23, p<.05; high, OR=2.59, p<.05), and in the predicted direction for this population. Furthermore, adding referral rates to the model reduced the coefficient for externalizing behaviors among Black youth by 17% (Student Model β=.45, School Model β= .38), suggesting the relationship between externalizing behaviors and service use for Black students may be confounded by school staff member referral practices (Jewell, 2004).

White students.

For White students, not living in a two-parent household (OR=1.35, p>.10) was positively associated with service use, as was older age (OR=1.08, p>.10), though these associations were not statistically significant (Table 7). White males were less likely than their female counterparts to use services (OR=.62, p<.10). Only externalizing behaviors (OR=2.72, p<.01) were positively associated with school-based service use for White students, and this relationship was statistically significant. In contrast, internalizing symptoms (OR=.77, p>.10) were negatively associated with service utilization, but this relationship was not statistically significant and the confidence intervals were too wide to assess a meaningful trend. Referral rates did not have a significant effect on White students' service use (med, OR=1.02, p>.10; high, OR=4.94, p>.10).

Latino students.

Unlike students of other racial backgrounds, not living in a two-parent household (OR=.79, p>.10) was negatively associated with service use, though this relationship was not statistically significant (Table 8). Latino males were less likely than females to use services (OR=.70, p<.10), but age had no effect (OR=1.0, p>.10). Only externalizing behaviors (OR=1.64, p<.001) were significantly, and positively, associated with service use, with no effect observed for internalizing behaviors (OR=1.0, p>.10). Referral rates were positively associated with service use (med, OR=1.24, p>.10; high, OR=1.61, p>.10), but this relationship was not statistically significant.

Pacific Islander students.

Among Pacific Islander students, not living in a two-parent household (OR=1.05, p>.10) was positively associated with service use, as was older age (OR=1.53, p<.05) (Table 9). Pacific Islander males were less likely than their female counterparts to use services (OR=.54, p>.10), but this relationship was not statistically significant. Both externalizing (OR=1.12, p>.10) and internalizing (OR=1.38, p>.10) behaviors were positively associated with service use, but this relationship was not statistically significant. The effect of high referral rates at the school level was statistically significant (OR=5.24, p<.01) in the predicted direction for this population, but the effect of medium referral rates was not statistically significant (OR=2.0, p>.10).

Other/Multiracial students.

For students of multiracial or other backgrounds, not living in a two-parent household (OR=1.55, p<.05) was significantly and positively associated with service use (Table 10).

Multiracial or other-identified males were less likely than their female counterparts to use services (OR=.66, p<.10), but age had no effect on their service use (OR=.99, p>.10). Only externalizing behaviors (OR=2.39, p<.001) were significantly associated with school-based service use for Multiracial or other-identified students. Internalizing symptoms (OR=1.43, p>.10) were also positively associated with service utilization, but this relationship was not statistically significant. High referral rates had a significant effect on these students' service use (OR=2.79, p<.01), but the effect of medium referral rates was not statistically significant (OR=1.30, p>.10). Furthermore, adding referral rates to the model reduced the coefficient for externalizing behaviors among multiracial youth by 11% (Student Model β=.87, School Model β= .77), suggesting the relationship between externalizing behaviors and service use for multiracial/other students may be confounded by school staff member referral practices (Jewell, 2004).

Research Question 4: Do School Staff Referral Practices Vary by Student Race?

Descriptive statistics of Dataset C, completed referral forms, reveal that school staff members were much more likely to refer Black and Latino students to school health programs than they were to refer White and Asian youth. The student population at the three participating schools was 49% Asian, 19% Latino, 10% White and 8% Black and 14% Other (enrollment data from the school district includes Pacific Islanders in the "Other" racial category) (Figure 5). In contrast, the racial composition of students referred to services by school staff members was 20% Asian, 46% Latino, 2% White, 26% Black, 5% Other (3% Pacific Islanders, 2% all others) (Figure 6). School staff members were most likely to initiate referrals in response to emotional concerns (65%), followed by family issues (35%), peer/relationship concerns (18%), substance abuse (18%), medical concerns (14%) and reproductive health issues (4%) (Table 11).

Multinomial logistic regression analyses, controlling for grade and gender, also demonstrate that school staff members' referral reasons vary somewhat by the race of the student referred (Table 12). Compared to Asian youth, school staff were less likely to refer Latino youth (RRR=.70, p>.10), and more likely to refer Black (RRR=2.39, p<.05), White (all referrals of White youth indicated an emotional concern, resulting in an unusually large RRR), Pacific Islander (RRR=7.85, p<.10), and students from other or Multiracial backgrounds (RRR=2.57, p>.10) for emotional concerns. School staff members were more likely to refer Asian youth for family concerns than any other sub-group, but none of the effects were statistically significant. Black (RRR= .47, p<.05), Latino (RRR=.22, p<.001), and Pacific Islander (RRR=.23, p<.10) youth were significantly less likely than Asian youth to be referred for peer/relational issues, and White students were equally likely to be referred for this reason (RRR=1.49, p>.10). All youth were more likely than Asian students to be referred by school staff for substance abuse concerns, but this relationship was only statistically significant for Latino students (RRR=6.9, p<.001) and approached significance for White youth (RRR=11.5, p<.10). None of the relationships between the race of the student referred and a medical reason for referral were statistically significant and the confidence intervals were too wide to assess trends by racial group. In the category of reproductive health concerns, it was not possible to calculate relative risk ratios because this referral reason was so uncommon and the number of students from these subgroups was so low. Descriptively, Latino (5%) and Black youth (2%) were the only groups referred for reproductive health concerns by school staff.

Figure 5. *Racial Compositon of Student Population.*
(n= 8,071 over two years, from 3 school s)

White 10%

Black 8%

Latino 19%

Asian 49%

Other 14%
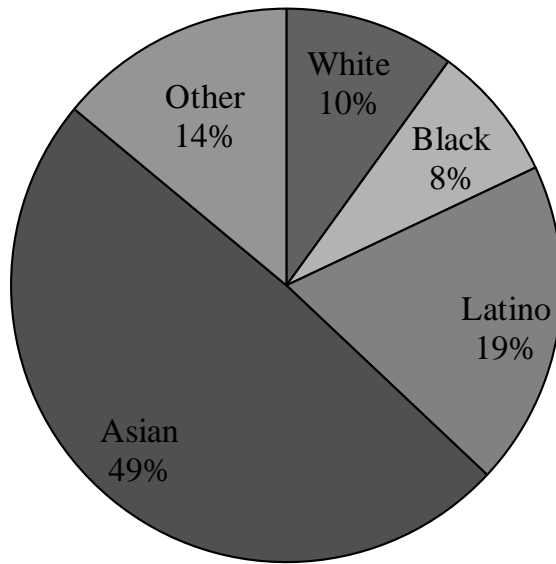
Metro School District Data, 2008 & 2009

Figure 6. *Racial Compositon of Students Referred by School Staff to School Health Programs.*
(n= 450 over two years, from 3 school health programs)

Other 6%

White 2%

Black 26%

Asian 20%

Latino 46%
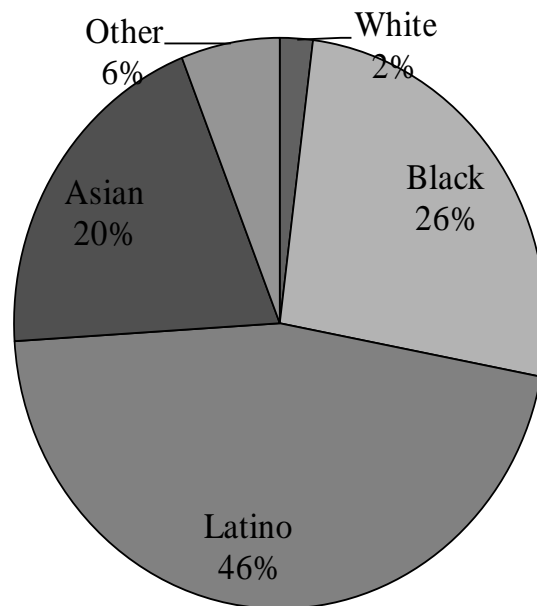
Dataset C: Archival Referral Forms, 2008 & 2009

Table 11.	
School Staff Referral Reasons.	
(Dataset C, n=450 over two years, from 3 school health programs)	
Referral Reasons	Percent Referred by School Staff
Emotional Concerns	65%
Family Concerns	32%
Peer/Relationship Issues	18%
Substance Abuse	18%
Medical Concerns	14%
Reproductive Health	3%
*Percentages add up to more than 100 because it was possible to mark more than one referral reason.	

Table 12.
Adjusted Relative Risk Ratios from Multinomial Logistic Regression of Referral Reasons Predicting the Referral of Students from Different Racial Backgrounds.
(Dataset C: Archival Referral Forms completed by School Staff, n=450)

Race of Student Referred (Reference group=Asian)	Emotional		Family Issues		Peer/Relational		Drugs		Medical	
	RRR	(95% CI)	RRR	(95% CI)	RRR	(95% CI)	RRR	(95% CI)	RRR	(95% CI)
Black	2.39*	(1.1, 5.0)	.69	(.36, 1.3)	.47*	(.23, .93)	1.4	(.37, 5.4)	.74	(.29, 1.9)
Latino	.67	(.36, 1.2)	.73	(.40, 1.3)	.22***	(.11, .45)	6.9***	(2.3, 20.8)	.85	(.37, 1.9)
White	-[a]	-[a]	-[b]	-[b]	1.49	(.27, 7.9)	11.5+	(.84, 158.6)	2.59	(.39, 17.2)
Pacific Islander	7.85+	(.89, 69.2)	.89	(.25, 3.2)	.23+	(.04, 1.2)	2.85	(.26, 31.2)	1.2	(.22, 6.7)
Other	2.57	(.45, 14.7)	.39	(.08, 2.0)	-[c]	-[c]	3.02	(.26, 34.6)	1.85	(.32, 10.6)

+p<0.1   *p<0.05   **p<0.01   ***p<0.001

[a] All referrals for White youth indicated an emotional concern, and given the small number of youth from this background in the sample, the RRR was unusually large and the CI could not be calculated

[b] An insufficient number of referrals for White youth indicated a family issue to calculate the RRR

[c] An insufficient number of referrals for Other-identified youth indicated a peer/relational concern to calculate the RRR

Chapter 6: Discussion and Conclusion

Summary of Results

This study used multiple sources of data to investigate the relationship between school staff referral practices and racial group differences in utilization of school health programs. To answer my first research question, whether group differences are more pronounced in mental health services than other types of services, I analyzed administrative data generated by school health programs at 15 public high schools in Metro (Dataset A). To answer my second research question, whether racial group differences in service use can be explained by differential need, I used a district-wide epidemiological survey of students regarding their risk behaviors and use of their school health programs (Dataset B). To assess whether school staff member referral rates are associated with service use for overrepresented youth only, I linked school-level data regarding school staff members' referral practices to the student survey (Dataset B). To gain further insight into the role of referrals in school-based service use across race, I analyzed data from completed referral forms (Dataset C). The major findings to be discussed in this chapter were:

1. Among students who use school health programs, racial group differences were more pronounced in psychosocial interventions than prevention or medical services. Black, Latino, Pacific Islander, White, and Multiracial youth were all more likely than Asian students to access psychosocial interventions. Asian youth were more likely than Latino, White and Pacific Islander students to participate in prevention programs.
2. Racial group differences were not explained by risk taking behaviors, gender, age or living situation. Race confounded the relationship between externalizing behaviors and service use.
3. After accounting for risk taking behaviors, school staff referral rates were associated with service use for Black and Pacific Islander students. Among Black students, school staff referrals confounded the relationship between externalizing behaviors and service use.
4. School staff members were more likely to refer Black and Latino youth than White or Asian youth to school health programs. Compared to Asian students, school staff members were more likely to refer Black youth for emotional concerns, and Latino youth for substance abuse. They were more likely to refer Asian students for peer or relational issues, compared to Black, Latino, and Pacific Islander youth.

Racial group differences were most pronounced in psychosocial interventions.

I hypothesized that racial group differences in school-based service utilization would vary depending on the type of service provided, predicting that racial disproportionalities would be more pronounced in psychosocial intervention (e.g., therapy and case management) than prevention services (e.g., health education and youth leadership) or medical care (e.g., first aid, dental and vision). Results from analyses of Dataset A indicated that racial group differences were most pronounced in students' use of psychosocial interventions, and were less pronounced in prevention services and receipt of medical care. The sheer number of significant racial group differences was highest in the case of psychosocial interventions, where all five racial groups were significantly more likely than Asian youth to participate in counseling, therapy or case management. Moreover, the effects associated with racial categories were larger within the

domain of psychosocial interventions. All together, this provides strong support for my original hypothesis.

The strongest effect sizes in the domain of psychosocial interventions were for Pacific Islander, Black, Latino, and Other/Multiracial students, suggesting these youth share characteristics that are aligned with dominant ideas in the school community about the target population for psychosocial interventions, which are more problem-focused and stigmatized than prevention or medical services. These findings also resonate with research from special education, which has found that Black and Latino youth are most dramatically overrepresented in subjective classifications of need, such as social and emotional problems, as compared to more objective physical health challenges (Coutinho & Oswald, 2000; Eitle, 2002; Gaviria-Soto & Castro-Morera, 2005). Although previous research in this area has not included Pacific Islander and Multiracial youth, it is possible that similar processes are at work with these groups, who may share physical characteristics with Black and Latino youth and live in similar neighborhood contexts (Table 1).

It is also worth noting that the effects associated with race were in the opposite direction for prevention services, which are more strengths-focused, when compared to psychosocial interventions. After controlling for age, community poverty and violence, gender, and English language fluency, Asian students were generally more likely than their peers of other backgrounds to participate in prevention programming. Participation in these programs is usually the result of universal outreach efforts, rather than referrals. This finding is consistent with research on help-seeking that indicates when youth of color voluntarily seek support for health and psychosocial problems, they are more likely to turn to youth workers and other providers who work in more informal services like health education, mentoring, and recreation – all of which are included in the prevention category of Metro school health programs (Power et al., 2005). This trend is also consistent with dominant stereotypes about Asian youth as "model minorities" who are not viewed as needing intervention services, but may be seen as the appropriate target population for positive youth development and college-preparatory activities like leadership and job assistance programs (Choi & Lahey, 2006; Louie, 2004).

Racial group differences were not explained by risk taking behaviors.

I hypothesized that service need would not fully explain differential patterns of service use by race. In my analyses of Dataset B, risk behaviors were positively associated with use of school health programs, but as predicted, racial group differences in service use persisted after controlling for externalizing behaviors and internalizing symptoms. This was true regardless of the scale of risk behaviors employed, although the likelihood of White students' service use compared to that of Asian's was not consistently statistically significant (see Appendix). Youth from all other racial groups were significantly more likely than Asian students to report using services, with the strongest effects for Black, Latino, Pacific Islander and Other/Multiracial youth. This suggests that some other factor related to race, beyond epidemiologically defined "need," is contributing to patterns of service use.

My analyses also suggested that race may be a confounder in the relationship between externalizing behaviors and service utilization, with the addition of race to the model leading to a meaningful reduction in the coefficient for externalizing behaviors. This may be related to school staff members' tendency to perceive Black and Latino youth as more aggressive and oppositional than White or Asian youth, which may increase the likelihood that these youth will be referred to school health programs for externalizing behaviors (Chang & Sue, 2003; Morris, 2005).

School staff referral rates were associated with service use for Black, PI and Multiracial youth.

I hypothesized that referral rates at the school level would be associated with service use among overrepresented groups, but not for underrepresented groups. This hypothesis was partially confirmed using Dataset B, with high referral rates significantly predicting service use for Black, Pacific Islander, and Multiracial/Other youth, but not Latino, White or Asian youth. Adding school-level referral rates to the full model also led to a meaningful reduction in the likelihood of Black and Multiracial students' using services, suggesting that referral practices interact with Black students' help-seeking trajectories in particularly meaningful ways. These findings indicate that as referral routines become more widespread, so do assumptions about Black, Pacific Islander, and Multiracial students being in need of school health services, particularly psychosocial interventions, leading to disproportionalities in referrals. It may be that as referral practices become more habitualized, ideas about these groups' need for services become more ingrained, and school staff members are more likely to interpret certain behaviors as reflective of a psychosocial problem that is appropriately responded to by school health programs, rather than instructional modifications or school-wide interventions (Downey & Pribesh, 2004).

The lack of a significant effect of school staff referral rates on service use among Latino youth is surprising given the degree of their overrepresentation in the population of those referred to and served by school health programs. However, this sub-group of youth reports the highest rates of substance use and depression in the district, so it is possible that referrals for these youth are largely an appropriate response to students' risk taking behaviors, and do not independently contribute to students' service use. Still, the effect of race persists for Latino youth after controlling for risk behavior, suggesting that different race-related processes are at work, perhaps in cultural or social contexts not considered in this study.

School staff referral practices varied by race.

I proposed that referral practices would vary by student race, reflecting the school community's dominant conceptions about which racial groups are in need of school health services and the purpose of these programs in terms of target populations. In general, Dataset C revealed that school staff members were much more likely to refer Black and Latino students to the school health program than White and Asian youth (information on Pacific Islander and Multiracial youth is not available in school district enrollment data, so it is not possible to determine whether they are disproportionately referred relative to their representation in the school district). School staff members were also more likely to initiate referrals in response to emotional and family issues than medical concerns, reproductive health, or peer/relational issues. Together, these findings illustrate that psychosocial interventions have the greatest legitimacy among school staff and that ideas about their appropriateness for Black and Latino youth are widely shared. Compared to the numbers of students who self-identify as Multiracial in the student survey, the low number of Multiracial or "other" youth identified on referral forms indicates that school staff likely identify students using one racial category. Therefore Multiracial youth are probably represented in the Latino or Black categories of the referral data.

As predicted, school staff members' referral reasons also varied by the race of the student referred, with the most group differences occurring in more subjective categories, like emotional concerns and peer/relational issues, than more objective categories like substance use and physical health concerns. After controlling for grade and gender, multinomial logistic regression

analyses revealed no racial group differences in referrals for medical care, but teachers, administrators and counselors were significantly more likely to refer Black, Pacific Islander, and White youth for emotional reasons in comparison to Asian youth. The finding for White youth must be understood in the context of a very low number of referrals, higher self-reports of depression and school property damage, and lower representation in psychosocial services than Black and Pacific Islander youth. It is noteworthy that the higher likelihood of referring Black and Pacific Islander youth for emotional concerns corresponds with strong effect sizes for these groups' participation in psychosocial interventions. Although Black and Pacific Islander youth report higher rates of externalizing behaviors than Asian youth, my analysis of the student epidemiological data reveals that their risk taking behaviors do not explain their overrepresentation in services. These findings suggest that the high referrals of Black and Pacific Islander youth for emotional concerns may reflect some biased interpretations of subjective student behavior, similar to what has been observed in special education referrals (Coutinho & Oswald, 2000; Gaviria-Soto & Castro-Morera, 2005)

In contrast, teachers, administrators and school counselors were significantly more likely to refer Asian youth for peer or relational concerns than Black or Latino students. This trend is in accordance with Asian students' greater likelihood to participate in prevention services, which tend to be group-oriented and often include a social skills component. It is also consonant with the model minority stereotype and other research that has demonstrated teachers' perceptions of Asian students as shy, timid, and anxious (Chang & Sue, 2003). The only other category in which teachers were more likely to refer Asian youth was for family concerns, though this relationship was not significant after taking into account gender and grade level. This finding was unexpected, but it is consistent with dominant stereotypes of Asian parents as overbearing and demanding, particularly with respect to their children's academic performance (Louie, 2004; Miller, 2011).

Finally, school staff members were more likely to refer Latino and White youth for substance abuse concerns. This is congruent with higher self-reported rates of substance use among these populations, and may explain why White youth are more likely than Asian students to participate in psychosocial interventions through school health programs, as this is a service category that includes drug and alcohol treatment.

Discussion and Alternative Interpretations of the Findings

Consistent with research from other fields and settings, my research reveals that racial group differences in service utilization are most pronounced in psychosocial interventions. This category of services also appears to have the most legitimacy in the school community given the widespread practice of referring youth to school health programs for emotional concerns. The relationship between school staff referral rates and service use for Black, Multiracial and Pacific Islander youth, along with the overrepresentation of these groups in the population of those referred, also suggests a shared belief among members of the school community that these youth are the types of students who have problems that are best solved through counseling and case management. This taken-for-granted notion about who needs mental health services appears to constrain the ability of teachers to accurately identify students experiencing psychosocial distress, for the relationship between referral rates and service use is significant for these groups above and beyond their self-reported risk taking behaviors.

My study design does not allow for a determination of whether referrals to school health programs are valid or biased, but I used theory and research from other fields to help me make

inferences about what these patterns mean. Institutional theory suggests dominant ideas about Black youth as "problems," compared to Asian and White youth, draw the attention of school staff to the behaviors of these students as indicative of psychosocial concerns (Lin & Harris, 2008; Thornton & Ocasio, 2008). Therefore, my interpretation of these findings is that staff members' perceptions of students' social and emotional needs are shaped not only by students' actual behaviors but also by dominant racial stereotypes (Coutinho & Oswald, 2000; Eitle, 2002; Gaviria-Soto & Castro-Morera, 2005; Lau et al., 2004; Skiba et al., 2006; Snowden, 2003). Instead of mental health problems that have origins in students' familial or community contexts, some of the behaviors that school staff find concerning may reflect disengagement with culturally unresponsive teaching, stage-environment fit issues, or conformity to peer pressure in the school climate (Eccles et al., 1993; Tobler et al., 2000; Wilson, Gottfredson, & Najaka, 2001). In these cases, psychosocial interventions that target individual mental health are not the most effective responses, particularly in the context of limited resources (Hoagwood, 2007; Rones & Hoagwood, 2000). Moreover, they may reinforce patterns of labeling Black and brown youth as "deviant" or "misfits" that contribute to stereotype threat and underachievement (Cohen, Garcia, Apfel, & Master, 2006; Lau et al., 2004; Steele, 2010).

I am not suggesting that these referral practices, or the growing provision of mental health services in schools, are intentional attempts to marginalize or label Black and Latino youth. It is much more likely that school staff are looking for support for managing their classrooms and student behavior wherever they can find it (Skiba et al., 2006). Likewise, by enrolling referred youth into services, school health providers are probably trying to be responsive to the demands of stakeholders and use their program's resources to support students who are feeling disconnected from school. Instead, I am arguing that these processes can be insidious, and must be understood in the context of larger racial sorting processes in schools, in spite of the best intentions among school staff to support students. This study suggests that school health providers need to pay greater attention to referral sources and patterns, and may need to employ additional outreach and assessment strategies to better identify youth with unmet health needs.

Alternative Interpretations

In my analyses, I attempted to rule out alternative hypotheses regarding the factors that are associated with racial group differences in use of school health programs by controlling for risk taking behaviors and other demographic covariates. Still, there remain alternative ways to interpret these findings. Rather than being a result of school staff referral practices, one could argue that patterns across categories of services reflect self-selection due to culturally informed preferences. Although psychosocial interventions are stigmatized across all racial groups, negative attitudes towards formal service use and proclivity to rely on friends and family during times of stress may be stronger for Asian American youth and could offer more explanatory power in their case (Kuhl, Jarkon-Horlick, & Morrissey, 1997). Still, it is not clear whether these attitudes are inherently cultural, or have been developed in response to healthcare systems that are not receptive to students', or their families', explanatory frameworks for health and psychosocial problems. If these same attitudes towards interventions for psychosocial problems are observed in students' country of origin, such a finding would provide stronger evidence of the influence of cultural norms on help-seeking.

In the American context, ethnic-specific mental health centers that are staffed largely by professionals who share API students' backgrounds and speak the same languages appear to increase service use, reduce treatment drop-out and lead to better clinical outcomes, even after

controlling for socioeconomic status and psychosocial functioning at admission (Yeh, Eastman et al., 1994; Yeh, Takeuchi et al., 1994). Shared cultural background between students and providers may reshape the relations between Asian American youth and service systems, and the attitudes adolescents have towards formal help-seeking. In other words, even if Asian students' participation in prevention services reflects some cultural preferences, service systems may still need to adapt in order to ensure they reach students with unmet health needs.

It is also possible that these patterns are related to larger sorting processes by race in school, but that referral practices are a direct response to these patterns, rather than a mechanical reproduction of them. Given the historical failure to engage Black and Latino students in formal education systems – school staff referral practices may reflect a mindful attempt to connect youth to additional resources that can help them cope with the mistreatment and stress they often experience in school (Ferguson, 2001; Solorzano, 2001; Weinstein, 2002). It may also be that teachers recognize that Asian students, who tend to experience higher academic achievement than their peers of other racial and ethnic backgrounds in Metro, have other spaces in their schools – such as the classroom – where they can ask a caring adult for advice about health and personal matters. In contrast, youth of other backgrounds, particularly those perceived as "problem" students, may feel less connected to their teachers and therefore more often need to rely on their school health program staff for support (Kao & Thompson, 2003; Ozer, Price Wolf, & Kong, 2008). Likewise, although research indicates psychosocial interventions are stigmatized and can lead to labeling, students may not internalize these labels, and even if they do, the benefits of service use may be greater than any harm to students' identities. Yet even if all this is true, it seems a more effective strategy would be to change the conditions of racial mistreatment in schools, and reduce the stigma associated with services, rather than improve these students' ability to cope with inequality or labeling.

Finally, one could argue that the measure of risk behavior employed in this study is not sufficiently robust and that a more comprehensive measure of epidemiologically defined need would explain these patterns of service use by race. In particular, this study did not account for individual-level exposure to trauma that may lead school staff members to refer students to services before they engage in any risk taking behaviors. In other words, school staff members may be referring students for psychosocial interventions in a preventive manner, to support youth experiencing stressful life events before they have a negative consequence on their emotional and physical well-being (Burns et al., 1995). It was not possible to explore this hypothesis using the quantitative referral data I used in this study, but future analyses that incorporate more fine-grained referral reasons could address this issue.

Ultimately, all of these hypotheses seem plausible in light of both theory and empirical research. Instead of viewing them as competing, they are likely overlapping processes, as is the case with many social problems related to race. The purpose of this research was not to demonstrate that referrals by school staff are the only relevant mechanism driving racial patterns of participation in school health programs. Nor do I want readers infer from this study that mental health services in schools are "bad" for youth of color; in the majority of cases, counseling and case management are helpful strategies to support students experiencing emotional distress and/or stressful life events. As was evident in the literature, there are multiple factors, at multiple levels, that contribute to racial group differences in help-seeking and service utilization. Even without bias in the referral process, we would likely observe racial group differences in service utilization, though perhaps less pronounced. My intention is to highlight the potential role these practices have in this phenomenon and demonstrate that this topic

warrants further investigation on the part of researchers and practitioners. In short, the major contribution of this study is to illustrate the need to pay more attention to school staff referral practices, and the broader institutional context of schooling, when designing and evaluating school health programs, and other services offered in school settings.

Implications for Social Work Policy and Practice

The tremendous growth of school health programs in recent years presents a real opportunity to use existing resources to improve students' developmental outcomes. In many cases, these programs provide critical support for young people growing up in challenging environments with limited access to high quality healthcare. For many youth, participation in these programs leads to stronger connections to caring adults, reduced risk taking behaviors, improved school attendance, reduced risk of drop out, and fewer disciplinary infractions (Kerns et al., 2011; Walker, 2009; Whitaker, 2012). However, like any valuable resource, it is critical that the public good of healthcare be distributed equitably in schools and not be misappropriated for unintended purposes, as has often been the case with support services in schools (Tyack, 1992). In the end, this study does not undermine the great value of these programs to the individual students served. Instead, this research suggests that the practice of identifying youth through referrals may need to be refined in order to a) achieve the aims of reaching students with the greatest unmet health needs, and b) limit the influence of racial sorting mechanisms at work in schools that allow issues of cultural mismatch and engagement to continue unaddressed.

Although moving health and psychosocial programs into schools removes structural barriers for underserved youth, this study indicates that improving Asian adolescents' access to care requires more than eliminating barriers of cost, transportation or inconvenience. One possible strategy to improve utilization among underrepresented groups whose health needs are not being met is to tailor services and outreach messages so that they emphasize universality, rather than selectiveness. For example, in marketing materials and presentations to the school community, providers may want to highlight any prevention programs offered through the school health program (support/empowerment groups, health education, recreational or leadership activities). This may change students' (and school staff members') perceptions of what it means to need services. Increasing the provision of prevention or strengths-based programs and co-locating them with more indicated and stigmatized services may also lead to increased service utilization on the part of previously underserved youth. Prevention programs are less stigmatizing than formal psychosocial interventions and could weaken the association between service use and negative student attributes. Particularly in the absence of referrals, universal and strengths-based programs may also encourage young peoples' independent and voluntary help-seeking. Prevention-oriented services create opportunities for youth and practitioners to build relationships and trust, which may help students overcome their discomfort with psychosocial interventions and provide some assurance that sensitive information shared with these adults will be kept confidential (Grossman & Bulle, 2006). In the pilot study for this dissertation, Asian youth reported that prevention programs that allow for relationship building between youth and school health program staff helped them overcome help-seeking barriers and increased their willingness to receive psychosocial interventions (Anyon, 2010). This finding is supported by research regarding the important role of "gateway" providers in behavioral health service utilization (Power et al., 2005; Stiffman, Pescosolido, & Cabassa, 2004).

More generally, given the better representation of Asian youth in prevention-oriented services, it may be beneficial to embed mental health providers and approaches within these

prevention programs, so that youth could access their support without officially enrolling in individual therapy. However, this recommendation draws attention to a gap in policy and financing for school health programs. Currently, sustainable sources of funding exist at the state and federal level for mental health and medical services targeting low-income adolescents (e.g. Early and Periodic Screening, Diagnosis, and Treatment through Medicaid and the Mental Health Services Act/Proposition 63 in California) (Brindis et al., 2003; Slade, 2003). This is not true in the case of prevention programs (Greenberg, 2003; Roth & Brooks-Gunn, 2003). As a result, school health programs are largely staffed by clinicians who are funded to provide intervention-oriented services to individual youth (The Center for Health and Health Care in Schools, 2003). New legislation or an addendum to the recently passed health care reform bill to provide support for prevention-oriented services that promote adolescent well-being is needed.

If school health programs continue to primarily use referrals to identify students with unmet health needs, school staff may need additional training to appropriately refer students for psychosocial interventions. School health programs may also need to use additional assessments to determine whether individual counseling and case management is the most appropriate form of care, and if there are other dynamics in the school that need to be addressed in order to reduce students' risk taking behaviors. To address some students' behavior, particularly substance use and externalizing behaviors, school-based health providers may need to increase their use of ecological interventions that target school and classroom environments, not just individual students (Hahn et al., 2007; Wilson et al., 2007). School staff and school health providers would benefit from professional development to better understand the instructional and cultural sources of students' behavior problems and strategies for how to respond. Research indicates that reducing mental health problems will lead to improved academic outcomes only if students have access to "effective instructional techniques," or if individual services are coupled with interventions that also target the school and classroom (Hoagwood, 2007, p. 88). Students would therefore likely benefit from greater efforts on the part of school-based health professionals to work collaboratively with school staff members and improve their capacity to engage students, respond to their behavior, and keep them in the classroom.

This call for greater use of ecological interventions that involve collaboration between school health providers and school staff requires a shift away from the current emphasis on providing individual health and psychosocial services through school health programs. The dominant model of support services is designed to "fix" the small minority of kids who are "broken." (Frey & Dupper, 2005) The vast majority of mental health programs in schools target individual youth referred for services, rather than broader school climate concerns or challenging classroom dynamics (Foster et al., 2005; Frey & Dupper, 2005; Ringeisen, Henderson, & Hoagwood, 2003). Yet instruction and school climate matter tremendously for students' health outcomes (Eccles et al., 1993; Fletcher et al., 2008; Hoagwood, 2007). For example, students with teachers who foster social connectedness and care are less likely to experience emotional distress, use alcohol and drugs, or engage in violent behavior (McNeely, Nonnemaker, & Blum, 2002). The nature of school experiences – both in and outside the classroom - shape youths' intellectual, social and emotional outcomes. This research suggests that when interventions are targeted at the problems of individual youth, their impact will be limited if the cultural and developmental mismatches between schools and students that contribute to the psychological and academic challenges of adolescents are not also addressed (Deschenes, Cuban, & Tyack, 2001; Eccles et al., 1993). For in the same way that schools and support services influence students' development of core capacities, they also influence each other. A negative climate itself creates

problems for students, and is likely to undermine the effectiveness of support services (Fletcher, Bonell, & Hargreaves, 2008; Grubb, 2009; Hoagwood, 2007). Similarly, unmotivating instruction undermines students' commitment to schooling, making it that much harder to "fix" the behavior of students (National Research Council, 2004).

Therefore, broader school reform initiatives and efforts to expand services in schools are inherently interconnected; these efforts must be integrated to be successful (Payne, 2008; Ringeisen, Henderson, & Hoagwood, 2003). In short, adding a variety of support services to existing schools may be a necessary condition to promote student success, but it is certainly not sufficient, particularly if a school's climate and instruction themselves exacerbate the problems students experience. So rather than viewing students' health, emotional and social needs as the responsibility of service providers and their academic needs as the responsibility of teachers, it is more appropriate to view such competencies as the responsibility of all adults working within a school. What is necessary is a "both-and" solution: both reforming the school and providing support services on-site (Grubb & Anyon, 2010). In this way, the findings from my dissertation support the call for more expansive notions of culturally responsive services that look beyond the skills and interventions employed by individual clinicians to the larger systems and contexts within which health providers operate (Sue, 2006).

Limitations

Findings from this study are only generalizable to other comprehensive school-based health and psychosocial service programs that are similarly designed, serving a comparable population of students in an urban setting. Given the limited number of schools participating in this study, the results presented on school effects in this dissertation must be interpreted with caution. Further investigation of these patterns using a larger sample of schools and districts, with measures of multiple contextual influences (cultural, social, structural and organizational) would further knowledge development substantially. Furthermore, as with all cross-sectional studies, it was not possible to draw causal connections between the variables of interest. This study was exploratory and only intended to highlight the association between referral practices and racial group differences in service utilization. As an exploratory study, I could not determine whether referral practices directly contribute to racial disproportionalities in service use. Instead, my analyses reveal that some relationships between variables are stronger than others, suggesting promising avenues for future inquiry and intervention.

The limited number of covariates available in all the datasets utilized also weakens the validity of the findings from this study. Datasets A, B and C did not include several important variables that have empirically and theoretically been linked to the prevalence of health and psychosocial problems among adolescents, along with their help seeking trajectories. For example, I was not able to account for family socioeconomic status, individual exposure to violence or trauma, acculturation, availability and use of services outside of school, insurance status, acculturation, or immigrant status. Without these covariates, I was limited in my ability to conclusively rule out "need" as an explanation for patterns of service use by race.

Similarly, I could not use controls to rule out a spurious relationship between school-level referral rates and students' service utilization because of the small sample size of schools included in this analysis. As a result, I could not disentangle the effect of referral rates from other school-level factors, such as the racial composition of the school. In reality, these factors are interconnected in the processes leading to service use in school; as the proportion of Black, Latino, PI and Multiracial youth increase in the school population, so do referral rates (for

teachers are more likely to refer students from these groups). A larger number of schools in the sample would allow for an investigation of whether referral rates and racial composition independently contribute to students' service use. Even more ideal would be to have a dataset in which referrals could be linked directly to information about individual students, their self-reported risk behavior, and school health service use.

It also would have been preferable to have referral records from more school sites. The small number of schools substantially limits the inferences that might be drawn about referral practices. In addition, the variable for referral reason did not include several types of student behavior that have been empirically linked to service use in schools, most notably academic performance indicators like declining grades. The broad categories of referral reasons available quantitatively did not allow for a comparison between externalizing and internalizing behaviors. For example, a referral for an "emotional concern" could be in response to an unruly student or one who appears withdrawn and morose. Future research should employ qualitative approaches and include an analysis of school staff members' narrative referral reasons to generate a broader set of referral variables.

Future Research

Replications of this study with a wider range of student-level demographic covariates (particularly SES and exposure to trauma) and a larger sample of schools that vary on key dimensions would advance our understanding of the role of referrals in racial disproportionalities in school-based service use. Linking such a dataset to individual referral records would allow an investigator to rule out many of the alternative interpretations outlined above. It would be particularly interesting to compare schools that differ by the racial and class composition of both students and staff members to determine whether teachers make similar assessments of student behavior in monolithic, highly segregated schools, where they do not have direct comparisons to other racial groups. Institutional theorists posit that individual perceptions of human behavior are influenced by dominant societal norms and messages, suggesting that racial biases can operate in a school without a comparison group present, but this is an empirical question. In other words, if the student population of a school is overwhelmingly Black, are school staff members' perceptions of student behavior still influenced by dominant racial stereotypes? Are these biases racialized even in monolithic racial contexts, do they disappear, or become gendered or class-based? These are questions that can only be answered with additional qualitative inquiry and a multivariate analysis of school effects using a much larger sample of schools.

Future analyses of referral form data would be strengthened by additional information about the students referred and the individuals making a referral. This would allow for a consideration of whether and how these practices depend on the behaviors of students and the characteristics of school staff members. In the case of disproportionalities in special education, some have hypothesized that referrals from teachers of color are less biased (Eitle, 2002). Empirical research is needed that considers whether referral practices vary by the racial background of school staff and other factors, such as their length of service or professional training. Regarding data collected at the student level, adding measures of multiple contextual influences, including their access to care outside of school and cultural norms around help seeking, would also help illuminate which factors make a meaningful contribution to patterns of service utilization in educational settings.

Finally, in terms of advancing theory, of particular relevance to future research in this area would be to document and contrast competing logics in the field of school health programs.

Throughout this manuscript, I demonstrate that the logic of problem reduction through psychosocial interventions has greatest legitimacy in these schools, and that Black and Latino youth are understood as the target population for these interventions. This finding is consistent with the dominant logics about who is "at risk" in schools and which racial groups have problems that warrant intervention in educational settings (Lamont & Small, 2008; O'Connor et al., 2009). However, there is a need to for more research that would empirically establish other institutional logics in the field of school health and whether any new logics are emerging that could lead to a shift prevailing paradigms (Scott et al., 2000; Thornton & Ocasio, 2008). For example, the logic of problem reduction has traditionally informed the medical model of health and psychosocial services for youth, which assumes there is a relatively small group of young people who face problems that are best fixed through selective, individually-focused medical and psychological therapies. In contrast, the a different logic of problem prevention is guided by a public health model of support services that assumes many more youth are in need of support because they face a host of biological and environmental risks to their healthy development. These risks are to be combated through universal interventions at multiple levels (e.g., family, school, community). Finally, the logic of strengths promotion has emerged in recent years, which assumes that all youth have assets and competencies that should be enhanced and engaged to promote their development and the improvement of their schools and communities (Blank et al., 2003; Connell, Gambone, & Smith, 2000; Greenberg et al., 2003; Pittman, Irby, Tolman, Yohalem, & Ferber, 2003)

Future research in this area could follow the model of other empirical studies of institutional logics and trace their evolution by conducting content analysis of popular newspapers, school-based youth services journals (e.g., The Journal of School Health, Children and Schools), reports by relevant professional associations and state agencies (e.g., Association of School Health Centers, Department of Education – Coordinated School Health), and key pieces of legislation (e.g., Federal Safe Schools-Healthy Students Initiative) (Russell, 2008a; Scott et al., 2000). Then, to more formally assess the predominance of particular logics at individual school sites, future research should also include content analysis of relevant materials (e.g. outreach documents, administrative statements, and referral forms) from school health programs. For example, researchers could request a sample of outreach documents from school-based providers that provide evidence of their efforts to increase awareness of services amongst students and staff at their school. These archival documents could be supplemented with interviews, observations of outreach presentations, and materials gathered by the investigator during site visits to participating schools throughout the school year. The researcher could then code these data sources and assess the degree to which outreach messages, referral forms, and services provided at particular schools reflect the logics of problem reduction, problem prevention, or strengths promotion. One could also consider how this varies by the racial composition of students and school staff.

References

Amaral, G., Geierstanger, S., Soleimanpour, S., & Brindis, C. (2011). Mental health characteristics and health-seeking behaviors of adolescent school-based health center users and nonusers. *Journal of School Health, 81*.

Anagnostopoulos, D. (2003). The new accountability, student failure, and teachers' work in urban high schools. *Educational Policy, 17*, 291-316.

Anagnostopoulos, D., & Rutledge, S. (2007). Making sense of school sanctioning policies in urban high schools. *Teachers College Record, 109*, 1261-1302.

Anderman, E. M. (2002). School effects on psychological outcomes during adolescence. *Journal of Educational Psychology, 94*, 795-809.

Andersen, R. M., & Davidson, P. L. (2001). Improving access to care in America: Individual and contextual Indicators. In R. Andersen, T. H. Rice & G. F. Kominski (Eds.), *Changing the U.S. health care system: Key issues in health services policy* (pp. 3-32). San Francisco, CA: John Wiley & Sons, Inc.

Anyon, Y. (2010). Help-seeking in context: Chinese American students' use of school-based health and psychosocial services [Electronic Version]. *ISSC Fellows Working Papers* from http://escholarship.org/uc/item/4724v9b0.

Barton, L., & Tomlinson, S. (1981). *Special Education: Policy, Practices and Social Issues*. London: Harper and Row.

Becker, B. E., & Luthar, S. S. (2002). Social-emotional factors affecting achievement outcomes among disadvantaged students: Closing the achievement gap. *Educational Psychologist, 37*, 197 — 214.

Blank, M. J., Quinn, J., & Kim, H. (2003). The community schools approach: Improving student learning, strengthening families and communities In M. D. Weist, S. Evans & N. Lever (Eds.), *Handbook of school mental health: Advancing practice and research* (pp. 119-133). New York: Springer Science and Business Media.

Boldero, J., & Fallon, B. (1995). Adolescent help-seeking: What do they get help for and from whom? *Journal of Adolescence, 18*, 193–209.

Bourdieu, P. (1977). *Outline of a theory of practice*. Cambridge, England: Cambridge University Press.

Bourdieu, P., & Passeron, J. C. (1990). *Reproduction in education, society and culture* (2nd ed.). London: Sage.

Brindis, C. D., Klein, J., Schlitt, J., Santelli, J., Juszczak, D. N., & Nystrom, R. J. (2003). School-based health centers: Accessibility and accountability. *Journal of Adolescent Health, 32*, 98–107.

Bui, K., & Takeuchi, D. (1992). Ethnic minority adolescents and the use of community mental health care services. *American Journal of Community Psychology, 20*, 403-417.

Bullock, H. E. (2008). Justifying inequality: A social psychological analysis of beliefs about poverty and the poor. In A. C. Lin & D. Harris (Eds.), *The colors of poverty* (pp. 52-75). New York: Russell Sage.

Burch, P. (2007). Educational policy and practice from the perspective of institutional theory: Crafting a wider lens. *Educational Researcher, 36*, 84-95.

Burns, B. J., Costello, E. J., Angold, A., Tweed, D., Stangl, D., Farmer, E. M. Z., et al. (1995). DataWatch: Children's mental health service use across service sectors. *Health Affairs, 14*, 147–159.

Burns, B. J., Costello, E. J., Erkanli, A., Tweed, D., Farmer, E. M. Z., & Angold, A. (1997). Insurance coverage and mental health service use by adolescents with serious emotional disturbance. *Journal of Child and Family Studies, 6*, 89-111.

Carrier, J. G. (1983). Masking the social in educational knowledge: The case of learning disability theory. *American Journal of Sociology, 88*, 948-974.

Carrier, J. G. (1986). *Learning disability: Social class and the construction of inequality in American education*. Westport, CT: Greenwood Press, Inc.

Cauce, A. M., Domenech-Rodriguez, M., Paradise, M., Chochran, B. N., Shea, J. M., Srebnik, D., et al. (2002). Cultural and contextual influences in mental health help seeking: A focus on ethnic minority youth. *Journal of Consulting and Clinical Psychology, 70*, 44-55.

Centers for Disease Control and Prevention. (2004). Methodology of the Youth Risk Behavior Surveillance System. *Morbidity and Mortality Weekly Report, 53*.

Chandra, A., & Minkovitz, C. S. (2007). Factors that influence mental health stigma among 8th grade adolescents. *Journal of Youth and Adolescence, 36*.

Chang, D. F., & Sue, S. (2003). The effects of race and problem type on teachers' assessments of student behavior. *Journal of Consulting and Clinical Psychology, 71*, 235–242.

Chang, L., Morrissey, R. F., & Koplewicz, H. S. (1995). Prevalence of psychiatric symptoms and their relation to adjustment among Chinese-American youth. *Journal of the American Academy of Child & Adolescent Psychiatry, 34*, 91-99.

Choi, Y., & Lahey, B. B. (2006). Testing the model minority stereotype: Youth behaviors across racial and ethnic groups. *Social Service Review, 80*, 419-452.

Cocozza, J. J., & Skowyra, K. (2000). Youth with mental health disorders: Issues and emerging responses [Electronic Version]. *Juvenile Justice Journal*, 7. Retrieved December 18, 2009 from http://www.ncjrs.gov/html/ojjdp/jjjnl_2000_4/youth.html.

Cohen, G. L., Garcia, J., Apfel, N., & Master, A. (2006). Reducing the racial achievement gap: A social-psychological intervention. *Science, 313*, 1307-1310.

Cohen, P., & Hesselbart, C. (1993). Demographic factors in the use of children's mental health services. *American Journal of Public Health, 83*, 4952.

Colyvas, J., & Powell, W. (2006). Roads to institutionalization. *Research in Organizational Behavior, 21*, 305-353.

Connell, J. P., Gambone, M. A., & Smith, T. J. (2000). Youth development in community settings: Challenges to our field and our approach. In *Youth development: Issues, challenges, and directions*. Philadelphia, PA: Public/Private Ventures.

Copeland, E. P., & Hess, R. S. (1995). Differences in young adolescents' coping strategies based on ethnicity and gender. *Journal of Early Adolescence, 15*, 203–219.

Copeland, W. E., Miller-Johnson, S., Keeler, G., Angold, A., & Costello, E. J. (2007). Childhood psychiatric disorders and young adult crime: A prospective, population-based study. *The American Journal of Psychiatry, 164*, 1668–1675.

Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist, 59*, 614-625.

Costello, E. J., Egger, H., & Angold, A. (2005). 10-year research update review: The epidemiology of child and adolescent psychiatric disorders: I. Methods and public health burden. *Journal of the American Academy of Child & Adolescent Psychiatry, 44*.

Costello, E. J., & Janiszewski, S. (1990). Who gets treated? Factors associated with referral in children with psychiatric disorder. *Acta Psychiatrica Scandinavica, 81*, 523-529.

Costello, E. J., Mustillo, S., Erkanli, A., Keeler, G., & Angold, A. (2003). Prevalence and development of psychiatric disorders in childhood and adolescence. *Archives of General Psychiatry, 60*, 837-844.

Coutinho, M. J., & Oswald, D. P. (2000). Disproportionate representation in special education: a synthesis and recommendations. *Journal of Child and Family Studies, 9*, 135-156.

Cuffe, S. P., Waller, J. L., Addy, C. L., McKeown, R. E., Jackson, K. L., Moloo, J., et al. (2001). A longitudinal study of adolescent mental health service use. *Journal of Behavioral Health Services & Research, 28*, 1-11.

Currie, J. (2005). Health disparities and gaps in school readiness. *The Future of Children, 15*, 117-138.

Denzin, N. K. (1978). *The research act: A theoretical introduction to sociological methods*. New York: Praeger.

Deschenes, S., Cuban, L., & Tyack, D. (2001). Mismatch: Historical perspectives on schools and students who don't fit them. *Teachers College Record, 103*, 525-547.

DiMaggio, P., & Powell, W. (1991). Introduction. In W. W. Powell & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis* (pp. 1-37). Chicago: University of Chicago Press.

Downey, D. B., & Pribesh, S. (2004). When race matters: Teachers' evaluations of students' classroom behavior. *Sociology of Education, 77*, 267–282.

Dryfoos, J. (1991). School-based social and health services for at-risk students. *Urban Education, 26*, 118-137.

Dudley-Marling, C. (2004). The Social Construction of Learning Disabilities. *Journal of Learning Disabilities.Special Issue: The Discursive Practice of Learning Disability, 37*, 482-489.

Dudley-Marling, C., & Dippo, D. (1995). What learning disability does: Sustaining the ideology of schooling. *Journal of Learning Disabilities, 28*, 408-414.

Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., et al. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. *American Psychologist, 48*, 90-101.

Eccles, J. S., & Roeser, R. W. (1999). *School and community influences on human development*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Eitle, T. M. (2002). Special Education or Racial Segregation: Understanding Variation in the Representation of Black Students in Educable Mentally Handicapped Programs. *The Sociological Quarterly, 43*, 576-605.

Elster, A., Jarosik, J., VanGeest, J., & Fleming, M. (2003). Racial and ethnic disparities in health care for adolescents: A systematic review of the literature. *Archives of Pediatrics and Adolescent Medicine, 154*, 867-874.

Ferguson, A. (2001). *Bad boys: Public schools in the making of black masculinity*. Ann Arbor: University of Michigan Press.

Feuer, M. J., Towne, L., & Shavelson, R. J. (2002). Scientific culture and educational research. *Educational Researcher, 31*, 4-14.

Foster, S., Rollefson, M., Doksum, T., Noonan, D., Robinson, G., & Teich, J. (2005). *School mental health services in the United States, 2002–2003* (No. DHHS Pub. No. (SMA) 05-4068.). Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration.

Foucault, M. (2001). *Madness and civilization: A history of insanity in the age of reason*. New York: Routledge.

Frey, A., & Dupper, D. R. (2005). A broader conceptual approach to clinical practice for the 21st century. *Children and Schools, 27*, 33-44.

Friedland, R., & Alford, R. R. (1991). Bringing society back in: Symbols, practices and institutional contradictions. In W. W. Powell & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis* (pp. 164-183). Chicago: University of Chicago Press.

Garland, A. F., Lau, A. S., Yeh, M., McCabe, K. M., Hough, R. L., & Landsverk, J. A. (2005). Racial and ethnic differences in utilization of mental health services among high-risk youths. *American Journal of Psychiatry, 162*, 1336-1336.

Gaviria-Soto, J. L., & Castro-Morera, M. (2005). Beyond over-representation: the problem of bias in the inclusion of minority group students in special education programs. *Quality & quantity, 39*, 537-558.

Gilbert, N., & Terrell, P. (2004). *Dimensions of social welfare policy* (6 ed.). Boston, MA: Allyn and Bacon.

Glied, S., Hoven, C. W., Moore, R. E., Garret, A. B., & Regier, D. A. (1997). Children's access to mental health care: Does insurance matter? *Health Affairs, 16*, 167-174.

Goldston, D. B., Molock, S. D., Whitbeck, L. B., Murakami, J. L., Zayas, L. H., & Hall, G. C. N. (2008). Cultural considerations in adolescent suicide prevention and psychosocial treatment. *American Psychologist, 63*, 14-31.

Gordon, R., Della Piana, L., & Keleher, T. (2000). *Facing the consequences: An examination of racial discrimination in U.S. public schools.* . Oakland, CA: Applied Research Center.

Greenberg, M. T., Weissberg, R. P., O'Brien M.U., Zins, J. E., Fredericks L., Resnik, H., et al. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional and academic learning. *American Psychologist, 58*, 466-474.

Greenberg, M. T., Weissberg, R.P., O'Brien M.U., Zins, J.E., Fredericks L., Resnik, H., & Elias, M.J. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional and academic learning. *American Psychologist, 58*, 466-474.

Griner, D., & Smith, T. B. (2006). Culturally adapted mental health interventions: A meta-analytic review. *Psychotherapy: Theory, Research, Practice, Training, 43*, 531-548.

Grossman, J. B., & Bulle, M. J. (2006). Review of what youth programs do to increase the connectedness of youth with adults. *Journal of Adolescent Health, 39*, 788-799.

Grubb, N. W., & Anyon, Y. (2010). *Rethinking comprehensive student supports*. Princeton, NJ: Woodrow Wilson National Fellowship Foundation, Early College High School Initiative.

Grunbaum, J., Lowry, R., Kann, L., & Patement, B. (2000). Prevalence of health risk behaviors among Asian American/Pacific Islander high school students. *Journal of Adolescent Health, 27*, 322-330.

Gudino, O. G., Lau, A. S., Yeh, M., McCabe, K. M., & Hough, R. L. (2009). Understanding racial/ethnic disparities in youth mental health services: Do disparities vary by problem type? *Journal of Emotional and Behavioral Disorders, 17*, 3-16.

Hanson, M. (2001). Institutional theory and educational change. *Educational Administration Quarterly, 37*, 637-661.

Harker, R. K. (1984). On reproduction, habitus and education. *British Journal of Sociology of Education, 5*, 117-127.

Ho, J., Yeh, M., McCabe, K., & Hough, R. L. (2007). Parental cultural affiliation and youth mental health service use. *Journal of Youth and Adolescence, 36*, 529-542.

Hoagwood, K. E., Olin, S.S., Kerker, B.D., Kratochwill, T.R., Crowe M., Saka, N. (2007). Empirically based school interventions targeted at academic and mental health functioning. *Journal of Emotional and Behavioral Disorders, 15*, 66.

Holland, D., & Lave, J. (Eds.). (2001). *History in person: Enduring struggles, contentious practice, intimate identities*. Santa Fe: School of American Research Press.

Holmes, D., Murray, S. J., Perron, A., & Rail, G. (2006). Deconstructing the evidence-based discourse in health sciences: truth, power and fascism. *International Journal of Evidence Based Healthcare, 4*, 180–186.

Huang, Z. J., Yu, S., & Ledsky, R. (2006). Health status and health service access and use among children in U.S. immigrant families. *American Journal of Public Health, 96*, 634-640.

Iezzoni, L. I. (1997). Assessing quality using administrative data. *Annals of Internal Medicine, 127*, 666-674.

Jewell, N. P. (2004). *Statistics for epidemiology*. Boca Raton, Florida: Chapman & Hall/CRC.

Johnson-Reid, M., Kontak, D., Citerman, B., Essma, A., & Fezzi, N. (2004). School social work case characteristics, services and dispositions: Year one results. *Children and Schools, 26*.

Jonson-Reid, M., Kontak, D., Citerman, B., Essma, A., & Fezzi, N. (2004). School social work case characteristics, services, and dispositions: Year one result. *Children & Schools, 26*, 5-22.

Kao, G., & Thompson, J. S. (2003). Racial and ethnic stratification in educational achievement and attainment. *Annual Review of Sociology, 29*, 417-442.

Kataoka, S. H., Zhang, L., & Wells, K. B. (2002). Unmet need for mental health care among U.S. children: Variation by ethnicity and insurance status. *The American Journal of Psychiatry, 159*, 1548-1555.

Kerns, S. E., Pullman, M. D., Walker, S. C., Lyon, A. R., Cosgrove, T. J., & Bruns, E. J. (2011). Adolescent use of school-based health centers and high school dropout. *Archives of Pediatrics and Adolescent Medicine*.

Kessler, R. C., Berglund, P., & Demler, O. (2005). Lifetime prevalence and age-of onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 593-602.

Kitano, M. K., & DiJiosia, M. (2002). Are Asian and Pacific Americans overrepresented in programs for the gifted? *Roeper Review, 24*, 76-80.

Kodjo, C., & Auinger, P. (2003). Racial/ethnic differences in emotionally distressed adolescents receiving mental health care. *Journal of Adolescent Health, 32*, 132-133.

Kuhl, J., Jarkon-Horlick, L., & Morrissey, R. F. (1997). Measuring barriers to help-seeking behavior in adolescents. *Journal of Youth and Adolescence, 26*, 637-650.

Lamont, M., & Small, M. S. (2008). How culture matters: Enriching our understanding of poverty. In A. C. Lin & D. Harris (Eds.), *The colors of poverty* (pp. 76-102). New York: Russell Sage.

Lau, A. S., Garland, A. F., Yeh, M., McCabe, K. M., Wood, P. M., & Hough, R. L. (2004). Race/ethnicity and inter-informant agreement in assessing adolescent psychopathology. *Journal of Emotional & Behavioral Disorders, 12*, 145–156.

Lau, R. W. K. (2004). Habitus and the practical logic of practice: An interpretation. *Sociology, 38*, 369–387.

Leaf, P. J., Alegria, M., Cohen, P., Goodman, S. H., Horwitz, S. M., Hoven, C. W., et al. (1996). Mental health service use in the community and schools: Results from the four-community MECA study. *Journal of the American Academy of Child & Adolescent Psychiatry, 35*, 889-897.

Lee, V. E. (2000). Using hierarchical linear modeling to study social contexts: The case of school effects. *Educational Psychologist, 35*, 125-141.

Leong, F. T. L., & Lau, A. S. L. (2001). Barriers to providing effective mental health services to Asian Americans. *Mental Health Services Research, 3*, 201-201.

Leventhal, T., & Brooks-Gunn, J. (2000). The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin, 126*, 309-337.

Lewis, C. W., James, M., Hancock, S., & Hill-Jackson, V. (2008). Framing African American students' success and failure in urban settings: A typology for change. *Urban Education 43*, 127-153.

Lin, A. C., & Harris, D. (2008). *The colors of poverty*. New York: Russell Sage.

Louie, V. (2004). *Compelled to excel: Immigration, education and opportunity among Chinese Americans*. Stanford, CA: Stanford University Press.

Luke, D. A. (2004). *Multilevel modeling*. Thousand Oaks, CA: Sage Publications.

Mathison, S. (1988). Why triangulate? *Educational Researcher, 12*, 13-17.

McCabe, K., Yeh, M., Hough, R. L., Landsverk, J., Hurlburt, M. S., Culver, S. W., et al. (1999). Racial/ethnic variation across five public systems of care for youth. *Journal of Emotional and Behavioral Disorders, 7*, 72-82.

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology, 83*, 340-365.

Miller, L. (2011). Tough love, from a Chinese mother. *Newsweek, 57,* 49.

Mills, C. (2008). Reproduction and transformation of inequalities in schooling: The transformative potential of the theoretical constructs of Bourdieu. *British Journal of Sociology of Education, 29*, 79-89.

Morris, E. W. (2005). 'Tuck in that shirt!' Race, class, gender and discipline in an urban school. *Sociological Perspectives, 48*, 25-48.

Mudimbe, V. Y. (1993). Reading and teaching Pierre Bourdieu. *Transition, 61*, 144-160.

Mulye, T. P., Park, J., Nelson, C. D., Adams, S. H., Irwin, C. E., & Brindis, C. D. (2009). Trends in adolescent and young adult health in the United States. *Journal of Adolescent Health, 45*.

National Research Council. (2004). *Engaging schools: Fostering high school students motivation to learn*. Washington, DC: The National Academies Press.

Neal, L. V., McCray, A. D., Webb-Johnson, G., & Bridgest, S. T. (2003). The effects of African American movement styles on teachers' perceptions and reactions. *Journal of Special Education, 37*, 49-57.

O'Conner, C., & Fernandez, S. D. (2006). Race, class and disproportionality: Reevaluating the relationship between poverty and special education placement. *Educational Researcher, 35*, 6-11.

O'Connor, C., Hill, L. D., & Robinson, S. R. (2009). Who's at risk in school and what's race got to do with it? *Review of Research in Education, 33*, 1-34.

Ozer, E. J., Price Wolf, J., & Kong, C. (2008). Sources of perceived school connection among ethnically-diverse urban adolescents. *Journal of Adolescent Research, 23*, 438-470.

Pager, D. (2008). The dynamics of discrimination. In A. C. Lin & D. Harris (Eds.), *The colors of poverty* (pp. 21-51). New York: Russell Sage.

Pascoe, E. A., & Smart Richman, L. (2009). Perceived discrimination and health: A meta-analytic review. *Psychological Bulletin, 135*, 531-554.

Pearcy, M. T., Clopton, J. R., & Pope, A. W. (1993). Influences on teacher referral of children to mental health services: Gender, severity, and internalizing versus externalizing problems. *Journal of Emotional and Behavioral Disorders, 1*, 165-169.

Pescosolido, B. (1992). Beyond rational choice: The social dynamics of how people seek help. *The American Journal of Sociology, 97*, 1096-1138.

Pescosolido, B., Brooks-Gardner, C., & Lubetl, K. (1998). How people get into mental health services: stories of choice, coercion, and "muddling through" from "first-timers". *Social Science and Medicine, 46*, 275-286.

Pittman, K. J., Irby, M., Tolman, J., Yohalem, N., & Ferber, T. (2003). *Preventing problems, promoting development, encouraging engagement: Competing priorities or inseparable goals*. Washington, DC: The Forum for Youth Investment, Impact Strategies, Inc.

Power, T. J., Eiraldi, R. B., Clarke, A. T., Mazzuca, L. B., & Krain, A. L. (2005). Improving mental health service utilization for children and adolescents. *School Psychology Quarterly, 20*, 187-205.

Pumariega, A. J., & Winters, N. C. (2003). Cultural competence in systems of care for children's mental health. In Anonymous (Ed.), *The handbook of child and adolescent systems of care: The new community psychiatry.* (pp. 82-104). San Francisco, CA, US: Jossey-Bass.

Rabe-Hesketh, S., & Skrondal, A. (2008). *Multilevel and longitudinal modeling using Stata* (Vol. Stata Press). College Station, TX.

Raudenbush, S., & Bryk, A. (2002). *Hierarchical linear models* (2 ed.). Thousand Oaks: Sage Publications.

Rickwood, D. J. (1995). The effectiveness of seeking help for coping with personal problems in late adolescence. *Journal of Youth and Adolescence, 24*, 685-703.

Ringeisen, H., Henderson, K., & Hoagwood, K. E. (2003). Context matters: Schools and the "research to practice gap" in children's mental health. *School Psychology Review, 32*, 153-168.

Roberts, R. E., Alegria, M., Roberts, C. R., & Chen, I. G. (2005). Mental health problems of adolescents as reported by their caregivers: a comparison of European, African, and Latino Americans. *Journal of Behavioral Health Services & Research, 32*, 1-13.

Rones, M., & Hoagwood, K. (2000). School-based mental health services: A research review. *Clinical Child and Family Psychology Review, 3*, 223-241.

Roth, J. L., & Brooks-Gunn, J. (2003). Youth development programs: risk, prevention and policy. *Journal of Adolescent Health, 32*, 170-182.

Russell, J. L. (2008a). *From child's garden to academic press: The role of shifting institutional logics in redefining kindergarten education*. Paper presented at the American Educational Research Association.

Russell, J. L. (2008b). *Kindergarten teaching in an era of accountability: How accountability policies shape instruction in an untested grade*. Paper presented at the American Educational Research Association.

Sanders-Phillips, K., Settles-Reaves, B., Walker, D., & Brownlow, J. (2009). Social inequality and racial discrimination: Risk factors for health disparities in children of color. *Pediatrics, 124*, S176-S186.

Schnittker, J. (2004). Social distance in the clinical encounter: Interactional and sociodemographic foundations for mistrust in physicians. *Social Psychology Quarterly, 67*, 217-235.

Scott, W. R. (2001). *Institutions and organizations* (2 ed.). Thousand Oaks: Sage Publications.

Scott, W. R., & Davis, G. F. (2006). *Organizations and organizing: Rational, natural, and open system perspectives*. Upper Saddle River, NJ: Pearson Prentice Hall.

Scott, W. R., Ruef, M., Mendel, P. J., & Caronna, C. A. (2000). The changing institutional environment. In W. R. Scott, M. Ruef, P. J. Mendel & C. A. Caronna (Eds.), *Institutional change and healthcare organizations: From professional dominance to managed care* (pp. 166-235). Chicago: University of Chicago Press.

Skiba, R. J., Michael, R. S., Nardo, A. C., & Peterson, R. L. (2002). The color of discipline: Sources of racial and gender disproportionality in school punishment. *The Urban Review, 317-342*.

Skiba, R. J., Simmons, A., Ritter, S., Kohler, K., Henderson, M., & Wu, T. (2006). The context of minority disproportionality: Practitioner perspectives on special education referral. *Teachers College Record, 108*, 1424-1459.

Skirtic, T. M. (2005). A political economy of learning disabilities. *Learning Disability Quarterly, 28*, 149-155.

Slade, E. P. (2003). The relationship between school characteristics and the availability of mental health and related health services in middle and high schools in the United States. *The Journal of Behavioral Health Services and Research, 30*, 382-392.

Smedley, B. D., Stith, A. Y., & Nelson, A. R. (Eds.). (2002). *Unequal treatment: Confronting racial and ethnic disparities in health care*. Washington, D.C. : National Academy Press.

Snowden, L. R. (2003). Bias in mental health assessment and intervention: Theory and evidence. *American Journal of Public Health, 93*, 239-239.

Soleimanpour, S., Geierstanger, S. P., Kaller, S., McCarter, V., & Brindis, C. D. (2010). The role of school health centers in health care access and client outcomes. *American Journal of Public Health, 100*, 1597-1603.

Solorzano, D. (2001). Critical race theory, racial microaggressions, and the experience of Chicana and Chicano scholars. *Qualitative Inquiry 8*.

Srebnik, D., Cauce, A. M., & Baydar, N. (1996). Help-seeking pathways for children and adolescents. *Journal of Emotional and Behavioral Disorders, 4*, 210-220.

Stanton-Salazar, R. D., Chavez, L. F., & Tai, R. H. (2001). The help-seeking orientations of Latino and non-Latino urban high school students: a critical-sociological investigation. *Social Psychology of Education, 5*, 49-82.

Steele, C. (2010). *Whistling Vivaldi and other clues to how stereotypes affect us*. New York: W. W. Norton & Company.

Stephan, S. H., Wieist, M., Kataoka, S. H., Adelsheim, S., & Mills, C. (2007). Transformation of children's mental health services: The role of school mental health. *Psychiatric Services, 58*, 1330-1338.

Stewart, L. A., & Napoles-Springer, A. M. (2003). Advancing health disparities research: Can we afford to ignore measurement issues? *Medical Care, 41*, 1207-1220.

Stiffman, A. R., Pescosolido, B., & Cabassa, L. J. (2004). Building a model to understand youth service access: The gateway provider model. *Mental Health Services Research, 6*, 189-198.

Sturm, R., Ringel, J., & Andreyeva, T. (2003). Geographic disparities in children's mental health care. *Pediatrics, 111*, 308-315.

Sue, D. W. (1994). Asian-American mental health and help-seeking behavior. *Journal of Counseling Psychology, 41*, 292–295.

Sue, S. (2006). Cultural competency: From philosophy to research and practice. *Journal of Community Psychology, 34*, 237-245.

Sue, S., Sue, D. W., Sue, L., & Takeuchi, D. T. (1995). Psychopathology among Asian Americans: A model minority? *Cultural diversity and mental health, 1*, 39-51.

Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics* New York: Harper Collins.

Takeuchi, D., Bui, K., & Kim, L. (1993). The referral of minority adolescents to community mental health centers. *Journal of Health and Social Behavior, 34*, 153-164.

The Center for Health and Health Care in Schools. (2003). *2002 state survey of school-based health center initiatives*. Washington D.C.: George Washington University, School of Public Health and Health Services.

Thomas-Presswood, T. N., & Presswood, D. (2008). *Meeting the needs of students and families from poverty: A handbook for school and mental health professionals*. Baltimore, MA: Paul H. Brookes Publishing Co.

Thornton, P. H. (1992). Psychiatric diagnosis as sign and symbol: Nomenclature as an organizing and legitimating strategy. *Perspectives on Social Problems, 4*, 155-176.

Thornton, P. H., & Ocasio, W. (2008). Institutional logics. In R. Greenwood, C. Oliver, R. Suddaby & K. Sahlin-Andersson (Eds.), *The SAGE handbook of organizational institutionalism* (pp. 99-129). London: Sage Publications.

Tobler, N. S., Roona, M. R., Ochshorn, P., Marshall, D. G., Streke, A. V., & Stackpole, K. M. (2000). School-based adolescent drug prevention programs: 1998 meta-analysis. *The Journal of Primary Prevention, 20*, 275-336.

Tyack, D. (1992). Health and social services in public schools: Historical perspectives. *Future of Children, 2*, 19-31.

U.S. Department of Health and Human Services. (2001). *Mental health: Culture, race, and ethnicity: A supplement to mental health: A report of the surgeon general*. Rockville, MD: Public Health Service, Office of the Surgeon General.

Wald, M., & Martinez, T. (2003). *Connected by 25: Improving the life chances of the country's most vulnerable 14 – 24 year olds*. Menlo Park, CA: Hewlett Foundation.

Walker, S. C., Kerns, S.E., Lyon, A.R., Bruns, E.J., & Cosgrove, T.J. (2009). Impact of school-based health center use on academic outcomes. *Journal of Adolescent Health.*. 1-7.

Weinick, R. M., & Krauss, N. A. (2000). Racial/ethnic differences in children's access to care. *American Journal of Public Health, 90*, 1771-1774.

Weinstein, R. (2002). Reaching higher: The power of expectations in schooling. In. Cambridge: Harvard University Press.

Whaley, A. L. (2001). Cultural mistrust and mental health services for African Americans: A review and meta-analysis. *The Counseling Psychologist, 29*, 513-531.

Whitaker, K., Stone, S., Anyon, Y., & Shields, J. (2012). *Can school-based health and wellness programs improve youth development assets in the school environment?* Paper presented at the Society for Social Work Research.

72

Williams, D. R., Neighbors, H. W., & Jackson, J. S. (2003). Racial/ethnic discrimination and health: findings from community studies. *American Journal of Public Health, 93*, 200–208.

Wilson, D. B., Gottfredson, D. C., & Najaka, S. S. (2001). School-based prevention of problem behaviors: A meta-analysis. *Journal of Quantitative Criminology, 17*, 247-272.

Wu, P., Hoven, C. W., Bird, H. R., Moore, R. E., Cohen, P., Alegria, M., et al. (1999). Depressive and disruptive disorders and mental health service utilization in children and adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 38*, 1081-1090.

Yeh, M., Eastman, K., & Cheung, M. K. (1994). Children and adolescents in community health centers: Does the ethnicity or the language of the therapist matter? *Journal of Community Psychology, 22*, 153-163.

Yeh, M., McCabe, K., Hough, R., Dupuis, D., & Hazen, A. (2003). Racial/ethnic differences in parental endorsement of barriers to mental health services for youth. *Mental Health Services Research, 5*, 65–77.

Yeh, M., McCabe, K., Hough, R. L., Lau, A., Fakhry, F., & Garland, A. (2005). Why bother with beliefs? Examining relationships between race/ethnicity, parental beliefs about causes of child problems, and mental health service use. *Journal of Consulting and Clinical Psychology, 73*, 800-807.

Yeh, M., McCabe, K., Hurlburt, M., Hough, R., Hazen, A., Culver, S., et al. (2002). Referral sources, diagnoses, and service types of youth in public outpatient mental health care: A focus on ethnic minorities. *Journal of Behavioral Health Services & Research, 29*, 45-60.

Yeh, M., Takeuchi, D. T., & Sue, S. (1994). Asian-American children treated in the mental health system: a comparison of parallel and mainstream outpatient service centers. *Journal of Clinical Child Psychology, 23*, 5-12.

Ysseldyke, J. (2001). Reflections on a research career: Generalizations from 25 years of research on assessment and instructional decision making. *Exceptional children, 67*, 295-309.

Yu, S. M., Huang, Z. J., & Singh, G. K. (2004). Health status and health services utilization among US Chinese, Asian Indian, Filipino, and other Asian/Pacific Islander children. *Pediatrics, 113*, 101-107.

Zimmerman, F. J. (2005). Social and economic determinants of disparities in professional help-seeking for child mental health problems: Evidence from a national sample. *Health Services Research 40*, 1514-1533.

Zwaanswijk, M., Van Der Ende, J., Verhaak, P. F. m., Bensing, J. M., & Verhulst, F. C. (2007). The different stages and actors involved in the process leading to the use of adolescent mental health services. *Clinical Child Psychology And Psychiatry, 12*, 567-582.

Appendix

Table 13.
Disparity Indices for Major Racial Groups

Race	Use Services		In School		Rate per 1,000	Disparity Metric[2]	Disparity Indices[3]			
	n	%	n	%			Compared w/ Black	Compared w/ White	Compared w/ Latino	Compared w/ Asian
Total[1]	6558	100	15460	100	433.12					
Black	1334	20.3	1773	11.47	752.40	1.77	1.00	2.66	1.28	2.34
White	348	5.3	1231	7.96	282.70	0.67	0.38	1.00	0.48	0.88
Latino	1854	28.3	3147	20.36	589.13	1.39	0.78	2.08	1.00	1.84
Asian	2423	36.9	7550	48.84	320.93	0.76	0.43	1.14	0.54	1.00

[1] Results displayed only for Black, White, Latino and Asian. Multiracial or declined to state youth are included in the total to present accurate percentages, but are not displayed.

[2] The DM is calculated by dividing the proportion of one group of children in school-based health services by the proportion of that group in the population in school. The DM as a measure of racial disparity is limited as a mathematical construct because it imposes a theoretical maximum based on the size of the minority group population (Shaw et al., 2008).

[3] The Disparity Index (DI) is a relative risk or relative rate ratio and is computed by taking a ratio of the rates per 1000 between two groups (Shaw et al., 2008).

Referral Codebook

- ● = missing or double response

A. School/Program name
    1. A
    2. B
    3. C

B. Referral ID number (numeric)

C. Date (XX/XX/XX) (day will be "00" if only month and year are on form)

D. Person making referral (text field – not transcribed)

E. Role
    1. Teacher
    2. Counselor
    3. Administrator
    4. Parent
    5. Peer
    6. Other/self

F. Grade (numeric)

G. Gender
    1. Female
    2. Male

H. Race/ethnicity
    1. Black
    2. Latino/Spanish Speaking
    3. Asian
    4. Pacific Islander
    5. White
    6. Other

I. Home language
    1. American Sign Language
    2. Arabic
    3. Cantonese
    4. English
    5. Japanese
    6. Khmer/Cambodian
    7. Korean
    8. Laotian

9. Mandarin
10. Russian
11. Samoan
12. Spanish
13. Tagalog
14. Toishanese
15. Unspecified
16. Vietnamese
17. Other

J. Special Ed status
    0. Not special ed
    1. Special ed

K. Referral timeline
    0. Needs to be seen as soon as possible
    1. Can wait for next opening

L. Referral notification
    0. No
    1. Yes

M. Reason for not notifying (text field – not transcribed)

N. Referral reason (numeric – coded each yes/no)
    1. Emotional concerns
        a. Grief and loss
        b. Stress/anxiety/nervous/frightened
        c. Depressed/withdrawn/isolated
        d. Suicide risk/self-harm
        e. Cutting
        f. Eating/nutrition/body
        g. Delinquency/behavioral acting out/aggressive/defiant/angry/anger management
        g_1. Delinquency/behavioral acting out
        g_2. Anger management
        h. Unpredictable and irregular behavior
    2. Peer/relationship/social and interpersonal skills
        2a. Relationship issues
        2b. Peer Relations
    3. Medical/physical health
    4. Drug/alcohol/tobacco/substance use
    5. Family concerns/domestic violence/abuse/neglect
        5a. Family concerns
        5b. Domestic Violence/Abuse/Neglect
    6. Reproductive health/pregnancy/birth control

7. Cultural adjustment
8. Sexual orientation/questioning
9. School adjustment/change in attendance

O. Referral reason/Open-ended comments (text field – not transcribed)

P. Student strengths (numeric – code each yes/no)
1. Regular attendance/Good attendance
2. Follows instructions
3. Participates in class
4. Asks for help/support
   4a. Asks for help (Educational Strengths)
   4b. Asks for help/support (Emotional Strengths)
5. Works well in groups
6. Receives good grades/Good grades
7. Sets goals
8. Makes/maintains friendships/ Friendly
9. Cooperative with others/ Cooperative
10. Good listener/Listens
11. Sense of humor
12. Able to problem solve
13. Negotiates/compromises
14. Participates in extracurricular activities
15. Communicates needs/ Communicative/Articulates feelings
16. Articulates feelings
17. Has social support system/Supportive family/Supportive peer network
   17a. Supportive family system (Emotional Strengths)
   17b/ Supportive peer network (Emotional Strengths)
18. Helpful to others/ Helpful
19. Attentive in class/Attentive
20. Creative
21. Diligent
22. Fast learner
23. Other
   23a. Other Educational Strengths
   23b. Other Relational/Social Strengths
   23c. Other Emotional Strengths

Q. Student strengths (text field – not transcribed)

R. Interventions/adaptation
1. Instructional modification/extra help and attention/work one-on-one/checked cumulative folder
   1a. Extra help and attention.
   1b. Work one on one
   1c. Checked cumulative folder

2. Classroom modification/change student seat
   2a. Set up Contingency management program
   2b. Change student seat
3. Parent conference/contact/notification
   3a. Parent conference.
   3b. Parent contact.
   3c. Parent notification
4. Student conference/contract/explain rules & expectations/contingency management
5. Referral tutoring/after school/academic counselor/dean/discipline/other resource

S. Intervention/adaptation (text field – not transcribed)

Multilevel Models with Indicators for Each Risk Behavior

Table 13.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use.
(Student Survey, n=8,466)

	Model 1		Model 2		Model 3	
	Adj. OR	(95% CI)	Adj. OR	(95% CI)	Adj. OR	(95% CI)
Demographic Covariates						
Does Not Live with Both Parents	1.26**	(1.1, 1.5)	1.15+	(.98, 1.3)	1.15+	(.98, 1.3)
Gender (Male)	.68***	(.59, .78)	.69***	(.59, .79)	.69***	(.59, .79)
Age	0.98	(.91, 1.0)	-	-	-	-
Service Need: Risk Behaviors						
Failing Grades	1.89**	(1.2, 2.9)	1.60*	(1.0, 2.5)	1.60*	(1.0, 2.5)
Truancy	1.28**	(1.1, 1.5)	1.24**	(1.1, 1.4)	1.24**	(1.1, 1.4)
Substance Use	1.29***	(1.2, 1.4)	1.21***	(1.1, 1.3)	1.21***	(1.1, 1.3)
School Property Damage	1.35**	(1.1, 1.7)	1.36**	(1.1, 1.7)	1.37**	(1.1, 1.7)
Depressed Mood	1.22**	(1.0, 1.4)	1.24**	(1.1, 1.4)	1.24**	(1.1, 1.4)
Race (reference group =Asian)						
Black	-	-	2.38***	(1.8, 3.2)	2.35***	(1.7, 3.2)
Latino	-	-	2.10***	(1.7, 2.6)	2.08***	(1.6, 2.6)
White	-	-	1.27+	(.96, 1.7)	1.27+	(.97, 1.7)
Pacific Islander	-	-	1.75**	(1.2, 2.6)	1.75**	(1.2, 2.7)
Other	-	-	1.55***	(1.2, 1.9)	1.55***	(1.2, 1.9)
School Level (reference group = low referral rate)						
High referral rate	-	-	-	-	1.69*	(.99, 2.9)
Med referral rate	-	-	-	-	1.48	(.91, 2.4)
+p<0.1 *p<0.05 **p<0.01 ***p<0.001						

Table 14.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use for Asian Students.
(Student Survey, n= 4,876)

Asian Students	Student Level			School Level	
	Adj. OR	(95% CI)		Adj. OR	(95% CI)
Demographic Covariates					
Do Not Live with Both Parents	1.22+	(.98, 1.5)		1.21+	(.97, 1.5)
Gender (Male)	0.71***	(.59, .86)		0.71***	(.59, .85)
Age	0.93*	(.86, .99)		0.93*	(.86, 1.0)
Service Need: Risk Behaviors					
Failing Grades	1.41	(.59, 3.3)		1.41	(.59, 3.3)
Truancy	1.42***	(1.2, 1.7)		1.41***	(1.2, 1.7)
Substance Use	1.27***	(1.1, 1.4)		1.27***	(1.1, 1.4)
School Property Damage	1.46*	(1.1, 2.0)		1.46*	(1.1, 2.0)
Depressed Mood	1.28*	(1.0, 1.6)		1.28*	(1.0, 1.6)
School Level (reference group = low referral rate)					
High referral rate	-	-		.82	(.44, 1.6)
Med referral rate	-	-		.69	(.36, 1.3)

+p<0.1   *p<0.05   **p<0.01   ***p<0.001

Table 15.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use for Black Students.
(Student Survey, n=725)

Black Students	Student Level			School Level	
	Adj. OR	(95% CI)		Adj. OR	(95% CI)
Demographic Covariates					
Does Not Live with Both Parents	1.72+	(.95, 3.1)		1.67+	(.94, 3.0)
Gender (Male)	0.78	(.44, 1.4)		-	-
Age	1.0	(.81, 1.3)		-	-
Service Need: Risk Behaviors					
Failing Grades	1.61	(.56, 4.6)		1.86	(.66, 5.2)
Truancy	1.27	(.66, 2.4)		1.47	(.79, 2.7)
Substance Use	1.04	(.78, 1.4)		0.97	(.73, 1.3)
School Property Damage	0.72	(.31, 1.7)		0.66	(.29, 1.5)
Depressed Mood	1.67	(.84, 3.3)		1.68	(.85, 3.3)
School Level (reference group = low referral rate)					
High referral rate				2.92**	(1.3, 6.8)
Med referral rate	-	-		2.39*	(1.1, 5.1)

+p<0.1   *p<0.05   **p<0.01   ***p<0.001

Table 16.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use for White Students
(Student Survey, n= 528)

White Students	Service Need			School Level	
	Adj. OR	(95% CI)		Adj. OR	(95% CI)
Demographic Covariates					
Does Not Live with Both Parents	1.41	(.84, 2.4)			-
Gender (Male)	.59*	(.36, .97)		.61*	(.37, .1.0)
Age	1.11	(.90, 1.4)			-
Service Need: Risk Behaviors					
Failing Grades	3.71	(.36, 37.5)		3.65	(.36, 36.9)
Truancy	1.33	(.73, 2.4)		1.51	(.83, 2.7)
Substance Use	1.04	(.81, 1.3)		1.04	(.82, 1.3)
School Property Damage	1.88*	(1.0, 3.5)		1.86*	(1.0, 3.5)
Depressed Mood	.71	(.39, 1.3)		.75	(.43, 1.3)
School Level (reference group = low referral rate)					
High referral rate	-	-		7.1+	(.76, 65.1)
Med referral rate	-	-		.95	(.58, 1.6)

+p<0.1   *p<0.05   **p<0.01   ***p<0.001

Table 17.

Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use for Latino Students.

(Student Survey, n= 1,228)

Latino Students	Service Need			School Level	
	Adj. OR	(95% CI)		Adj. OR	(95% CI)
Demographic Covariates					
Does Not Live with Both Parents	.79	(.54, 1.2)		-	-
Gender (Male)	0.62*	(.42, .91)		0.62*	(.42, .91)
Age	1.1	(.89, 1.2)		-	-
Service Need: Risk Behaviors					
Failing Grades	1.82	(.85, 3.9)		1.79	(.84, 3.8)
Truancy	.93	(.60, 1.5)		.96	(.62, 1.5)
Substance Use	1.22*	(1.0, 1.5)		1.19*	(1.0, 1.4)
School Property Damage	1.7+	(.93, 3.2)		1.73+	(.94, 3.2)
Depressed Mood	1.1	(.69, 1.6)		.99	(.66, 1.5)
School Level (reference group = low referral rate)					
High referral rate	-	-		1.40	(.73, 2.7)
Med referral rate	-	-		1.21	(.71, 2.1)

+p<0.1   *p<0.05   **p<0.01   ***p<0.001

Table 18.
Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use for Pacific Islander students.
(Student Survey, n= 247)

Pacific Islander Students	Service Need			School Level	
	Adj. OR	(95% CI)		Adj. OR	(95% CI)
Demographic Covariates					
Does Not Live with Both Parents	.89	(.32, 2.5)		-	-
Gender (Male)	.65	(.26, .1.6)		-	-
Age	1.59*	(1.0, 2.4)		1.59*	(1.1, 2.4)
Service Need: Risk Behaviors					
Failing Grades	.19	(.02, 1.6)		.18	(.02, 1.3)
Truancy	.47	(.16, 1.4)		.54	(.19, 1.6)
Substance Use	1.82*	(1.1, 3.1)		1.63+	(.98, 2.7)
School Property Damage	.66	(.18, 2.4)		.59	(.16, 2.2)
Depressed Mood	1.45	(.52, 4.0)		1.52	(.56, 4.1)
School Level (reference group = low referral rate)					
High referral rate	-	-		3.35*	(.99, 11.4)
Med referral rate	-	-		1.60	(.55, 4.7)

+$p<0.1$ *$p<0.05$ **$p<0.01$ ***$p<0.001$

Table 19.

Adjusted Odds Ratios from Random-Effects Logistic Regression (Multilevel Model) Predicting School-Based Service Use for Multiracial or Other-Identified Students.

(Student Survey, n= 862)

Multiracial/Other-Identified Students	Service Need			School Level	
	Adj. OR	(95% CI)		Adj. OR	(95% CI)
Demographic Covariates					
Does Not Live with Both Parents	1.48+	(.96, 2.3)		1.39	(.89, 2.1)
Gender (Male)	.66+	(.44, .1.0)		.65*	(.42, .99)
Age	.98	(.83, 1.2)			-
Service Need: Risk Behaviors					
Failing Grades	2.24	(.66, 7.5)		1.98	(.58, 6.8)
Truancy	1.15	(.71, 1.9)		1.10	(.69, 1.8)
Substance Use	1.27*	(1.0, 1.6)		1.27*	(1.0, 1.6)
School Property Damage	1.23	(.65, 2.3)		1.15	(.61, 2.2)
Depressed Mood	1.41	(.88, 2.4)		1.41	(.89, 2.3)
School Level (reference group = low referral rate)					
High referral rate	-	-		2.85**	(1.3, 6.2)
Med referral rate	-	-		1.27	(.81, 2.0)

+p<0.1   *p<0.05   **p<0.01   ***p<0.001