Title

School-based Health Centers: A Model of Care to Meet the Behavioral and Mental Health Needs of Children and Adolescents

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Publication Date

2016

Peer reviewed|Thesis/dissertation

School-based Health Centers: A Model of Care to Meet the Behavioral and Mental Health Needs of Children and Adolescents

by

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DISSERTATION

Submitted in partial satisfaction of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Dedication

This dissertation is dedicated to my husband, Beau, and our daughters, Saana and Sylvi. Your loving kindness, hugs, smiles, and joyful spirit have been my greatest source of support. I love you. I also dedicate this manuscript to my parents. It is because of your love and support I have arrived at this incredible moment in my life. Kiitos – Thank you.

Acknowledgements

I would like to express my gratitude to my dissertation committee. I am grateful for my advisor and dissertation chair, Dr. Susan Chapman, who provided guidance and countless hours of editing that has lead to a successful completion of my dissertation. My sincere appreciation goes to Dr. Joanne Spetz, whose expertise and thoughtful suggestions were indispensable. I am forever thankful for the committed mentorship of Dr. Claire D. Brindis, whose invaluable expertise greatly expanded the scope of my understanding of health policy and research. Your kind words during this challenging journey were very welcome and I am truly honored to have had the experience of working with you. I am also sincerely thankful for Dr. Howard Pinderhughes' participation in the development of the conceptual model. Understanding health in the context of trauma has forever changed how I view and provide pediatric care and for this, I am truly grateful.

I would also like to express my heartfelt thanks to all the staff who supported me these past five years and to the faculty who taught the courses that reshaped and expanded my views on health, research, and policy. I especially want to thank Dr. Steven Paul. I greatly appreciated your availability as a statistician for consult and for all your supportive coaching as a mentor. Your style of teaching is truly inspiring and I will always remember you as the best professor. I'd also like to thank Jeff Kilmer, Maria Elena de Guzman, and Shandel Roberts, whose support in navigating the program was priceless. I would not have been able to finish the program without the three of you.

I would like to thank the UCSF School of Nursing for awarding me the very generous Graduate Dean's Health Sciences Fellowship, the Burke Family Global Health Faculty Scholars

Award, and the Nurse Faculty Loan. It is because of this financial support I was able to return to school to pursue and complete my doctoral degree.

And, of course, I would like to thank all the UCSF nursing students who were a means of support and inspiration during this journey. I am honored to know you and I am grateful for your friendship. I particularly want to give a shout out to my health policy cohort. It is because of you two I finished this program with a smile on my face. Thank you!

Abstract

Exposure to chronic childhood trauma increases the risk for the development of behavioral and mental health disorders and poor academic achievement. Nearly 70% of children have experienced some form of trauma, in the form of either a victimizing or non-victimizing event. Estimates suggest that 20% of children and adolescents have a mental health disorder, yet 70% do not receive mental health services. Children and adolescents of minority racial/ethnic groups and those living in poverty are at greater risk of exposure to trauma and less likely to have access to and utilization of mental health services. This increases the risk for poor academic achievement and school dropout. School success is a major determinant of a person's opportunities for employment and social mobility advancement. Structural interventions are needed to provide resources to help prevent or mitigate the harm from exposure to chronic childhood trauma. One strategy to increase access and utilization of mental health services is the school-based health center (SBHC) model of care. This dissertation begins with a literature review to explore the association between trauma, mental health, academic success, mental health care disparities, and SBHC mental health services. This paper then employs a cross-sectional design to examine the School-based Health Alliance 2010-11 Census to describe and assess the characteristics of SBHCs with mental health providers. This study also examines the 2010 California Healthy Kids Core Module Survey to assess the need for mental health services in school-aged children in California. The findings demonstrate that exposure to chronic childhood trauma negatively impacts school achievement when mediated by mental health disorders. There are multiple characteristics associated with SBHCs having a mental health provider on-site at the school. There is a need for mental health services for 6^{th}-12^{th} graders. These students are being exposed to victimizing events on school campuses and are thus at

higher risk for use of substances, symptoms of depression and eating disorders, and poor academic achievement. These findings have implications for policy makers and school health stakeholders in addressing the need for mental health services in children and adolescents exposed to chronic childhood trauma.

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Chapter 1

Introduction: Three Paper Option and Statement of the Problem

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Introduction

I have chosen the three paper option for my dissertation. Thus, a brief explanation of how the three papers will be incorporated into the dissertation is relevant. My first paper is a literature review that adds to the literature in a novel way by connecting trauma, mental health, academic achievement, and school-based health centers (SBHCs). My second paper provides descriptive statistics of differences between two models of SBHCs in the US. One model has a mental health provider on-site at the center, while the other does not. My third paper discusses descriptive statistics of rates of exposure to victimizing events, substance use, mental health disorder symptoms, and academic achievement in middle and high school students in California. The final chapter addresses the overall purpose of the dissertation research.

Background

Chronic childhood trauma, also known as childhood adverse events, is a major social and public health problem in the United States. Exposure to childhood adverse events significantly increases the risk for poor health and premature death.[1] Chronic childhood trauma is comprised of cumulative frequent life stressors, conditions, and events that, in the literature, have been categorized into victimizing and non-victimizing events.[2,3] Victimization is exposure to sexual abuse, physical abuse, emotional abuse, physical neglect, emotional neglect, medical neglect, witnessing family violence, abuse by others based on color of skin/religion/sexual orientation, having been kidnapped, witnessing murder, having a close friend/family member murdered, and witnessing war.[2] Non-victimizing events include poverty, food insecurity, parental substance abuse, parental unemployment, episodes of homelessness, marital discord, parental mental illness, and parental incarceration.[2] Approximately 71% of children and adolescents in the United States have experienced one direct or indirect victimization event in the past year.[4]

Higher rates of victimization disproportionately affect children and adolescents in low-income households, those of racial and ethnic minorities, those with low parental education, and/or those living with single parents or stepparents.[2] Childhood victimization is associated with emotional and behavioral difficulties, mental health disorders, substance use, sexually risky behavior, and aggressive or delinquent behavior. [5,6]

There is a strong link between exposure to chronic childhood trauma and the development of mental health disorders[7] Substance (alcohol and drug) use disorder, anorexia nervosa, anxiety disorders, attention deficit hyperactive disorder (ADHD), bipolar disorder, borderline personality disorders, bulimia nervosa, conduct disorder, depression, obsessive-compulsive disorder, oppositional defiant disorder, post-traumatic stress disorder (PTSD), and schizophrenia are all significantly correlated with exposure to childhood adverse events.[7-18] Victimization in the form of discrimination based on race, ethnicity, gender, sexual orientation, social economic status, and mental health status has a strong correlation with negative mental health outcomes.[19-25] Interpersonal victimization increases risk of depression and substance abuse.[26] Exposure to community violence increases aggressive behavior and PTSD.[27,28] Childhood maltreatment increases risk for attention problems, PTSD, depression, and substance abuse.[29-31]

Approximately 1 in 5 children and adolescents have a diagnosable mental health disorder that can cause severe lifetime impairment.[32] Many more adolescents live with sub-threshold psychological distress.[33] Yet, of those children and adolescents with mental health disorders, 70% do not receive mental health services, with minority race and ethnic groups and lower socioeconomic status (SES) youths disproportionately not being treated.[32,34] The consequences of untreated mental health disorders are detrimental to the individual, family, community, and

nation. Of high school students with mental health disorders, 50% drop out of school and are at increased risk for becoming unemployed, homeless, or incarcerated.[35] African American, Latino, and Native American adolescents are disproportionately placed in the juvenile justice system, comprising up to 50-70% of the juvenile detention population, instead of addressing the untreated mental health disorders.[36] Untreated depression can result in death from suicide and suicide is the third leading cause of death in adolescents in the United States.[37]

Differences in mental health service structure varies by state and state of residence and has been found to significantly influence utilization of mental health services.[38,39] When mental health services are available, children and adolescents of minority race/ethnicity and low SES receive fewer mental health services as compared to non-Latino white peers.[36,40] Lack of utilization of services is not indicative of need of services.[39] The lack of available mental health services and disparities in access to and utilization of mental health care are cause for national concern. Untreated mental health disorders negatively impact social and academic functioning with related decreased opportunities for educational, employment, and social mobility advancement and can lead to severe disability and early death.[2,3,32,41-47]

The school setting is one of the most influential environments through which children and adolescents spend their lives.[48] Schools have increasingly become a site for the provision of health services because of their accessibility to youth. Schools are an important point of contact for prevention, identification, and treatment of emotional and behavioral issues and mental health disorders.[49,50] School failure is an important indicator of mental health disorders and exposure to chronic childhood trauma.[2,51,52] SBHCs, with their ability to provide comprehensive, youth-friendly, primary care services on school grounds, have demonstrated the ability to increase school attendance, improve academic scores, decrease school dropout, and provide cost-efficient,

high-quality care in underserved communities.[53-60] SBHCs overcome typical barriers to care that include: (1) lack of insurance coverage; (2) inability to access care due to lack of transportation, limited clinic hours, services unavailable where the family lives, or language barriers; (3) national shortage of mental health providers; (4) lack of coordination of care with providers, families, and schools; (5) lack of culturally sensitive or age-appropriate services; (6) lack of knowledge regarding mental health needs; (7) lack of screening by health care providers or schools; (8) lack of confidentiality for adolescents; and (9) stigmatization of persons requiring mental health services.[5,6,53-55,61-65]

Expanding the SBHC model of care has the potential to increase health equity in underserved at-risk youths. SBHCs that employ mental health providers and provide comprehensive mental health services that include trauma-informed care, practice, and treatment modalities increase the capacity of SBHCs to address the unmet mental health needs of children and adolescents, especially those exposed to chronic childhood trauma.

Summary of Previous Research

Studies of SBHCs with mental health services have primarily examined or described health care issues of access, utilization, quality, and funding. There are also outcome studies that review the impact of SBHC school-based mental health services on academic achievement. Populations included in the majority of SBHC studies were 9-12th grade urban high school students.[7,33,54,63,66,67] In general, the majority of studies that review SBHC school-based mental health services utilize a cross sectional design for their methods, though two studies have been longitudinal. The literature review for this dissertation has a more in depth discussion of the SBHC mental health services literature.

Gaps in Previous Research

Gaps in the SBHC school-based mental health service model of care literature include the need for more longitudinal studies in order to provide persuasive evidence of associations. In addition, the majority of past studies were of urban populations. Additional studies in rural and suburban populations would be beneficial. Inclusion of lesbian, gay, bisexual, transgender, queer (LGBTQ) status in demographic data is needed to better understand this high-risk population. The majority of SBHC studies reviewed access and utilization but not quality and financing. Reviewing disparities in SBHC mental health service use in a variety of populations and in other SBHC school-based mental health service models of care is largely missing from previous research. With only one prior study examining SBHC mental health service use and impact on academic standardized measures in a very specific adolescent population of public schools in Seattle, more studies are needed to review SBHC impact on academic achievement in other parts of the US. No known studies were found to review chronic childhood trauma and SBHC mental health service use. Also, no known studies in the literature describe the characteristics of SBHCs that are associated with the inclusion of mental health services in their model of care. My proposed research will address some of these gaps and make a significant and meaningful contribution to the SBHC mental health service literature.

Statement of the Problem

Though a successful model of care, SBHCs can only be found in 2% of schools in the United States.[68] Of the 1,381 SBHCs that participated in the national School-based Health Alliance (previously known as the National Association of School-based Health Center) 2010-2011 Census, approximately 70% reported that they provide mental health services by a licensed or unlicensed clinical social worker/therapist, psychologist, substance abuse counselor, or psychiatrist or psychiatric nurse practitioner.[68] California SBHCs have lower rates of mental

health services than the national average.[68] Yet, the majority of CA SBHCs are located in underserved, low-income, and/or in racial-ethnic neighborhoods other than non-Latino White and these student populations are at higher risk for exposure to chronic trauma and associated development of mental health disorders. It is a major concern that not all SBHCs have a mental health provider on their staff.

Research Aims and Questions

The goals of my research are to guide policies to promote health equity by 1. advancing the SBHC model of care as a primary source of care for all school-aged children and adolescents; and 2. fostering the discussion of how can all SBHCs include school-based mental health services and trauma informed care.

The proposed aims of this study are:

1. To describe factors (demographics, available services, sponsoring agency, geography, funding sources, etc.) associated with SBHCs either having or not having school-based mental health services at the national level.

2. To describe the type and frequency of behavioral and mental health services provided by SBHCs nationally.

3. To describe the rate of exposure to victimizing events, substance use, and depressive and eating disorder symptoms in middle school and high school students in California to quantify the need for mental health services.

The proposed research questions included the following:

1. What factors are significantly associated with SBHCs incorporating a school-based mental health provider in their model of care?

2. What behavioral and mental health services are provided nationally by SBHCs and at what frequency?

3. What are the rates of exposure to victimization rates, substance use, and symptoms of depression and eating disorders in middle and high school students in California?

Chapter 2

A Review of Chronic Childhood Trauma's Effect on Academic Achievement as Mediated by Mental Health Disorders: The Role of School-Based Health Centers

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Introduction

Chronic childhood trauma is a major social and public health problem in the United States. Approximately 70% of children have been exposed to trauma, in the form of either victimizing or non-victimizing events.[2] Exposure to childhood trauma is associated with academic problems, emotional and behavioral difficulties, sexually risky behavior, and substance use.[6] Current estimates indicate that 1 in 5 children and adolescents have a diagnosable mental health disorder that can cause severe lifetime impairment.[32] Yet up to 70% of children and adolescents with mental health disorders do not receive mental health services, with minorities and lower socioeconomic youths disproportionately not receiving treatment.[32,34] Mental health disorders negatively impact social and academic functioning with related decreased opportunities for educational, employment, and social mobility advancement.[41-44,47] Among high school students with mental health disorders, 50% drop out of school and are at increased risk for becoming unemployed, homeless, or incarcerated.[69] Untreated mental health disorders can lead to severe disability and even death from suicide.[32,45,46]

Schools are an important point of contact for prevention, identification, and treatment of mental health issues and disorders.[49] Schools have increasingly become the focus for health interventions and services because of their availability and accessibility to students.[50] There is some evidence that school-based health centers (SBHCs) have demonstrated the ability to increase access to and utilization of quality cost-effective health and mental health services for children and adolescents, especially in underserved populations.[53-55,61-64] Expanding this model of care has the potential to increase health equity in underserved at-risk youths. The purpose of this paper is to review the literature exploring chronic childhood trauma's impact on academic achievement as mediated by mental health disorders; disparities in child and adolescent mental

health care; and the impacts of SBHCs that incorporate mental health services on children and adolescents. This paper contributes to the school-based health center literature by reviewing the need for pediatric access, utilization, quality, and funding of mental health care services in the context of chronic childhood trauma.

Background

Conceptual Framework

This paper is guided by a conceptual model created by the authors that combined Link and Phelan's 1995 social determinants of health and Felitti et al.'s 1998 study of exposure to childhood adverse events and negative adult health outcomes.[1,70] The conceptual model also includes the intervention of a SBHC. As depicted in Figure 1, the social determinants of health, such as education, healthcare, employment opportunities, work and living conditions, and accessibility of healthy foods, are distributed unequally due to social policies and economic opportunities that have been unevenly applied for generations, thereby resulting in health disparities beginning at birth.[71] Children and adolescents living in low socioeconomic households, who represent racial-ethnic minorities, whose parents have achieved low education levels, and/or those living with single parents or step-parents have disproportionately higher rates of exposure to trauma.[2] Chronic childhood trauma is comprised of accumulative frequent life events that can been categorized into victimizing and non-victimizing events.[2,3] Victimization includes exposure to all forms of abuse and neglect, witnessing family violence, discrimination based on race/gender/sexual orientation/religion, or having a close friend/family member murdered.[2,3] Non-victimizing events include poverty, food insecurity, parental substance abuse, parental unemployment, episodes of homelessness, marital discord, parental mental illness, and parental incarceration.[2,3] The model shows that children and adolescents exposed to chronic

childhood trauma are at increased risk for developing mental health disorders.[19-21,23,24,26-31,72] Mental health disorders have been linked to a greater risk for poor academic achievement.[35,41,47,60] Poor academic achievement leads to decreased social capital and decreased ability to escape exposure from adverse events, chiefly poverty, and thus, the cycle of exposure to chronic trauma is transmitted from generation to generation.[73]

As presented in Figure 1, the SBHC that incorporates mental health services is one strategy to intervene in the chronic health trauma cycle. The SBHC is a model of pediatric primary care delivery that offers comprehensive services provided by a multidisciplinary team on school grounds.[54,55,62] Studies have shown SBHCs increase access to health and mental health care, especially for the 'hard to reach' and high risk adolescent population, as well as minority and lower socioeconomic pediatric populations.[54,55,61-64] Multiple studies have documented how SBHCs overcome typical barriers to care: 1. lack of insurance coverage; 2. inability to access care due to lack of transportation, limited clinic hours, or language barriers; 3. national shortage of mental health providers; 4. lack of coordination of care with providers, families, and schools; 5. lack of culturally sensitive or age-appropriate services; 6. lack of screening by health care providers or schools; 7. lack of confidentiality for adolescents; and 8. stigmatization of persons requiring mental health services[53,56,57,59-62,74,75]. SBHCs have demonstrated the ability to increase school attendance, improve academic scores, decrease school dropout, provide cost-efficient quality care, and adolescents have favorable attitudes toward their use.[53,56,57,59,60,74-76] The expansion of the SBHC with mental health services is a structural intervention that may have the potential to reduce the inequalities currently documented in child and adolescent mental health that continue to exacerbate disparities in school achievement that in turn perpetuate income inequality disparities and increased exposure to chronic trauma in the United States.

Methods

A search of the PsycINFO and PubMed databases was conducted. Empirical studies and literature reviews conducted in the past 10 years of US child and adolescent populations and of US SBHCs between 2003 and 2013 were included. Table 1 lists the search terms used to review the four major topics of this paper: childhood trauma's effects, mental health care disparities, SBHC mental health services, and SBHC mental health impacts.

The search terms used to review childhood trauma's effect on academic achievement as mediated by mental health disorders are listed in Section A. This search yielded 43 articles, of which 9 specifically reviewed the relationship between exposure to childhood trauma and the development of mental health disorders and school success in children and adolescents.

The search terms used for pediatric mental health care disparities in the context of access, utilization, quality, and financing are summarized in Section B. This search yielded 129 studies. Articles that reviewed special subgroup pediatric populations of children and adolescents in juvenile detention, psychiatric inpatient facilities, or youth with intellectual disabilities were excluded. Of the remaining articles, 9 were selected that reviewed disparities in access, utilization, quality, and/or financing of pediatric mental health care.

The search terms used to identify studies reviewing SBHC mental health service access, utilization, quality, and financing are listed in Section C. The initial search yielded 253 articles. Articles reviewing mental health services that were not part of a SBHC were not included. Of the remaining articles, 11 fit the criteria because they examined access, utilization, quality, and/or financing of SBHC mental health services.

The search terms used to identify articles reviewing SBHC mental health center use and impact on academic achievement are shown in Table 1 Section D. This search yielded 5 studies

of which 2 were specific to SBHC mental health service use by students and impacts on academic achievement as measured by GPA or dropout status.

Results

An overview of all the studies in this review is presented in Table 2. This table summarizes the study design, time period, population, and main variables measured. A large number of studies used secondary analysis of cross sectional databases that utilized valid and reliable surveys.

Chronic Childhood Trauma's Impact on the Development of Mental Health Disorders and Subsequent Poor Academic Achievement

Eight out of ten studies of children and adolescents exposed to chronic childhood trauma show a significant risk of increasing mental health disorders with subsequent poor academic achievement while two studies did not demonstrate a significant difference.[6,52,77-82] For example, one study among the eight that found statistically significant relationships showed that youth, especially those of low-income and/or racial/ethnic minorities, who are exposed to trauma or victimization are at greater risk for developing anxiety, depression, conduct disorder, post-traumatic stress disorder (PTSD), suicidal ideation, attention deficit hyperactivity disorder (ADHD), and have lower GPAs than their peers who have not experienced trauma or victimization.[78] Frequency of victimization had the most significant impact on development of mental health disorders, especially attention problems and poor academic achievement.[6,52,78] Exposure to community violence inversely affected school engagement and performance when mental health disorders were included.[77,79,81,82] Youths exposed to chronic trauma had a higher risk for dropout as mediated by mental health disorders.[80] Mental health symptoms and disorders that predicted poor academic achievement were PTSD[79,82], anxiety[82], aggressive behavior[77,81,82],

and depression[81]. Among the eight studies with significance, Voisin et al. (2011) found the effects of violence on academic performance were gendered, with aggressive behavior in females associated with lower GPAs and less student-teacher connectedness, while males with general psychological problems had less student-teacher connectedness, but both of these factors were shown to have minimal effect on GPA.

Two of the ten studies did not find significant impacts on academic achievement (Foshee et al. 2013 and McLean et al. 2013). Dating abuse victimization was a significant predictor of substance use (alcohol, cigarettes, and marijuana), but did not predict academic outcomes.[83] Post childhood sexual abuse PTSD significantly impacted social functioning, but not academic performance.[84] However, both studies utilized self-report of grades, while the other eight studies that did find significant differences in academic outcomes utilized standardized scoring measures.

Mental Health Care Disparities as Measured by Access, Utilization, Quality, and Funding of Pediatric Mental and Behavioral Health Services

Table 3 summarizes studies reviewing US pediatric mental health care disparities in the domains outlined by Braveman (2006) of access, utilization, quality, and funding.[85] Seven studies found significant disparities in child and adolescent mental health care in the US.[38,39,86-91] State of residence significantly impacts use of mental health care, often exceeding the effects race and income play in disparities found in access and utilization of mental health services.[38,39] Insurance coverage plays an important role in enabling children's and adolescents' access to mental health care services.[90] Variations in state law and deficiencies in federal law regarding parity has led to large gaps in coverage of mental health services.[90] Lower family household income significantly predicted less receipt of mental health services among publicly-insured

families.[38] Among publicly insured families, Asian, Black, and Hispanic publicly-insured children and adolescents were less likely to receive services.[38] Significant differences were found in racial and ethnic groups in utilization of services, with one study finding Hispanics had the highest unmet need for mental health services.[39] African American and Latino youths had higher reports of mental health symptoms with lower reports of having received mental health care in the past 12 months as compared to Whites, Native American, and Multiracial youths.[88] Asian American and Pacific Islander youths had low reports of mental health symptoms and the lowest reports of mental health service use among the groups.[88] Initiation of use of outpatient mental health care by Black and Latino children ages 5-17 was significantly lower than that for White children.[91] There were no differences in receipt of counseling services among racial/ethnic groups in a school setting, while there were significant differences in receipt of counseling services among racial/ethnic groups in the clinic-based setting with Blacks, Hispanics, and Asian American and Pacific Islanders receiving fewer mental health services compared to Whites.[87] Rural African American adolescents had higher rates of participation in mental health screening at a school-based mental health program when compared to White adolescents.[89] Fifth graders with ADHD symptoms were more likely to have received mental health services than those with oppositional defiant disorder, conduct disorder, or depressive symptoms.[86]

Studies examining disparities in quality of pediatric mental health care primarily focused on insurance coverage instead of clinical outcomes. Publicly-insured children had more than double the odds of experiencing a gap in coverage when compared to children with private insurance and this gap was significantly influenced by state of residence.[38] Bethell et al. (2011) presents a map of the United States by the minimum quality index (percentage of children who met medical home criteria, had adequate insurance coverage, and had one or more preventative

care visits). States with statistically significant ($p<0.05$) lower than average national US quality index scores were Arizona, California, Idaho, Mississippi, Montana, Nevada, New North Dakota, and Oklahoma.[38] Gaps in public insurance coverage were highest among Hispanics and lowest among Asians.[38]

Studies that reviewed funding of mental health services focused on mental health parity and gaps in insurance coverage.[38,90] Mental health care disparities occur due to a number of factors, including differences in mental health coverage in public insurance between states and between state and federal programs (SCHIP versus Medicaid), reductions in services under managed care systems, and the manner in which school-based and safety net mental health providers are often considered out-of-network providers by managed care.[90]

School-based Health Center Mental Health Services

In the conceptual model, SBHCs are presented as one plausible intervention to address childhood trauma, mental health, and poor academic achievement. It is important to note decreasing exposure to trauma and treating children exposed to childhood trauma requires multiple types of structural interventions and national cultural changes. The SBHC is one structural intervention that offers a place-based health care model that provides a one-stop source of care to patients with or without insurance. Table 4 summarizes the studies that review access, utilization, quality, and funding of SBHC mental health care to help determine if this model of care could contribute to decreased pediatric mental health care disparities. It also includes studies that review the impact SBHC mental health service use has on academic achievement.

Access, utilization, quality, and funding of SBHC mental health services.

Several studies have found SBHCs increase access and utilization of mental health care.[54,63,64,66,67,92] Yet disparities among racial/ethnic minority groups continue to be observed

even when SBHCs offer mental health care.[33,66] Black and Hispanic students are less likely to have been screened or once screened, diagnosed with depression and Asian students are less likely to have used SBHC mental health services.[33,66]

Two studies reviewed quality of SBHC health and mental health care. Guo et al's (2008) longitudinal study evaluated mental health care quality by utilizing psychosocial health-related quality of life (HRQOL) to determine if any impact was documented on adolescent functioning status with use of mental health care service. The improved HRQOL scores were not statistically significant but the authors posited they may have been clinically significant.[53] The study's low rate of return of surveys may have contributed to the authors' inability to document a significant difference. Soleimanpour et al. (2010) employed mental health provider reports of clinical improvement and client satisfaction with services through focus groups. Providers reported significant improvements in student symptoms for a range of mental health disorders.[63] Client satisfaction rates were generally high.[63] Yet, the authors found that 1 in 10 students were not receiving needed mental health services, though this is an improvement compared to national statistics of 1 in 3 students not receiving mental health services. It appears the SBHC improves access and utilization, but it does not guarantee that all students will receive appropriate mental health services.

Two studies reviewed financing of SBHCs. Nystrom and Prata (2008) surveyed Oregon SBHCs and found the type of sponsoring agency largely determined funding. Non-Federally Qualified Health Center (FQHC) SBHCs are more dependent on state funding in the form of grants, while FQHC–sponsored SBHCs rely more on billing insurance programs. Yet, because SBHCs typically provide services that are not billable (i.e., out of network provider status, services for children with no health insurance or Medicaid, or managed care restrictions), a large

number of SBHCs are not financially sustainable without government supplemental support.[93] Schlitt et al. (2008) reviewed state policies that impact financing of SBHCs, but did not differentiate between funding for medical or mental health services. The 19 states that directly funded SBHCs had specific funding mechanism policies, typically competitive grants, that were not guaranteed and subject to budget cuts.[94] Eight states had policies that mandated mental health quality assessments for SBHCs.[94]

School-based Health Center Use and Impact on Academic Achievement

Two studies examined SBHC use and academic achievement. Kerns et al. (2011) and Walker et al. (2010) both used a retrospective longitudinal cohort design to examine urban low-income adolescent high school students' use of SBHCs with a master's prepared mental health counselor on staff. Walker et al. (2010) utilized attendance and GPA to measure academic achievement, while Kerns et al. (2011) used the rate of high school dropout. Students who used SBHC medical services had improved attendance rates, while students who used SBHC mental health services had improved GPA.[60] Students who had minimal or moderate use of a SBHC had lower dropout rates compared to students who did not use the SBHC, while students who used the SBHC often dropped out in similar rates to students who did not use the SBHC.[56] Nearly half (41%) of the visits among students considered "high" clinic users were for mental health reasons, while a quarter (24%) of "moderate" clinic users used mental health services, and 14% of all visits by "low" users were for mental health.[56] This implies that high clinic users have greater mental health needs and are therefore at greater risk for dropout.

Discussion

This review of literature consistently documented the role that chronic childhood trauma, including exposure to violence in childhood, predicts poor academic achievement outcomes. The

relationship between trauma and negative academic performance was found to be mediated by mental health disorders. The mental health disorders that had the greatest impact upon poor academic achievement were PTSD, depression, and anxiety. Though not formally DSM-V disorders, children and adolescents with aggressive behavior or who had problems with attention deficit also had poorer academic achievement. These findings point to the importance of preventing childhood adverse events from occurring in the first place as a strategy for improving academic performance.

Studies continue to reveal how disparities in access, utilization, quality, and financing of pediatric mental health care are widespread in the US health care system. These factors were measured by use of services, type of clinics used, state of residence, health insurance, family sociodemographics, and lack of parity between mental and physical health. The studies reviewed populations prior to the implementation of the Affordable Care Act (ACA) and therefore did not include analysis of whether or not parity in health and mental health services as mandated by the ACA was making a difference in pediatric mental health access and outcomes. Both structural elements and cultural attitudes determined access and utilization of mental health services. Previous research has found disparities among all racial and ethnic groups when compared to White children and adolescents. Certain racial and ethnic groups were found to have consistently less access and utilization of mental health services when compared to non-Latino Whites. For the majority of studies, income was the greatest predictor of mental health care use, with those children and adolescents in lower income households having less access or use of mental health services. It is not possible from these studies to ascertain what other barriers may have existed, such as a lack of mental health providers representing the same ethnic/racial

groupings of students or cultural factors including mental health stigma, that may have prevented some students from accessing care, even if it was available.

Several studies have found that SBHCs that incorporate mental health services increase access to and use of mental health services. However, not all populations benefit to the same degree. One study indicated mental health services may influence academic performance. Disparities in screening for mental health disorders persistently remain in SBHCs, in spite of co-location of services and elimination of traditional barriers to care. SBHCs are burdened by the lack of sustainable funding policies by state and federal health agencies to support both physical and mental health services. Federal policy that provides financing of SBHCs may be helpful in alleviating geographic and other types of health care delivery disparities currently reflected across the pediatric mental health care system.

Limitations and Gaps in the Research

This literature review may be limited by the search terminology used to find relevant studies and the criteria used for the inclusion or exclusion of studies. Though this was not a systematic review, it was an extensive review of the literature based on hypotheses generated through the conceptual model and, thus, it included a number of studies reflecting various levels of rigor.

There were also limitations in the selected studies thereby rendering an inconclusive judgment regarding the impact of SBHCs on decreasing the impact of trauma, health disparities and improving academic outcomes. Given the lack of available research studies, we included studies that reflect various level of rigor, e.g., studies that did not adopt a randomized design, and noted where additional research is needed.

The literature regarding chronic childhood trauma's impact on academic performance as mediated by mental health disorders is relatively recent and has multiple gaps. The majority of studies have used a cross-sectional methodology. Longitudinal designs can provide more persuasive evidence and are urgently needed. The majority of studies are of urban populations; additional studies in rural and suburban populations are recommended. Another limitation is the lack of standardized measures across studies to capture health care process and outcome measures, as well as standardized ways to measure academic achievement. Another limitation is the lack of specific studies that further identify specific subpopulations, for example, inclusion of LGBTQ status as part of the demographic data collected across studies. Gaps also remain in pediatric mental health care with more studies needed that document quality of care, health outcomes, effectiveness, and financing of mental health care.

Studies regarding SBHC mental health service use have been conducted primarily with urban high school populations; thus, additional studies are needed to assess SBHCs' impacts on mental health outcomes in rural and suburban schools and in elementary and middle schools. This may be challenging because there are fewer SBHCs located in these settings. With only one study examining SBHC mental health service use and impact on academic standardized measures in a specific adolescent population of public schools in Seattle, it would be valuable to conduct similar research in other settings with the same age group, as well as elementary and middle school samples. Ideally, studies that measure students' exposure to chronic childhood trauma, their current mental health status, and sources of mental health care use (SBHC, community clinic, private office, and/or no care) with corresponding academic performance over time would be useful in answering the question of how well SBHCs can address the mental health needs of students, including those exposed to chronic trauma.

Conclusions

Chronic childhood trauma has a significant negative impact on academic performance, which is mediated by mental health disorders. Children and adolescents of low socioeconomic status and/or those of minority race or ethnic status are disproportionately exposed to chronic childhood trauma and have disproportionately higher rates of mental health disorders and lower academic achievement. Sadly, disparities in access, utilization, quality, and funding of child and adolescent mental health care are prevalent and continue to persist in the US. Populations most vulnerable to victimizing and non-victimizing events are the least likely to have the mental health care resources they need. These children and adolescents are therefore more likely to perform poorly in school and to have diminished educational and employment opportunities. This decreased social capital increases the risk of continued victimization into adulthood, homelessness, incarceration, substance abuse, poverty, chronic medical and mental health conditions, and early death.

SBHCs that incorporate mental health services have some demonstrated evidence of their ability to reduce, though not eradicate, the disparities currently found in our mental health care system. Additional studies are needed to assure that this finding is replicable, including a wider sample of racial and ethnic groups, as well as in different geographic areas. Important to note is that students who used the clinic most frequently had similar outcomes to those who did not use the SBHC. Further studies are needed to investigate this phenomenon to review if services are comprehensive and of appropriate quality and to review the characteristics (exposure to trauma, past medical history, living arrangements) of the students using the SBHCs most frequently. Without stable funding, SBHCs will likely have limitations in fulfilling their potential to increase health equity. The implication for policy is that the prevention of chronic childhood trauma is an

ideal goal to assure health equity and mental well-being in the US. If primary prevention or exposure to chronic childhood trauma is not feasible, then high quality, accessible, and culturally-responsive mental health screening and treatment services are urgently needed for children and adolescents, specifically within school settings.

Special Thank You to Dr. Howard Pinderhughes

Figure 1. Conceptual Framework

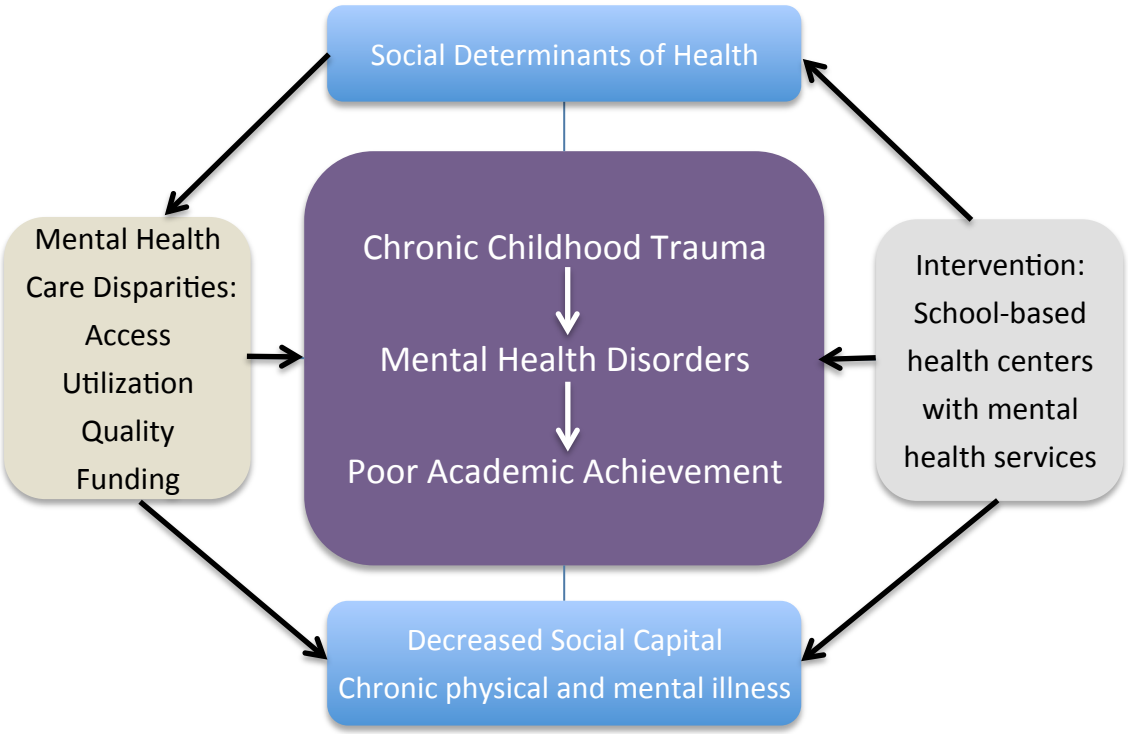

Table 1. Literature Review Search Terms

Search Term	*	Articles that Met Criteria for Inclusion**
A. Childhood Trauma's Effect on Academic Achievement as Mediated by Mental Health Disorders		
Childhood trauma, mental health disorders, academic achievement	13	McLean, Rosenbach, Capaldi, and Foa (2013)
Violence, mental health disorders, academic achievement	9	Busby, Lambert, and Ialongo (2013); Mathews, Dempsey, and Overstreet (2009); Schwartz and Gorman (2003)
Childhood trauma, emotional behavioral disorders, academic achievement	6	Overstreet, Mathews (2011); Foshee, Reyes, Gottfredson, Chang, Ennett (2013)
Victimization, psychosocial functioning, academic performance	5	Holt, Finkelhor, and Kaufman-Kantor (2007)
Childhood trauma, psychiatric disorders, and school dropout	4	Porche, Fortuna, Lin, and Alegria (2011)
Exposure to violence, psychological problems, school engagement	3	Voisin, Hunnicutt, and Neilands (2011)
Childhood maltreatment, academic performance	3	Slade and Wissow (2007)
B. Pediatric mental health care disparities in access, utilization, quality, and financing		
Mental health care, utilization, access, children, adolescents, disparity	18	Thomas, Temple, Perez, Rupp (2011); Cummings, Ponce, Mays (2010)
Mental health care, quality, pediatrics, disparity	26	
Financing, mental health services, children and adolescents	38	Kapphahn, Morreale, Rickert, and Walker (2006)
Mental health care, pediatrics, disparity	2	Coker, Austin, Schuster (2010); Sturm, Ringel, Andreyeva (2003)
Healthcare disparities, access, utilization, child, adolescent, mental health	16	Le Cook, Barry, Busch (2013); Husky, Kanter, McGuire, Olfson (2012); Flores and Tomany-Korman (2008)
Mental health, child, adolescent, health care quality indicators	29	Bethell et al. (2011)
C. School-based health center mental health service access, utilization, quality, and financing		
School-based health centers, mental health	46	Anyon et al. (2013); Guo, Wade, Keller (2008); Wade, Mansour, Line, Huentelman, Keller (2008); Juszczak, Melinkovich, Kaplan 2003
School-based health centers, access	5	Gibson, Santelli, Minguez, Lord, Schuyler (2013); Soleimanpour, Geierstanger, Kaller, McCarter, Brindis (2010)
School-based health centers, quality	29	
School-based health centers, financing	52	
School health services, cost	83	Nystrom and Prata (2008)
D. School-based health center mental health service use impact on academic achievement		
School-based health center, academic outcomes	1	Walker, Kerns, Lyon, Bruns, and Cosgrove (2010)
School-based health center, academic outcomes	4	Kerns, Pullman, Walker, Lyon, Cosgrove, Bruns (2011)

*Number of Articles from Databases PsycINFO and PubMed
**Articles that appeared in multiple searches were not relisted

Table 2. Studies of Chronic Childhood Trauma's Impact on Academic Achievement as Mediated by Mental Health Disorders

Study-Main Author	Study Design	Study Period	Study Population United States	Main Effects Measured (All include sociodemographics)	Results
Busby et al. (2013)	Longitud-inal cohort interviews	3 years	491 6th graders, African American	Community violence, symptoms of depression anxiety aggression, academic functioning	Aggressive behavior mediated the association between exposure to community violence and academic performance
Foshee et al. (2013)	2o analysis Context Study	2003-2005	3,328 rural 8th- 10th graders	Exposure to dating abuse victimization, family conflict, substance use, symptoms of anxiety and mood disorders, grades	Exposure to dating abuse victimization increases the risk of adolescent substance use and, for girls, internalizing symptoms but no impact on grades.
Holt et al. (2006)	Cross sectional survey		689 urban 5th graders, low SES	Victimization: peer, sibling, maltreatment, sexual, witness to, crime; symptoms of anxiety and depression; grades	Students exposed to multiple forms of victimization are more likely to have psychological distress, academic problems, peer victimization, and to have been victimized sexually.
Overstreet and Mathews (2011)	Literature review		School-aged children	Chronic trauma, cognitive impairment, academic functioning, mental health care	Children experiencing academic failure, emotional disorders, or both, are more likely to have been exposed to chronic trauma.
Mathews et al. (2009)	Cross sectional survey		47 urban 5th-6th graders, African American	Exposure to community violence, posttraumatic stress symptoms, school functioning, poverty status	Exposure to community violence is inversely related to academic achievement as mediated by posttraumatic symptoms.
McLean et al. (2013)	Cross sectional survey and interview		90 urban 13-18 yo females in treatment for PTSD	Child sexual abuse, PTSD severity, family functioning, drug use, social competence, school performance	PTSD from child sexual abuse negatively impacts social functioning but not academic outcomes.
Porche et al. (2011)	2o cross sectional analysis CPES	2001-2003	2,532 21-29 yo	Childhood trauma, psychiatric diagnoses, mental health service use, dropout status	Childhood trauma significantly impacts development of mental health disorders and high school dropout.
Schwartz and Gorman (2003)	Cross sectional surveys, SAT-9 score, GPA		237 urban 3rd-5th graders, minority race, low SES	Exposure to community violence, in-class disruptive behavior, bullying by peers, symptoms of depression, academic success	School-aged children exposed to community violence are at risk for symptoms of depression and disruptive behaviors that may negatively impact academic achievement.
Slade and Wissow (2007)	2o analysis longitudi nal study	1994-1995, 2001-2002	132 middle & high school students and paired sibling	Maltreatment index, low birth weight, school performance	Childhood maltreatment is associated with lower GPA. Earlier onset and chronic exposure had a greater effect.
Voisin et al. (2011)	2o cross sectional analysis survey	2006	563 urban high school students, 80% African American	Community violence, marital conflict, gender, problem behaviors, school engagement	In home and community violence exposure negatively impacts school success when mediated by psychological problem behaviors.

CPES=Collaborate Psychiatric Epidemiological Survey; GPA=Grade point average; PTSD=Post-traumatic stress disorder; SES=socioeconomic status; SAT=Standard Achievement Test 9th ed.

Table 3. Studies of Pediatric Mental Health Care Disparities

Study Main Author	Study Design	Study Period	Study Population United States	Main Effects Measured (All with socio-demographics)	Results
Bethell et al. (2011)	2^{o} cross sectional analysis NCSH telephone survey	2007-2008	9,1642 0-17 year old	Insurance coverage, minimal quality of care index, access to medical home, BMI, 20 chronic medical or mental conditions	State of residence, family income level, and race or ethnicity, have a major role in whether children lack consistent insurance coverage or have adequate mental health coverage.
Coker et al. (2009)	2^{o} analysis Healthy Passages survey cohort	2004-2006	5,147 5th graders (and parents) from metropolitan areas	Mental health care utilization, child mental health symptoms, parental mental health symptoms, social resources and well-being	There are significant disparities in mental health care utilization for African American children which cannot be fully explained by racial/ethnic differences in parental social factors, family socio-demographics, or child mental health. Hispanic children did not have a disparity in utilization when compared to White children.
Cummings et al. (2010)	2^{o} cross sectional analysis of Add Health survey	1994-1995	7th-11th graders	Received counseling in a clinic or school, symptoms of depression, substance use, delinquency score	Minority students are less likely to receive mental health counseling in a community clinic when compared to White adolescents while no differences were found in schools.
Flores and Tomany-Korman (2008)	2^{o} cross sectional, NSCH telephone survey	2003-2004	102,353 0-17 year old	Access and use of medical and dental care, medical and oral health status	Less than 10% of racial/ethnic groups other than non-Latino White had received mental health care in the past 12 months. Native Americans had highest disparities.
Husky et al. (2012)	2^{o} cross sectional analysis in-person interviews	2001-2004	13-14 yo and parent; nationally representat-ive sample	Service use for mental health "problems", suicidal ideation/attempt	Rural low-income African Americans in public high schools participate more often in a school-based mental health-screening program than White students.
Kapphahn et al. (2006)	Review of current state of affairs		Adolescents	Mental health care insurance coverage, cost of access, parity of mental health services	Adolescent mental health problems are prevalent and result in serious impairments when not treated. Funding early mental health care cost-efficient and humane.
Le Cook et al. (2013)	longitudinal 2^{o} analysis of MEPS	2002-2007	30,171 5-21 year old	Need for mental health care, use of mental health care, insurance status	Disparities in mental health care for African American and Latino populations continue to persist over time.
Sturm et al. (2003)	Cross sectional 2^{o} analysis of NSAF	1997 1999	45,247 6-17 year old	Use of mental health services, need for mental health care, unmet need	Mental health care disparities are determined by state of residence. The majority of states have a higher need for mental health services than utilization rates.

Add Health=National Longitudinal Survey of Adolescent Health; MEPS=Medical Expenditure Panel Survey; NSAF=National Survey of America's Families; NSCH=National Survey of Children's Health

Table 4. Studies of School-based Health Center (SBHCs) Mental Health Services

Study-Author	Study Design	Study Period	Study Population (US)	Main Effects Measured (All include socio-demographics)	Results
Anyon et al. (2013)	2° cross sectional analysis of YRBSS	2007	1,755 urban 9th-12th graders	Health risks, use of SBHC, race	SBHCs increase access/utilization of services for at risk minority youth except for Asian students. Older students who were sexually active, had depressive symptoms, or used substances more likely to use SBHC.
Gibson et al. (2013)	Cross sectional survey	2009	2,076 urban 9th-12th graders	Access to, quality of care, and willingness to use SBHC	SBHCs increase access and utilization of care for 10-12th graders.
Guo et al. (2008)	Longitudinal time-series repeated measures	1997-2003	School-age students in metropolitan schools with Medicaid or SCHIP	Students who used mental health services before and after SBHC opened, total annual cost and reimbursement per student, psychosocial physical HRQOL score	SBHCs increase student access to mental health services in both urban and rural school settings. SBHCs reduce Medicaid costs per student and may have clinical improvements in psychosocial function.
Juszczack et al. (2003)	Retrospective cohort design	1989-1993	451 urban highs school students	Student medical chart review-Group 1 at school with a SBHC but did not use it; Group 2 school did not have SBHC; Group 3 at a school with a SBHC and used SBHC.	Students were 21 times more likely to initiate a mental health visit at a SBHC compared to community clinic. SBHCs increase access and utilization of health and mental health services in adolescents.
Nystrom and Prata (2008)	Survey, cost analysis, case study	2006-2007	20 SBHC systems in Oregon	Startup costs, annual operations costs, revenues	Type of sponsorship impacts source of revenue. Non-FQHC SBHCs rely on state funding while FQHC SBHCs rely on billing insurance.
Schlitt et al. (2008)	Mailed survey	2004-2005	All state public health departments	Number of SBHCs, amount of funding and state criteria for funding distribution, types of technical assistance and performance data collection, Medicaid/SCHIP policies	States continue to increase SBHC initiatives and state-level leadership promotes the expansion of the SBHC model of care. Less than half the states in 2004 had set SBHC policies and funding not reliable.
Soleimanpour et al. (2010)	SBHC encounter form, pre-post client survey, focus group	2006-2009	12 SBHCs in California; 7410 clients, 286 surveys, 12 focus groups	Provider reported clinical data (service use, referrals, impact on health outcomes), pre-post client survey (sources of care, impact on health, satisfaction), focus groups	1 in 10 SBHC clients did not get needed mental health services from any source of care. With national averages of 1 in 3 students not receiving mental health services, the SBHC appears to improve access.
Thomas et al. (2011)	Analysis of self-report survey	2008	1,694 9th-12th graders, Texas school with SBHC	Depressive symptoms, gender, race	Black and Hispanic students less likely to have been screened or diagnosed with depression at SBHCs compared to White student
Wade et al. (2008)	Analysis SBHC medical encounter data	2000-2003	13,046 rural and urban K-8 students at schools with SBHCs	Enrollment into SBHC, utilization of SBHC, referral sources	SBHCs improve access and utilization of health and mental health care services in children, especially those of low SES or minority race.
Kerns et al. (2011)	Longitudinal retrospective cohort	2005-2009	3,334 urban 9th graders	Average monthly use of SBHC, dropout status	Strong inverse relationship between SBHC use and dropout for students using SBHCs except among the 10% most frequent high-risk users.
Walker et al. (2010)	Retrospective analysis of SBHC database	2005-2008	2,306 9th graders in Seattle school district	Compare GPA/attendance in students who began use of SBHC first semester of high school to those who did not ever use SBHC	Students who utilize SBHCs for medical services have improved attendance while students who utilize SBHCs for mental health services have improved academics.

GPA=grade point average; K=kindergarten; YRBSS=Youth Risk Behavior Surveillance System

Chapter 3

Characteristic Differences Among School-based Health Centers With or Without Mental Health Providers: A Review of National Trends.

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2016

Introduction

Approximately 71% of children and adolescents in the United States have experienced childhood trauma in the form of victimizing and non-victimizing events.[2] Victimizing events include all forms of abuse, neglect, and witnessing family and community violence.[2] Non-victimizing events include poverty, food insecurity, episodes of homelessness, parental substance abuse, parental unemployment, marital discord, parental mental illness, and parental incarceration.[2] Exposure to chronic childhood trauma is associated with mental health disorders.[5,6] One in 5 children and adolescents have a diagnosable mental health disorder that can have severe lifetime impairment, yet estimates indicate that 70% do not receive mental health services, with lower socioeconomic status (SES) and/or minority race and ethnic youth even less likely to receive care.[32,34,36,40] Increasing access, utilization, quality, and funding of mental health care is of national concern. Untreated mental health disorders negatively impact academic and social functioning with related decreased opportunities for educational, employment, and social mobility advancement and can lead to severe disability and early death.[32,41-47]

Schools are an important point of contact for prevention, identification, and treatment of behavioral health problems because of their availability and accessibility to students.[49] The school-based health center (SBHC) is a model of pediatric primary care delivery that offers comprehensive services provided by a multidisciplinary team on school grounds.[54,55,62] SBHCs have been shown to increase access to and utilization of high-quality cost-effective health care services for children and adolescents, especially in underserved populations. [53-55,61-64]

Several studies of SBHCs have demonstrated their ability to improve academic scores, increase school attendance, decrease school dropout, receive favorable approval by adolescents, and provide cost-efficient quality care.[53,56,57,59,60,74-76]

Though the SBHC is a successful model of care, less than 2% of US schools have one, and among those schools with an SBHC, one-third do not provide mental health services.[95] The expansion of the SBHC model of care may be a valuable health equity strategy in addressing the gaps in provision of pediatric health and mental health care. SBHCs staffed with mental health providers may be uniquely positioned to mitigate the negative health effects of exposure to chronic childhood trauma. The purpose of this paper is to describe factors associated with SBHCs in the US that are staffed with mental health providers as compared to those that are not in order to aid policy creation that promotes access, utilization, quality, and funding of pediatric mental health services both among SBHCs and other models of adolescent-specific care.

Methods

Data Source

We conducted a secondary analysis of cross-sectional data from the National School-based Health Care Census School Year 2010-2011 Census Report. The School-based Health Alliance (SHA), previously known as the National Assembly on School-based Health Care (NASBHC), is a national advocacy group that has collected data every 2 to 3 years from SBHCs nationwide beginning in 1986. Survey items are nominal scales and include demographics of students and schools served, staffing services, operations, prevention activities, clinical services, and policies.

The SBHC Census surveys a variety of school-based and school-linked health organizations including those that partner with schools and deliver health care to students within a fixed site on school campus (school-based); programs that are formally or informally linked with schools, but provide clinical services not directly on school campus (school-linked); programs that provide health care without a fixed site (mobile); and programs offering clinical services via telehealth.[95] The majority of survey items have remained consistent since 2005,

though there have been some deletions and additions. Collection of data occurred from October 2011 to November 2012 with census questions pertaining to the 2010 to 2011 academic school year. Nationwide, 1,930 centers and programs were identified as being school-based, school-linked, mobile, or telehealth programs.[68] Of these, 1,485 (77%) responded to the survey and the SHA included 1,381 programs in the census data for the sites that provided primary care (SHA, 2013). The SHA excluded programs that did not provide primary care because their identification was less systematic and the data from these alternative models may not be generalizable.[68] The organization also omitted sites if their survey data was incomplete.[68] Permission to utilize the database was obtained from the SHA National Advocacy Group. This study was approved by the University of California San Francisco's Committee of Human Research (CHR).

Data Analysis

We used descriptive statistics to describe and summarize the characteristics of SBHCs with and without on-site mental health providers at the SBHC. In all analyses, the variable of interest was a dichotomous variable indicating whether or not a SBHC had a mental health provider as part of their staff. Mental health providers listed in the census survey include licensed social worker/counselor/therapist, unlicensed social worker/counselor/therapist, alcohol and drug counselor, psychologist, psychiatrist, and psychiatric nurse practitioner. Chi-square tests were used to assess whether differences were statistically significant between those SBHCs with a mental health provider and those SBHCs without a mental health provider. Data were analyzed using SPSS Version 22.

Results

Differences Among US School-based Health Centers With or Without a Mental Health Provider

Of the 1381 SBHCs in the 2010-2011 census survey, 978 had a mental health provider on staff at the SBHC. There were many significant differences between SBHCs that had a mental health provider on staff compared to those SBHCs without such services, as shown in Table 1. Mental health providers were found more often in SBHCs that serve a larger student body, had been in operation longer, were open more hours, utilized electronic billing, and had a prearranged source for after-hours care.

Funding source and sponsoring organization also were different for SBHCs with and without mental health providers. A significantly greater proportion of SBHCs with a mental health provider had state government and/or managed care organizations as sources of funding. They also served students with Medicaid insurance at significantly higher rate, 86%, compared to 76% of SBHCs without a mental health provider ($p<0.001$). A significantly greater proportion served students without insurance (59% of SBHCs without a mental health provider vs. 48% with; $p<0.001$).

Two-thirds of SBHCs with mental health providers were found at schools at which there was also a school-employed mental health provider on school grounds or co-located within the SBHC, compared with about half of schools without a SBHC mental health provider (67% vs. 54%; $p<0.001$). Students attending schools with school-employed nurses (either on campus or co-located within the SBHC) were served in similar proportions by SBHCs with or without mental health providers (78% versus 76%, $p=0.3$). Significantly greater proportions of SBHC staff in sites that had mental health providers participated on school wellness (74% vs. 58%), crisis management (62% vs. 32%), and school improvement (39% vs. 23%) committees (all values $p<0.001$). A significantly greater proportion of SBHCs with mental health services also had students who provided feedback to the SBHC (85% vs. 65%), served on the SBHC Board

(55% vs. 30%), participated in SBHC advocacy activities (49% vs. 21%), and participated in design of services (31% vs. 19%) as compared to SBHCs without a mental health provider (all values $p<0.001$).

Mental health providers were more commonly found within SBHCs that served upper grade levels. A greater proportion of SBHCs with a mental health provider served 9-12 grades (34% vs. 20%; $p<0.001$), while a greater proportion of SBHC without a mental health provider served grades K-5 (21% vs. 10%; $p<0.001$). SBHCs with mental health providers were found in similar proportions among urban, rural, and suburban locations (not shown). Additionally, there were non-significant differences in the proportion of SBHCs with mental health providers and the number of students eligible for a free or reduced price lunch (not shown).

Staffing Profile of School-based Health Centers With Mental Health Providers

Table 2 presents data on full time equivalent (FTE) staffing by provider type at SBHCs with a mental health provider. Nurse practitioners were found in 79% of SBHCs. They had the highest average FTE among providers of primary health care services. The full time equivalent mean for nurse practitioner services was 0.77, followed by physicians (0.32 FTE) and physician assistant staffing (0.78 FTE).

Among SBHCs with a mental health provider, 85% employed a licensed social worker/counselor/therapist with a mean of 0.82 FTE. Other mental health providers included unlicensed social worker (20%), psychologist (15%), alcohol and drug counselor (14%), and a psychiatrist (11%). The least commonly employed mental health provider was a psychiatric nurse practitioner. They were found in only 3% of SBHCs with mental health providers. However, in those SBHCs with psychiatric nurse practitioners, the mean FTE was 0.45, with a

range of 0.06 to 2.29. Twenty-three of the 28 psychiatric nurse practitioners (82%) were located in urban SBHCs.

There was a wide range of FTE staffing for each type of mental health and non-mental health provider among the SBHCs, with a FTE range of 0.06 to 14.86. SBHCs health centers with mental health providers more commonly employed medical assistants (48%) than registered nurses (36%) or licensed vocational nurses (14%). Half (50%) employed an administrative assistant and almost 20% had a health educator on staff. Though few in number, SBHCs with mental health providers also employed a dental hygienist (14%) and a dentist (11%).

Mental Health Services Provided On-site by School-based Health Centers

Schools both with and without mental health providers offered a range of mental health services. However, these services were more available at SBHCs with mental health providers. As shown in Table 3, a significantly higher proportion of SBHCs with a mental health provider compared to those without provided: crisis intervention (92% vs. 40%), comprehensive individual evaluation and treatment (90% vs. 30%), case management (82% vs. 35%), classroom behavior and learning support (74% vs. 33%), substance abuse and counseling (64% vs. 25%), individual assessment and treatment of learning problems (59% vs. 26%), and peer mediation (53% vs. 17%) (all p-values<0.001). Not surprisingly, a significantly greater proportion of SBHCs with a mental health provider prescribed and managed mental health medications (44% vs. 25%; p<0.001) (Table 3).

Behavioral and Health Promotion Services Provided by School-based Health Centers

SBHCs with mental health providers provided a broader range of behavioral and health promotion services (see Table 4). The top three topics of health promotion provided by a SBHC with a mental health provider were programs about healthy eating/active living/weight

management, emotional health and well-being, and suicide prevention. Nearly all health topics directed at individuals, small groups, classrooms, parents, or communities were offered at a higher proportion of SBHCs with a mental health provider compared to those without such a provider. Prevention programs for parents regarding adolescent tobacco, alcohol, and drug use were the only three topics found in similar proportions between SBHCs with and without a mental health provider.

Discussion

The data demonstrate that 70% of SBHCs participating had a mental health provider on site. Compared to SBHCs without a mental health provider, those with such providers tended to have more resources. They were more available to students, open more hours, and had a prearranged source of after-hours care. SBHCs with mental health providers had more electronic billing and health records. Electronic health records can support better coordination among different types of agencies and may be linked to having more resources overall. SBHCs with mental health providers also more often had services provided by other health care providers, such as dentists or health educators.

The type of sponsoring agency of a SBHC played an important role in whether or not the SBHC had a mental health provider as part of their staff. Those SBHCs sponsored by a mental health agency more often had a mental health provider. This speaks to the potentially greater availability of mental health providers to serve schools. In contrast, SBHCs sponsored by a community health center may have difficulty in finding available mental health providers, particularly if mental health services are not provided by the community health center. The type of funding also appears to be associated with the ability to employ a mental health provider. School-based health centers that can bill state government funds or managed care organizations

tended to have a mental health provider on staff, again pointing to greater resources available to those schools. In general, SBHCs that served younger elementary-level students did not have a mental health provider at the SBHC, while SBHCs that served older high school students were more likely to have a mental health provider on site. This may reflect studies that show that adolescents are a period in which many mental health problems emerge.[96]

Geographic region was not shown to have an impact on whether or not a SBHC included a mental health provider. Though previous literature has demonstrated that rural areas were less likely to have access to a mental health provider,[97] in this research we found that mental health providers were on-site in similar proportions among urban, rural, or suburban SBHCs.

Making mental health services available across socioeconomic lines is important. Regardless of income, mental health services are needed due to the high incidence of mental health disorders among youth.[32] The percent of students eligible for free or reduced price lunch (as a marker of poverty level) did not differentiate whether a SBHC included a mental health provider.

The SBHC's ability to provide individual, small group, campus-wide, parental, and community behavioral and health promotion interventions may help to normalize issues related to emotional health and well-being. Students may feel safe to reach out for mental health services at a SBHC due to not needing parental consent. Yet, they may not want to participate in small group campus-wide activities for fear their friends will know that they are seeking services. Also, only a few SBHCs provided parental and community-level interventions.

SBHCs with mental health providers were generally staffed by a nurse practitioner for primary care services and a licensed social worker/counselor/therapist for mental health care. Unlicensed social worker/counselor/therapists, alcohol and drug counselors, psychologists,

psychiatrists, and psychiatric nurse practitioners were also employed by SBHCs, albeit in fewer numbers. Psychiatric nurse practitioners were found in only 3% of SBHCs. It is unclear if this is indicative of there being very few psychiatric nurse practitioners in the United States or if it is related to scope of practice laws that require them to work in collaboration with, or be supervised by, a psychiatrist in many states. When mental health services were made available, services were more comprehensive, including crisis intervention, comprehensive individual evaluation and treatment, case management, classroom behavior and learning support, substance abuse and counseling, individual assessment and treatment of learning problems, and peer mediation. However, it is important to note that not all mental health care services were available even when a mental health provider was part of the staffing profile.

Very few SBHCs prescribed and managed behavioral and mental health medications. The data shows the majority of SBHCs employed social workers/therapists and this type of mental health professional does not prescribe medications.[98] Psychologists, until very recently, were not allowed to prescribe medications, though this is slowly changing in state laws.[99] The wide range in licensure, training, and scope of practice among mental health professionals found in SBHCs may steer the type of mental health services available at SBHCs rather than be a response to the demand for specific services. Even if SBHCs employed the same type of mental health provider and had the same FTEs, there could be considerable variability in the quality of care (experience, language proficiency, gender match, racial/ethnic match, provider attitudes, types of therapy employed, etc.). Variances in licensure, FTE status, and attributes of the mental health provider contribute to the lack of continuity and fragmentation in mental health care at SBHCs. Also, the absence of a mental health provider at a SBHC does not necessarily preclude a SBHC from

providing mental health services if those services can be and are provided by primary care practitioners.

Another salient point is not all SBHCs have the same type of mental and behavioral health services. This may be related to licensure, FTEs, attributes of the providers, or the cultural climate of the school and community. It also may be related to the needs of the student population or be based on other factors, such as availability of providers or resources. Youth exposed to trauma and youth with mental health disorders may need different levels of care and in different approaches. From the data, we cannot determine if a SBHC provides group-level interventions because of limited resources or because this approach has been shown to be more effective with adolescents. The data also do not allow for the determination of whether the mental health needs of the student determine what type of mental health provider is at the SBHC or if other reasons determine the type of provider employed (availability, cost, sponsoring agency, scope of practice, stigma). Further research is needed that reviews the quality of mental health services provided by SBHCs.

The study also highlights how school-employed staff, such as the school nurse and school mental health provider, are often not integrated into the SBHC. With only 34% of school nurses and 14% of school psychologists co-located in SBHCs (data not shown), there is an increased risk in duplicate services and screenings and decreased ability to coordinate care among the providers and agencies. Further qualitative exploration could help understand the relationship between having a school-employed mental health provider external to the SBHC and SBHCs that integrate their own mental health provider. Additionally, future research could help assess what factors contribute to less investment in mental health services when both the school and the

SBHC do not provide mental health services. Issues related to stigma in use of mental health services may be a contributing factor.

Involving students in SBHC activities other than health care visits was associated with a SBHC having a mental health provider. Further qualitative studies may be helpful in teasing out if student involvement lends to the addition of a mental health provider or if it is a reflection of a SBHC with more resources.

Limitations

The survey is completed on a voluntary basis so there is a risk that SBHCs with more resources are more likely to respond to the survey. However, the sample includes a large proportion of all clinics in the US so this risk is minimalized. Some survey items did not have operational definitions and therefore the person completing the survey was responsible for interpreting the meaning of the item. There also were challenges related to specific variables, such as the variable related to grade level of student; this survey item asked what grades were served and not what type of school was served. Because this study uses a cross-sectional design, it cannot determine which characteristics of SBHCs have a causal impact on the likelihood of having a mental health provider.

Conclusion

There is a great need for pediatric mental health services. Exposure to chronic childhood trauma is pervasive and a major predictor of mental health disorders and poor academic achievement. The provision of mental health screenings, preventive care, treatment, and peer and parent groups at schools has the potential to decrease the impact of childhood adverse events. SBHCs are in a position to ameliorate the impacts of exposure to chronic childhood trauma since a large proportion provide primary preventive health and mental health care. The

promotion of the SBHC model of care is a structural intervention with the potential to increase access and utilization of mental health care if services are provided on a sufficient basis and a coordinated physical and behavioral health care plan can be developed for the individual client. This combination of services also has the potential to improve academic achievement, especially among hard-to-reach adolescents, low-income rural and urban pediatric populations, and racial and ethnic minority populations. Further studies are needed to review if mental health care provided by a SBHC has an impact on mitigating childhood exposure to trauma.

Special Thank You to Dr. Steven Paul

Table 1. Differences Between School-based Health Centers With and Without Mental Health (MH) Providers

VARIABLE	WITH MH PROVIDER (*N=978*) N	%	WITHOUT MH PROVIDER (*N=403*) N	%	X^2	CRAMER'S V
Number of students at school with SBHC					8.16*	0.08
less than 1000 students	544	62.2	206	71.5		
1000 or more students	330	37.8	82	28.5		
Grades served by SBHC						
Grades 9-12	330	33.7	81	20.1	62.3**	0.21
Grades K-5	102	10.4	83	20.6		
Length of time SBHC in operation					13.88**	0.11
10 or more years	494	56.1	150	44.2		
Hours/week open (during school year)					24.00**	0.14
31 hours or more	659	70.6	203	56.2		
Open during the summer months	420	45.3	134	37.4	6.53*	0.07
Electronic billing	661	79.8	217	68.2	17.23**	0.12
Electronic health records	479	51.1	205	58.4	4.87*	0.06
Prearranged source of after-hours care	695	74.4	219	60.7	23.69**	0.14
Type of Sponsor					43.09**	0.18
Community health center	279	28.9	169	45.1		
Hospital or medical center	273	28.3	81	21.6		
Local health department	124	12.8	54	14.4		
School system	115	11.9	36	9.6		
Private, non-profit organization	66	6.8	19	5.1		
Mental health agency	16	1.7	1	0.3		
Other	93	9.6	15	4.0		
Populations eligible to use center						
Family of student users	300	32.3	171	51.5	38.42**	0.18
Faculty/school personnel	325	34.9	143	43.2	7.20*	0.08
School-employed mental health provider					19.14**	0.12
In school separate or within SBHC	645	67.4	187	54.2		
Bills for services to students with:						
Medicaid: State agency	793	86.2	275	76.4	18.01**	0.12
No insurance, self pay, sliding scale	444	48.4	211	58.5	11.08*	0.09
Sources of revenue						
State government	758	84.6	202	62.5	69.05**	0.24
Managed care org. or private insurer	275	31.9	77	24.2	6.50*	0.07
SBHC participates on school committees						
School wellness	667	73.9	202	57.5	31.96**	0.16
Crisis management	539	61.5	103	32.2	80.78**	0.26
School improvement	331	39.0	71	22.8	26.24**	0.15
Student involvement with SBHC						
Provide feedback to SBHC	752	85.4	206	65.2	59.20**	0.22
Serve on SBHC committee or Board	480	55.3	90	30.2	55.92**	0.22
Participate in advocacy activities	408	48.6	57	20.5	67.74**	0.25
Participate in design of services	268	31.2	55	18.6	17.09**	0.12

*p<0.01

**p<0.001

Table 2. Staffing Profile of School-based Health Centers With Mental Health Providers

Full Time Equivalent (35 hrs/wk)[1]	% WITH Provider	Mean FTE IF ANY	Median FTE IF ANY	Max FTE IF ANY
Primary Care				
Nurse practitioner	79.0	0.77	0.80	5.71
Physician	44.3	0.32	0.11	5.71
Physician assistant	13.2	0.78	0.86	2.29
Nurse midwife	1.6	0.58	0.49	1.14
Mental Health Care				
Licensed social worker	85.1	0.82	0.86	5.71
Unlicensed social worker	19.9	0.85	1.00	2.74
Psychologist	15.1	0.85	1.14	2.29
Alcohol and drug counselor	13.5	0.74	1.00	1.40
Psychiatrist	11.2	0.27	0.10	0.25
Psychiatric nurse practitioner	2.9	0.45	0.23	2.29
Dental Services				
Dental hygienist	14.0	0.39	0.20	3.43
Dentist	11.0	0.58	0.43	3.43
Dental assistant	10.3	0.80	0.46	8.00
Clinical Support				
Medical assistant	48.8	1.08	1.09	13.71
Registered nurse	36.1	1.00	1.09	10.86
Licensed practical nurse	14.0	0.92	1.00	3.43
Other Services				
Administrative assistant	50.8	1.06	1.14	14.86
Health educator	19.4	0.58	0.44	2.29
Outreach coordinator	13.4	0.62	0.57	2.29
Registered dietician	13.6	0.23	0.20	2.29
Case manager/social services	12.1	0.78	0.57	10.86
Optometrist/ophthalmologist	0.5	0.29	0.23	0.69

1. FTE calculated using only those clinics that had the profession on staff. FTE mean does not include missing or zero hour answers.

Table 3. Mental Health Services Provided On-Site At School-based Health Centers

MENTAL HEALTH SERVICE ON-SITE	MENTAL HEALTH PROVIDER (N=978) N	%	NO MENTAL HEALTH PROVIDER (N=403) N	%	X^2	Cramer's V
Crisis intervention	849	92.4	139	39.9	404.24**	0.57
Comprehensive evaluation/treatment	826	89.9	105	30.1	463.45**	0.61
Case management	749	81.5	121	34.8	256.20**	0.45
Classroom behavior/learning support	677	73.7	114	32.8	180.10**	0.38
Substance abuse counseling	586	63.8	88	25.3	150.10**	0.34
Evaluation of learning problems	545	59.3	92	26.4	109.07**	0.29
Peer mediation	490	53.4	59	17.0	136.31**	0.33
Prescribe/manage mental health meds	400	43.5	80	25.4	34.72**	0.17

**p<0.001

Table 4. Behavioral and Health Promotion Services Provided by School-based Health Centers

HEALTH PROMOTION SERVICES	INDIVIDUAL			SMALL GROUPS			CLASSROOM			PARENTS			COMMUNITY		
	%	%	X^2	**%**	%	X^2	**%**	%	X^2	**%**	%	X^2	**%**	%	X^2
Healthy eating, active living, weight mngt	**93.3**	81.7	39.4**	**49.8**	27.8	51.2**	**42.7**	23.3	41.6**	**29.6**	21.4	8.8*	**16.1**	8.9	11.1*
Emotional well-being	**91.4**	72.8	75.7**	**44.2**	17.2	81.5**	**33.9**	18.1	31.3**	**21.2**	14.2	8.3*	**13.7**	6.1	14.7**
Suicide prevention	**89.9**	64.4	118.6**	**33.7**	10.3	72.2**	**31.9**	14.7	38.9**	**23.9**	12.2	21.7**	**13.4**	4.2	23.0**
Violence bullying prevention	**87.7**	69.2	61.8**	**42.2**	13.6	94.6**	**39.9**	21.7	38.1**	**24.0**	16.7	8.3*	**13.5**	4.4	21.9**
Tobacco prevention	**85.5**	71.2	35.7**	**37.6**	13.9	68.5**	**41.2**	21.3	44.8**	**24.0**	22.4	0.4	**15.4**	9.1	8.7*
Sexual assault counseling	**84.5**	54.4	129.2**	**27.8**		7.562.0**	**24.1**	10.0	32.3**	**17.9**	8.9	16.1**	**11.7**	3.1	23.1**
Alcohol use prevention	**82.3**	66.2	39.4**	**37.2**		13.072.1**	**39.4**	19.4	46.5**	**23.4**	19.9	1.8	**14.5**	1.8	14.8**
Drug use prevention	**82.4**	64.5	47.9**	**37.0**		10.885.8**	**38.6**	17.7	51.6**	**20.6**	19.1	0.4	**14.7**	6.1	17.8**
School safety and climate	**80.9**	63.3	44.3**	**37.4**		15.856.1**	**35.0**	17.2	39.3**	**19.8**	11.4	12.8**	**13.8**	5.31	8.8**
Sexual orientation	**74.3**	41.9	120.0**	**25.2**		6.954.0**	**22.2**	8.6	32.1**	**12.2**	3.9	20.3**	**10.9**	2.2	25.0**
Gang violence prevention	**70.7**	46.9	64.1**	**28.5**		8.658.2**	**26.3**	10.6	37.6**	**17.9**	8.6	17.2**	**12.2**	3.3	23.4**
Dropout prevention	**65.2**	42.8	54.0**	**23.3**		6.151.0**	**21.5**	7.8	33.7**	**17.0**	6.7	23.0**	**11.3**	2.2	26.7**

BOLD = SBHCs WITH A MENTAL HEALTH PROVIDER (N=978)
Not Bolded = SBHCS WITHOUT A MENTAL HEALTH PROVIDER (N=403)
***p<0.01**
****p<0.001**

Chapter 4

Middle and High School Student Rates of Exposure to Victimizing Events and Use of Substances: A Review of the California Healthy Kids Survey.

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2016

Introduction

Exposure to chronic childhood trauma significantly increases the risk for the development of mental health disorders and poor academic performance.[6,52,77-84] Approximately 71% of children and adolescents in the United States have experienced childhood trauma in the form of victimizing events (all forms of abuse or neglect, witnessing family violence, witness to murder, having a close friend or family member murdered, witnessing war) or non-victimizing events (poverty, food insecurity, parental substance abuse, parental unemployment, episodes of homelessness, marital discord, parental mental illness, and parental incarceration).[100] Higher rates of victimization disproportionately affect children and adolescents in low-income households, of racial and ethnic minorities, with low parental education, and/or living with single parents or stepparents.[2] Estimates indicate 25% of children and adolescents have a mental health disorder that can have severe lifetime impairment, with nearly 70% of these children and adolescents not able to access mental health care.[32,34] Minority race/ethnicity and lower socioeconomic status children and adolescents disproportionately do not receive mental health care.[34,36] Exposure to chronic childhood trauma and the lack of appropriate pediatric mental health care is of national concern for it negatively impacts social and academic functioning with detrimental effects on educational, employment, and social mobility opportunities that can lead to morbidity and early death.[32,41,46]

Background

Chronic Childhood Trauma Impact on Mental Health and Academic Performance

Exposure to chronic childhood trauma places a child or adolescent at significant risk of developing a mental health disorder with subsequent poor academic achievement.[6,52,77,80-82] Urban elementary and high school students exposed to community violence exhibit increased

symptoms of depression, anxiety, aggression with lower academic achievement.[77,81,82] Urban 5th graders exposed to multiple forms of victimization are more likely to have symptoms of anxiety and depression and increased academic problems.[6] Childhood maltreatment has a negative impact on academic performance.[52] Exposure to violence in the home also negatively impacts academic achievement when a child or adolescent also has behavioral health issues.[82] School achievement and the level of education completed affect a person's occupation, where they live, and ability to accumulate wealth.[42-44] Poor school performance leads to decreased social capital and decreased ability to escape exposure from adverse events, primarily poverty, and therefore the cycle of exposure to chronic trauma persists.[73]

This study used a unique survey of California school-age children to examine the extent to which children are exposed to victimizing events, have symptoms of mental health disorders, and engage in substance use. We present results, implications for service, research and policy provision.

Methodology

Research Design

We conducted a secondary descriptive analysis of de-identified cross-sectional data from the 2010 California Healthy Kids Survey (CHKS) Core Module. Permission to conduct the study was obtained from the University of California San Francisco's Committee of Human Research (CHR). Permission to utilize the CHKS database was obtained from WestEd, a national nonpartisan non-profit service agency that works with the California Department of Education and is responsible for the development and fielding of the CHKS surveys.

Survey

California Healthy Kids Survey Core Module**.**

The California Healthy Kids Survey (CHKS) was designed by the California Department of Education (CDE) and incorporates elements of the Youth Risk Behavior Survey (YRBS) to survey risky behavior, resiliency, and protective factors among students.[101] The CHKS Core Module is a survey that asks middle school and high school students about their school campus experiences and their behaviors and attitudes towards alcohol, cigarette, and drug use. The 132-item survey asks questions about demographics, grades, school connectedness, substance use, and exposure to various forms of victimizing events that occur on school property. The survey also includes items related to symptoms of depression and eating disorders. Some key differences between the CHKS and the YRBS is in how the CHKS Core Module does not include items related to a student's height, weight, if they rode a bike or motorbike, if they seriously considered suicide, how many times did they attempt suicide, how does one obtain cigarettes, one's eating patterns (juice, soda, fruit, vegetables), or screen time. These items are available in different modules. The middle school Core Module does not include 10 items that are in the high school version that ask questions regarding "hard" drug use (cocaine, methamphetamine, Ritalin, cough/cold medicine, ecstacy, diet pills, and prescription pain medications such as OxyContin). All other items are the same or nearly identical. The anonymous CHKS Core Module student self-report survey is administered to 5th, 7th, 9th, and 11th graders.[101] Schools that receive funding under the federal Safe and Drug Free Schools and Communities Act (SDFSCA) or state Tobacco Use Prevention Education (TUPE) program are required to administer the CHKS at least once every two years.[102] School participation in the biannual Core Module has varied from year to year with approximately 7,000 schools representing 900 California school districts participating since its inception in 2001. This study utilized the 2010 Core Module that surveyed 729,626 students, of which 639,925 students were

included in the analyses. Excluded from this analysis were students who marked they had only answered some or hardly any of the questions honestly.

Data Analyses

To organize and summarize substance use and victimizing events, data from the CHKS survey were analyzed using descriptive statistics. Students were grouped into 6^{th}-8^{th} grade, 9^{th}-10^{th} grade, and 11^{th}-12^{th} grade. The survey had "other" grade, marked by 492 (0.1%) students. Without an explanation of what "other" grade would be and with such a low frequency of occurrence, these students were removed from the analysis.

Ordinal variables with a 5-point Likert scale were transformed into dichotomous variables that indicate agreement versus non-agreement: "agree" and "strongly agree" were grouped as "agree", and "neutral," "disagree," and "strongly disagree" were grouped as "disagree." With "agree" and "strongly agree" the focus of the outcome, "neutral" was thereby placed with "disagree" and "strongly disagree." Four-point Likert scale questions also were transformed into dichotomous variables, with "pretty much true" and "very much true" grouped into "true", and "little true" and "not true" grouped into "not true." Lifetime use of a substance items were transformed into dichotomous variables, measuring "ever used" versus "never used." Items asking about past 30-day use of substances were turned into similar dichotomous variables. For questions related to the age when a drug was first used or the respondent first had sex, ages were grouped into 12 years and under, 13-14 years, and 15 years and older. Data were analyzed using SPSS Version 22.

Results

Student Demographics

Table 1 presents the general demographics of the students. Of the 639,925 students, just over 50% were female. Approximately one-third of students were 10 to 13 years old, one-third were 14 to 15 years, and one-third were 16 to 18 years. Similarly, about one-third were in 6^{th}-8^{th} grade, one-third were in 9^{th}-10^{th} grade, and one-third were in 11^{th}-12^{th} grade. Nearly 41 percent of the students were Hispanic or Latino/Latina, 34% were White (Caucasian/non-Hispanic), 14% were Asian, 7% were African American/Black (non-Hispanic), 4.5% were American Indian or Alaska Native, and 4% were Native Hawaiian or Pacific Islander. Approximately 80% of students self-reported their grades to be either As, Bs, or Cs, and around 20% self-reported their grades to be primarily Ds and Fs. Of the 302,948 students (representing % of sample) who answered questions pertaining to their living arrangements, 40% live in a home with both parents, 14% in a home with one parent, 2% in another relative's home, and 2% in a home with more than one family. More than 3,000 students reported living in a shelter, car, foster home, hotel, or migrant housing, or on the street.

Exposure to Victimizing Events

Table 2 presents information on exposure to a variety of victimizing events that had occurred one or more times in the past 12 months on school property and subcategorized by grade level. Due to the large sample size, all Chi Square values were significant with p-values <0.001. Students in 6-8^{th} grades were significantly more likely than those in other grades to report they had been pushed, slapped, or kicked at school by someone not just kidding around in the past 12 months (45%). They also were more likely to report that they were afraid of being beaten up (28%), had been in a physical fight (28%), and had mean rumors or lies spread about them (49%). Though the value of $p<0.001$, the percentage of victimization among 6-12^{th} graders was within 3 percentage points among the three groups of grades for having had sexual jokes or

gestures made to them (44%-46%) or to have been threatened or injured by someone with a weapon (7%-10%). Levels of harassment were relatively similar among the different grade levels. Racial or ethnic harassment was the highest, with approximately 17% of all students having been harassed or bullied because of their race or ethnicity. Skipping class because the student did not feel safe at school dramatically and significantly increased with grade level, with 19% of 6-8th graders, 34% of 9-10th graders, and 53% of 11-12th graders being absent from school due to not feeling safe in the past 12 months ($p<0.001$). A significantly higher proportion of females compared to males (49% vs. 37%; $p<0.001$) experienced mean rumors having been spread about them at school while a significantly higher proportion of males compared to females (29% vs. 16%; $p<0.001$) had been in a physical fight at school (not shown).

Student Lifetime Use and Past 30 Day Use of Substances One or More Times

Table 3 presents rates of substance use by students in grades 6-12. Students who had ever used a substance in their lifetime, 43% had one full drink of alcohol, 23% had used marijuana, 18% had smoked a whole cigarette, and 18% had used a cold or cough medicine to get high. Students had used one or more times in the past 30 days the following: 25% had one full drink of alcohol, 14% had drunk 5 or more drinks of alcohol in a row in a few hours, 12% had used marijuana, and 10% had smoked one or more cigarettes.

Exposure to Victimization and Rates of Substance Use, Mental Health Disorder Symptoms, and Academic Achievement

Table 4 presents rates of alcohol, tobacco, marijuana, and other substance use among students who had been exposed to a victimizing event. A significantly higher proportion of students exposed to at least one victimizing event had earlier age of initiation of substance use. A greater proportion of students exposed to a victimization had used in the past 30 days alcohol,

cigarettes, or marijuana compared to students who had not been exposed to the victimizing events. One-third (33%) of students who had been forced to have sex also had 5 or more drinks of alcohol in a few hours in the past 30 days, while 18% of students who had not been forced to have sex had binge-drinked in the past 30 days ($p<0.001$). A greater proportion of students who had been threatened by a weapon used methamphetamines in the past 30 days than those who had not been threatened by a weapon (14% vs. 1%; $p<0.001$) (not shown).

Table 5 presents rates of symptoms of eating disorders and depression, as well as academic achievement, by whether students had been exposed to a victimizing event. Students who had experienced a victimizing event had significantly higher proportions of mental health symptoms ($p<0.001$), including eating disorders and depression, when compared to students without exposure to a victimizing event. Victimized students also had significantly lower grades compared to students who had not been victimized ($p<0.001$). In addition, a greater proportion of students who had been victimized in the form of being pushed, kicked, or slapped on school campus had in the past 30 days not eaten for 24 or more hours in order to lose weight (31% vs. 15%; $p<0.001$). A greater proportion of students who had been harassed because they either were LGBT or thought to be LGBT had also been sad daily for two or more weeks and lost interest in usual activities compared to students who had not been harassed (56% vs. 28%; $p<0.001$).

Discussion

Our analyses revealed high rates of victimization on school grounds by students, particularly those in grades 6 through 8. The top five highest rates of victimization across all grades were for someone having had sexual jokes or gestures made of them, had mean rumors or lies spread about them, had been pushed or slapped or kicked by someone not just kidding

around, had been made fun of because of one's looks, and had one's property stolen or damaged. A greater proportion of middle school students had mean rumors spread about them or had been pushed or kicked or shoved when compared to high school students. Having been harassed due to race, gender, or sexual orientation remained fairly consistent through 6-12 grades. Having been offered or sold illicit drugs was one item that increased with grade levels. Over 30,000 students (5%) reported carrying a gun to campus. The percentage of students bringing a gun to campus was the same throughout middle and high school.

Though the majority of items were for events that occurred on school grounds, the item asking if a student had been forced to have sex was exempt from having taken place on campus. More than a thousand 6^{th}-12^{th} grade students indicated they had been forced to have sex. Thirty five percent of 6^{th}-12^{th} graders reported they had skipped class because they did not feel safe at school. These feelings were carried into their communities, with 20% of 6^{th}-12^{th} graders expressing that they did not feel safe in their neighborhood. Students also experienced non-victimizing events in the form of unstable housing, with 3,300 (<1%) living in a shelter, a foster home, a hotel, migrant housing, in a car, or on the streets.

Substance use occurred across all ages and increased with grade level. Exposure to a victimizing event was significantly associated with younger age of onset of use of substances and binge drinking. Students in grades 6-12 who had been exposed to a victimizing event were also significantly more likely to report having used alcohol, cigarettes, and marijuana in the past 30 days compared to students who had not been exposed to the victimizing event. Exposure to a victimizing event also significantly increased the occurrence of mental health symptoms related to eating disorders and depression. Academic grades were significantly lower for those 6^{th}-12^{th} graders who had experienced victimization on school grounds.

These findings suggest there is substantial need for mental health services for school-age children, and that these services should begin by middle school. The findings also point to how important school-based interventions are since many of these victimizing events are occurring on the school campus. Due to student accessibility, schools are an important point of contact for prevention, identification, and treatment of emotional and behavioral issues and mental health disorders.[49,50] The public health model that utilizes universal, selective, and preventive interventions can be a useful approach in addressing emotional and behavioral disorders.[103] Universal prevention programs are interventions that target a population regardless of risk for victimization or bullying while selective preventive interventions target youth who are at risk and may require additional preventive and treatment interventions to meet the youth's needs.[103] The school-based health center (SBHC) model of care has the ability to provide the three-tiered approach of universal, selective, and indicated preventive and treatment interventions. The SBHC is place-based health care that provides comprehensive primary care services, typically by a nurse practitioner, on school grounds.[95] The SBHC primary care provider or mental health provider is in a position to conduct universal screenings, as well as provide tailored treatment, for students. SBHCs with mental health providers are well positioned to provide individual, small group, classroom, parent, and community interventions and treatments for behavioral health issues. SBHC providers also participate on school committees and may be available to provide professional development of teachers and school staff regarding behavioral health. School nurses and school psychologists are an important universal intervention for these professionals can provide universal screening of students' substance use and exposure to victimizing events and either refer or treat accordingly.

SBHCs are one of many available programs and strategies to address exposure to victimizing events. A meta-analysis of anti-bullying programs determined that the most effective ones include multiple components, are available across a variety of settings, are school wide, and often address school climate.[103] Programs and structural interventions that address school climate are key to decreasing exposure to on campus victimizing events.

Local, state, and federal policy, politics, and financing are major determinants of the expansion of the SBHC model of care, as well as other types of mental health services. School districts and communities that invest in school nurses, psychologists, social workers and SBHC will increase the ability of health care providers to screen and provide care for students. Addressing the violence and victimization that occurs on school grounds can help increase health equity for all students, especially for students who are also exposed to non-victimizing events such as poverty, food insecurity, or homelessness. School-based providers that adopt trauma informed care practice, policy, and treatment modalities will be better equipped to address the behavioral and mental health needs of children and adolescents.

Limitations and Conclusion

There are limitations in the use of the CHKS Core Module. Primarily, the victimizing event, in most instances, had to have occurred on school grounds. School-based victimization may be distinctly different from family or community victimization, so there may be an under-count of the level of trauma experienced by students. Other questionnaire items have limitations as well. For example, "forced to have sex" is limited to those students who have had sex and does not define all forms of sexual abuse. Another concern is the mental health disorders of substance abuse, eating disorders, and depression cannot be diagnosed from the survey because the items are not comprehensive in their scope and do not include a clinical assessment. The

survey also does not have items pertaining to other mental health disorders. Though the survey is not diagnostic, the items still provide important information regarding the high levels of self-reported health risks and risk taking behaviors that require further professional attention by both teachers and other health providers.

There are also technical limitations with the survey. In order for a school district to be considered as having a representative sample of the student population, at least 60% of the targeted students and all selected schools and classrooms must have completed the survey.[102] If the sampling is not representative, then it limits the generalizability of the results. Though the survey is anonymous, students may not accurately self-report confidential information. Bias can result when students choose not to answer a question compared to those who do decide to answer the question. Also, some students marked more than one answer to an item, posing a challenge in determining in which category to classify the answer.

Middle and high school students are exposed to victimizing events on school grounds at alarming rates. Students exposed to victimization use substances at higher rates than their peers not exposed to victimization. These same students also exhibit signs suggestive of mental health disorders as well as poor academic achievement. School districts and communities that invest in school nurses, psychologists, social workers and school-based health centers will increase their ability to provide universal, selective, and indicated preventive interventions in order to improve school climate, potentially decrease victimization rates, and contribute to improved student mental well-being and academic success.

Table 1. 2010 California Healthy Kids Survey Student Demographics

	STUDENTS (N=639925)	
	N	**%**
What is your sex?		
Female	333,530	52.5
Male	301,493	47.1
How old are you?		
10 to 13 years old	220,058	34.6
14 to 15 years old	211,659	33.2
16 to 18 years or older	204,956	32.2
What grade are you in?		
6th - 8th grade	219,634	34.3
9th - 10th grade	213,532	33.4
11th - 12th grade	206,267	32.2
Race		
African American/Black (non-Hispanic)	43,951	6.9
American Indian or Alaskan Native	28,665	4.5
Asian	88,034	13.8
Hispanic or Latino/Latina	267,655	41.8
Native Hawaiian or Pacific Islander	25,135	3.9
White (Caucasian/non-Hispanic)	219,392	34.3
Past 12 months - your grades		
A's - C's	506,582	80.7
D's - F's	121,389	19.3
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Where do you live:		
A home with both parents	118,856	39.2
A home with only one parent	42,337	14.0
Other relatives home	6,434	2.1
On street, in car	872	0.3
Foster home, group care	813	0.3
Shelter	749	0.2
Hotel or motel	493	0.2
Migrant housing	426	0.1

Table 2. Exposure to Victimizing Event One or More Times in the Past 12 Months On School Property by Grade Level*

	6th - 8th grade		9th - 10th grade		11th - 12th grade		TOTAL N=639925	
Victimizing Event	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Been pushed, slapped, kicked	97,671	45.2	63,406	30.1	42,035	20.6	203,226	32.2
Been afraid of being beaten up	61,124	28.2	43,980	20.9	27,616	13.5	132,793	21.0
Been in a physical fight	59,978	27.7	45,512	21.6	34,883	17.1	140,507	22.3
Had mean rumors/lies spread about you	106,741	49.3	87,284	41.5	77,355	38.0	271,544	43.0
Had sexual jokes/gestures made to you	95,801	44.3	98,210	46.7	91,702	45.0	285,874	45.3
Been made fun of because of your looks	96,108	44.5	78,829	37.5	65,198	32.0	240,258	38.1
Had your property stolen or damaged	66,780	30.8	55,977	26.6	45,754	22.4	168,610	26.7
Been offered, sold, given an illegal drug	27,712	12.8	57,091	27.1	68,737	33.8	153,738	24.4
Have you carried a gun to school	10,898	5.0	10,386	4.9	8,794	4.3	30,152	4.8
Have you carried a weapon to school	23,034	10.6	21,861	10.4	20,954	10.3	65,961	10.4
Been threatened/injured with a weapon	21,986	10.2	17,214	8.2	13,684	6.7	52,957	8.4
Harassed because of your race, ethnicity	40,233	18.6	36,476	17.3	30,327	14.9	107,108	17.0
Harassed because of your religion	21,358	9.8	19,212	9.1	16,864	8.3	57,491	9.1
Harassed because of your gender	24,200	11.2	18,771	8.9	15,946	7.8	58,964	9.3
Harassed because you are LGBT	23,315	10.8	19,045	9.1	14,258	7.0	56,676	9.0
Harassed because of a disability	12,760	5.9	10,448	5.0	8,156	4.0	31,418	5.0
Felt unsafe at school so skipped class	41,101	18.9	72,581	34.3	108,170	52.9	222,140	35.1

***All Chi square values p<0.001**

Table 3. Use of Substances in 6th-12th Grade Students: Lifetime Use and Past 30 Day Use

	TOTAL N=639925	
	N	Valid %
LIFTETIME USE, ONE OR MORE TIMES		
Smoked a whole cigarette	114,376	18.0
Smokeless tobacco	40,688	6.4
One full drink of alcohol	271,947	43.1
Marijuana	142,555	22.5
Inhalants	83,038	13.0
Cocaine in any form	29,295	7.1
Methamphetamines	22,179	5.3
LSD or other psychedelics	24,393	5.9
Ecstacy in any form	31,952	7.7
Heroin	12,262	3.0
Prescription pain killers	44,451	14.9
Cold or cough medicine	54,997	18.5
Diet pills	18,298	6.1
Ritalin or Adderall	15,569	5.2
PAST 30 DAYS USE, ONE OR MORE TIMES		
Smoke one or more cigarettes	60,194	9.5
Use smokeless tobacco	19,564	3.1
One drink of alcohol	160,393	25.0
Drink 5 or more drinks of alcohol in a row	89,903	14.2
Marijuana	75,387	11.9
Inhalants	30,194	4.8

Table 4. Exposure to Victimizing Event at School and Rate of Substance Use*

	Pushed, slapped, or kicked				Threatened with a weapon				Forced to have sex			
	NO (N=428,192)		YES (N=203,226)		NO (N=578,996)		YES (N=52,957)		NO (N=11,621)		YES (N=1,322)	
	N	%	N	%	N	%	N	%	N	%	N	%
1st drank alcohol?												
12 or younger	75,699	39.2	56,733	19.5	110,224	43.0	22,442	64.5	2,252	41.1	441	48.5
13 to 14	67,652	35.0	27,215	28.0	86,724	33.9	8,343	24.0	1,924	35.1	307	33.7
15 or older	49,711	25.7	7,801	14.3	59,107	23.1	3,995	11.5	1,301	23.8	162	17.8
1st cigarette?												
12 or younger	41,806	42.4	31,811	58.5	58,135	45.1	15,734	64.1	1,412	44.7	332	51.6
13 to 14	31,592	32.0	14,786	27.2	40,693	31.5	5,862	23.9	987	31.2	185	28.8
15 or older	761	24.1	126	19.6	30,210	23.4	2,935	12.0	761	24.1	126	19.6
1st used marijuana?												
12 or younger	761	28.3	197	34.6	28,874	26.5	11,172	51.5	761	28.3	197	34.6
13 to 14	1,038	38.6	224	39.3	44,333	40.6	7,051	32.5	1,038	38.6	224	39.3
15 or older	888	33.0	149	26.1	35,952	32.9	3,453	15.9	888	33.0	149	26.1
Past 30 days used,												
Cigarettes	1,204	11.8	308	23.7	45,945	8.0	12,995	25.1	1,204	11.8	308	23.7
Binge drinking	1,872	18.2	430	33.0	71,583	12.5	16,760	32.2	1,872	18.2	430	33.0
Marijuana	1,417	13.8	365	28.0	58,522	10.2	15,393	29.6	1,417	13.8	365	28.0

	Harassed because of race				Harassed because of gender				Harassed because LGBTQ			
	NO (N=524,382)		YES (N=107,108)		NO (N=578,996)		YES (N=52,957)		NO(N=574,336)		YES (N=56,676)	
	N	%	N	%	N	%	N	%	N	%	N	%
1st drank alcohol?												
12 or under	101,589	43.4	31,073	55.2	114,455	44.2	18,146	57.2	114,070	44.0	18,435	59.0
13 to 14	78,783	33.6	16,168	28.7	86,067	33.2	8,903	28.1	86,472	33.4	8,473	27.1
15 or older	53,956	23.0	9,064	16.1	58,333	22.5	4,663	14.7	58,654	22.6	4,324	13.8
1st cigarette?												
12 or younger	54,891	45.6	19,032	57.6	62,749	46.6	11,133	59.1	61,907	46.4	11,954	59.9
13 to 14	37,610	31.2	8,852	26.8	41,626	30.9	4,817	25.6	41,319	31.0	5,139	25.7
15 or older	27,970	23.2	5,161	15.6	30,180	22.4	2,895	15.4	30,208	22.6	2,870	14.4
1st used marijuana?												
12 or younger	29,578	28.2	10,601	40.7	33,517	29.0	6,645	44.0	33,096	28.8	7,081	44.7
13 to 14	41,902	39.9	9,465	36.4	46,134	39.9	5,209	34.5	45,797	39.8	5,493	34.7
15 or older	33,416	31.9	5,952	22.9	36,090	31.2	3,254	21.5	36,078	31.4	3,255	20.6
Past 30 days used,												
Cigarettes	45,085	8.7	13,897	13.2	49,969	8.8	8,967	15.5	49,020	8.6	9,885	17.8
Binge drinking	69,517	13.4	18,781	17.8	76,431	13.5	11,821	20.3	76,650	13.5	18,488	33.1
Marijuana	58,101	11.2	15,855	15.0	63,946	11.3	9,895	17.0	63,487	11.2	11,631	20.8

All Chi Square values p<0.01

Table 5. Exposure to Victimizing Event at School and Mental Health Symptoms and Academic Achievement*

	Pushed, slapped, or kicked				**Threatened with a weapon**				**Forced to have sex**			
	NO (N=428,192)		**YES** (N=203,226)		**NO** (N=578,996)		**YES** (N=52,957)		**NO** (N=11,621)		**YES** (N=1,322)	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Past 12 months												
Sad daily 2+ wks	3,164	31.2	665	52.7	3,164	31.2	665	52.7	3,164	31.2	665	52.7
Grades As, Bs, Cs	8,248	80.8	962	74.3	8,248	80.8	962	74.3	8,248	80.8	962	74.3
Grades Ds or Fs	1,955	19.2	332	25.7	1,955	19.2	332	25.7	1,955	19.2	332	25.7
Past 30 days to lose weight												
No eating 24+ hrs	1,214	14.7	320	31.2	1,214	14.7	320	31.2	1,214	14.7	320	31.2
Vomit or laxatives	737	9.0	220	21.5	737	9.0	220	21.5	737	9.0	220	21.5

	Harassed because of race				**Harassed because of gender**				**Harassed because LGBTQ**			
	NO (N=524,382)		**YES** (N=107,108)		**NO** (N=578,996)		**YES** (N=52,957)		**NO** (N=574,336)		**YES** (N=56,676)	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Past 12 months												
Sad daily 2+ wks	141,224	27.4	47,819	46.5	158,914	28.3	30,107	54.2	159,266	28.2	29,716	55.8
Grades As, Bs, Cs	97,000	18.8	22,879	21.8	454,840	80.8	45,833	79.5	458,162	81.1	42,319	76.2
Grades Ds or Fs	4,522	7.3	2,052	17.1	107,941	19.2	11,854	20.5	106,501	18.9	13,182	23.8
Past 30 days to lose weight												
No eating 24+ hrs	7,848	11.7	2,087	16.5	8,512	11.7	1,420	20.5	8,494	11.6	1,426	22.0
Vomit or laxatives	4,433	6.7	1,271	10.3	4,787	6.7	906	13.4	4,783	6.7	911	14.3

All Chi Square values p<0.001

Chapter 5

Discussion and Implications

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The proposed aims of this study were threefold: 1) to describe factors associated with school-based health centers (SBHCs) having a school-based mental health provider; 2) to describe the type and frequency of behavioral and mental health services provided by SBHCs; and 3) to describe the rates of exposure to victimizing events, substance use, mental health symptoms, and academic achievement in middle school and high school students in California to demonstrate mental health care needs. This chapter will provide a discussion of the major findings of this study.

The literature review provides a meaningful contribution to the subject of chronic childhood trauma because it demonstrated that trauma and negative academic performance are mediated by mental health disorders. The mental health disorders that had the greatest impact upon poor academic achievement were PTSD, depression, and anxiety. By utilizing a health disparity framework and reviewing components of access, utilization, quality, and funding, the paper also provided a relevant contribution to the pediatric mental health care disparity literature and an important perspective to the school-based health care literature. Children and adolescents of low SES and/or minority race/ethnic status are disproportionately exposed to chronic childhood trauma, and have disproportionately higher rates of mental health disorders and lower academic achievement.

Disparities in access, utilization, quality, and funding of child and adolescent mental health care are prevalent and continue to persist in the US. Populations most vulnerable to victimizing and non-victimizing events are the least likely to have the mental health care resources required to mitigate the devastating effects of chronic childhood trauma. These children and adolescents are therefore more likely to not perform well in school and experience subsequent lost educational and employment opportunities. This decreased social capital increases the risk of

continued victimization into adulthood, homelessness, incarceration, substance abuse, poverty, chronic medical and mental health conditions, and early death. SBHCs with mental health services have demonstrated the ability to reduce, though not eradicate, the disparities currently found in our mental health care system. Though only two studies have demonstrated the ability of SBHCs to improve academic achievement, they reveal the potential of SBHCs to play a role in producing health equity for children and adolescents by providing early screenings, preventive care, and treatment of behavioral and mental health conditions to enable greater success in school.

The third chapter demonstrated that the inclusion of mental health providers at SBHCs in the United States depended on a variety of factors. Generally, SBHCs with the most resources and support were more likely to have a mental health provider on staff. A SBHC mental health provider was more commonly found in high schools than in elementary schools.

SBHCs that had a mental health provider on staff more often had comprehensive mental and behavioral health services available, except in prescribing behavioral and mental health medications. SBHCs generally provided behavioral and mental health interventions at the individual, small group, and classroom level while very few provided parental or community level interventions. The presence of a mental health provider at a SBHC, however, did not guarantee all types of mental health services were available nor did the absence of a mental health provider preclude a SBHC from offering behavioral and mental health services if the services were provided by the primary care provider. This is most likely due to the varied scope of practice of mental health professionals employed by SBHCs. Nationally, the majority of SBHCs employed a licensed or unlicensed social worker or therapist. The least frequently employed provider was a psychiatrist or a psychiatric nurse practitioner. The proportion of

SBHC mental health providers was not different among urban, rural, and suburban SBHCs; thus, this model of care can overcome geographic disparities in availability of mental health services for pediatric populations.

The fourth chapter found that students, particularly 6th-8th graders, are experiencing high rates of victimization on school grounds. Nearly half of all middle school students and a third of high school students had experienced harassment or bullying based on race, gender, sexual orientation, or religious affiliation. Ten percent of students had been threatened with a weapon on school property and five percent of students had brought a gun to campus. It is not surprising that 35% of the students had skipped class because they did not feel safe at school. A statistically significantly greater proportion of students who had been exposed to a victimizing event were using substances, initiating substance use at a younger age, showing signs of depression and/or eating disorders, and had poorer academic success.

Limitations and Gaps in the Research

Though not a systematic review, the literature review utilized a conceptual model that included studies of various levels of rigor. The literature on chronic childhood trauma is relatively recent and primarily consists of cross-sectional design studies in urban populations. Gaps also remain in pediatric mental health care with more studies needed to help document the quality of care, health outcomes, effectiveness, and financing of mental health care. It was not possible from the pediatric mental health care disparities literature to determine what other barriers may exist in preventing access and utilization of mental health services. Studies regarding SBHC mental health service use have been primarily conducted with urban high school populations, thus, additional studies are needed to assess SBHCs' potential impacts on mental health outcomes in rural and suburban schools and in elementary and middle schools.

Studies are also needed to review different types of SBHC mental health care, early intervention versus treatment. The existing gaps in the SBHC literature results leave us with inconclusive evidence of how SBHCs impact exposure to trauma, health disparities, and improving academic outcomes. Ideally, studies that measure students' exposure to chronic childhood trauma, their current mental health status, and source of mental health care use (SBHC, community clinic, private office, and/or no care) with corresponding academic performance over time, as well as measures regarding the type of mental health interventions and dosage, would be useful in answering the question of how well SBHCs can address the mental health needs of students, including those exposed to chronic trauma. Ideally, these studies would be strengthened through randomized or quasi-experimental designs, where "current" practice could be compared with intervention sites.

The study of the SHA Census 2010-11 uses a cross-sectional design and therefore cannot determine which characteristics of SBHCs have a causal impact on the likelihood of having a mental health provider. There were also limitations in the use of the 2010 CHKS Core Module. Primarily, the victimizing event, in most instances, had to have occurred on school grounds. School-based victimization may be distinctly different from family or community victimization so there may be an under-count of the level of trauma experienced by students.

Implications for Research and Policy

There were several goals for this dissertation. The goals of my research were to inform policies to improve academic achievement by promoting access and utilization of child and adolescent mental health care through the advancement of the SBHC model of care. Therefore, it was important to assess what is known about the relationships between exposure to chronic childhood trauma, mental health disorders, and poor academic achievement. Another was to

describe the characteristics that enable SBHCs to provide mental health services. And lastly, it was key to illustrate the prevalence of exposure to victimizing events and the implications for pediatric mental health care.

The findings point to the importance of the decreasing childhood adverse events from occurring in the first place as a strategy for improving academic performance. They also suggest there is substantial need for mental health services for school-age children, and that these services should begin by middle school, or perhaps even earlier for family-focused interventions. The findings also point to how important school-based interventions, including changes in school climate, are for these victimizing events are occurring on school campus.

The SBHC model of care is one solution to increasing access and utilization of health and mental health care, especially when the SBHC employs a mental health provider. SBHCs with mental health providers are well positioned to provide selective and indicated preventive interventions for they provide individual, small group, classroom, parent, and community interventions and treatments for behavioral health issues. Yet, the model is currently underfunded and under valued. SBHCs are burdened by the lack of sustainable funding policies by state and federal health agencies to support both physical and mental health services. Federal policy that provides financing of SBHCs may be helpful in alleviating geographic and other types of health care delivery disparities currently reflected across the pediatric mental health care system.

However, with only 2300 SBHCs nationally, they comprise a very small component of the health care system. SBHCs are one of many available programs and strategies to address exposure to victimizing events. Effective anti-bullying programs include many components across a variety of settings, are school-wide, and often address school climate.[103] Programs and

structural interventions that address school climate are key to decreasing exposure to on campus victimizing events.

Policies that continue to address the social determinants of health could have a substantial impact on education-related health disparities. A structural approach to addressing the unequal distribution of resources and removing the obstacles that prevent children and adolescents, especially those of low income or minority racial/ethnic groups, from realizing their right to health and mental well-being is paramount to reducing the health and mental health disparities that are currently seen in the United States. School districts and communities that invest in their students by employing school nurses, psychologists, social workers, and work with local health agencies to establish school-based health centers or other mental health programs, will increase the ability to provide universal, selective, and indicated preventive interventions in order to improve school climate and potentially decrease victimization rates and thus improve student mental well-being and academic success.

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APPENDIX A

NASBHC National Assembly on School-Based Health Care

Bringing Health Care To Schools For Student Success

NATIONAL SCHOOL-BASED HEALTH CARE CENSUS SCHOOL YEAR 2010-2011

Welcome to the National School-Based Health Care Census, School Year 2010-2011.

Who should participate in the 2010-2011 School-Based Health Care Census?

- Partnerships between schools and community health organizations that deliver health care to students within a fixed site on school campus [SCHOOL-BASED]
- Programs without a fixed site that rotate a health care team through a number of schools [MOBILE]
- Health care programs that are formally or informally linked with schools to coordinate and promote health care for students on campus; clinical services are not provided on school site [SCHOOL-LINKED]

Who should complete the Census?

The Census should be completed by the person who is most knowledgeable about the clinical care provided in the health center, such as the nurse practitioner or clinical director.

INSTRUCTIONS

Please answer all questions.

1. If you are unable to complete every section, provide as much data as possible and return your incomplete form. We appreciate any amount of information you can provide.
2. If you are completing a paper version of the survey, please use a separate questionnaire for each fixed health center site you represent. For programs on campuses that serve several schools, complete one survey and provide information on all grades served within the immediate campus. Mobile programs may use one survey (use final section to describe the locations served).
3. All questions refer to the school year 2010-2011 unless otherwise specified.

You may use this printout to review the questions that are being asked beforehand to ensure collection of correct information.

To complete the Census online, please visit: www.nasbhc.org/censussurvey.

To complete paper copy, please print and answers all items. You must complete one survey per SBHC site. Send or fax completed copy to:

National Assembly on School-Based Health Care—NASBHC
1010 Vermont Ave NW, Suite 600
Washington, D.C. 20005

Fax: 202-638-5879

1

Name of School:

Name of Health Center:

SBHC ID:

SCHOOL-BASED/LINKED HEALTH CENTER CONTACT INFORMATION

Primary contact person:

Address of health center:

City/State/Zip:

Telephone number of health center:

Email address of contact person:

Twitter account of health center:

Facebook account of health center:

Website address of health center:

SPONSORING/ADMINISTRATIVE AGENCY CONTACT INFORMATION

Sponsor/Administrative Agency:

Primary agency contact person:

Address of Sponsor agency contact:

City/State/Zip:

Telephone number of agency contact:

Email address of agency contact:

PERSON COMPLETING THIS SURVEY:

Name:

Title:

Telephone number:

Email address:

1. HEALTH CENTER DEMOGRAPHICS

a. The health center I represent is (select one):

- O In a school building
- O on school property, but not in a school building
- O beyond school property, but has formal or informal links with one or more schools in the community
- O mobile program serving several schools but with no fixed site

b. Name of the school at which the health center is located: _____

c. Number of schools served by health center (For campuses with more than one school, such as a middle and high school, include all schools in your count.)

- O Only students in school where health center is located
- O Students from additional schools (how many schools?): _____
- O All students in school district

d. Indicate the type of agency that serves as the primary administrator and/or sponsoring health care organization for the health center (select one):

- O local health department
- O community health center
- O school system
- O hospital/medical center
- O mental health agency
- O university (i.e. school of medicine, nursing, public health)
- O private, non-profit
- O tribal government

Other, please specify:

e. If your sponsoring health organization is a community health center, please provide your UDS number: _____

The UDS Number is a unique number that represents the Uniform Data System number as identified by a grantee organization to the Health Resources and Services Administration (HRSA).

f. The geographic location of the community served by the health center is described primarily as (select one):

- O suburban
- O urban
- O rural

2. HEALTH CENTER OPERATIONS

a. In what year was the health center first established? _____

b. During the school year, how many days each week is the health center open? _____

c. During the school year, how many hours per week is the health center open? _____

d. Indicate when the health center is open:

Yes	No	
O	O	Before the school day begins
O	O	After the school day ends
O	O	During school hours
O	O	During school vacations/ holiday breaks (e.g. Thanksgiving, winter, spring break)
O	O	During weekend hours
O	O	During summer months

e. Does the health center have a prearranged source of after-hours care (e.g., on-call services provided by the sponsoring agency, health center staff, or external agency)?

Yes	No
O	O

3. HEALTH CENTER CARE TEAM

This table is about your health center's staffing. Include all staff, even those employed by other agencies. Do not include interns, volunteers, peer educators, etc.

a. Total hours per week: For each staff person, write in the total hours per week that person is at the health center. If a person serves many functions, select the position that describes the majority of their work at the health center. If more than one person fills a position, add together all the hours for that position. (For example, if two NPs each work 5 hours per week, write in 10 hours.)

b. Total administrative hours per week: For each staff person, write in the total administrative hours per week. Again, if more than one person fills a position, add together all the administrative hours for that position.

	Total hours per week	Total administrative hours per week	Do not have this role
Primary Care (those who diagnose, treat, prescribe)			
Nurse practitioner			
Physician			
Physician assistant			
Nurse midwife			
Mental Health			
Alcohol and drug counselor			
Licensed social worker/counselor/therapist			
Unlicensed social worker/counselor/therapist			
Psychiatric nurse practitioner			
Psychiatrist			
Psychologist			
Clinical Support			

	Total hours per week	Total administrative hours per week	Do not have this role
Medical assistant or health aide			
Admin assistant or receptionist			
Licensed practical or vocational nurse			
Registered nurse			
Other Service Providers			
Case manager/social services			
Outreach coordinator			
Dental assistant			
Dental hygienist			
Dentist			
Health educator			
Registered dietician			
Ophthalmic tech			
Optometrist or ophthalmologist			

Please add any relevant comments concerning the health center staffing:

c.

The following staff are (select one):	Not in the school	In school, but separate from health center	In school and co-located with health center
School nurse	O	O	O
School mental health provider	O	O	O

4. HEALTH CENTER PARTNERSHIPS

a. In what school teams/committees does your health center participate?

	Yes	No	Do not know
School improvement team	O	O	O
Crisis management or early intervention team	O	O	O
Individuals with Disabilities Education Act (IDEA) team	O	O	O
Curriculum development committee	O	O	O
School wellness committee (e.g., coordinated school health or other school wellness committee)	O	O	O
Student-led groups (e.g., student government, clubs))	O	O	O
Community school committee	O	O	O
Principal's advisory committee	O	O	O
Professional development team (with school personnel)	O	O	O
After-school program team	O	O	O

Other, please specify:

5. PRIMARY CARE

a. Do you provide primary care, which includes comprehensive health assessments, diagnosis, and treatment of minor, acute, and chronic medical conditions, and referrals to, and follow-up for, specialty care?

O Yes O No

b. Does your health center follow Bright Futures Guidelines for Health Supervision?

O Yes O No O Do not know

6. VISION SERVICES

a. Indicate which of the following services are provided to individuals by the health center:

	Provide onsite	Not provide onsite
Vision screening		
Autorefractor	O	O
Photoscreener	O	O
Eye chart	O	O
Eye examination	O	O
Eyeglasses dispensing	O	O

Other, please specify:

b. Do you have relationships with partners for obtaining free or reduced price eyeglasses?

O Yes O No

7. ADOLESCENT IMMUNIZATIONS

a. Do you provide the following immunizations (individually or in combination) to adolescents?

	Provide onsite	Not provide onsite
Diphtheria-Tetanus-Acelluar Pertussis (Tdap)	O	O
Hepatitis B	O	O
Varicella (Varivax)	O	O
Hepatitis A	O	O
Influenza	O	O
Meningococcal (MCV4)	O	O
Human Papilloma Virus (HPV): male	O	O
Human Papilloma Virus (HPV): female	O	O

b. Do any of the following barriers exist to providing immunizations in your health center?

Yes	No	
O	O	Required refrigeration/storage equipment
O	O	Affordability of vaccines
O	O	Reimbursement from insurance
O	O	Inability to obtain immunization records
O	O	Parental consent requirements
O	O	Parental refusal
O	O	Adolescent refusal

Other, please specify:

8. SEXUAL HEALTH

a. Indicate which of the following services are provided by the health center:

Sexual Health Services	Provide onsite	By referral only	Not provided or referred
Abstinence counseling	O	O	O
Chlamydia testing	O	O	O
STD diagnosis and treatment	O	O	O
Counseling for contraceptive services	O	O	O
Contraceptive (prescriptive) services	O	O	O
Follow-up of contraceptive users	O	O	O
Gynecological examinations	O	O	O
Testicular examinations	O	O	O
HIV testing	O	O	O
HIV/AIDS counseling	O	O	O
Papanicolaou (Pap) test	O	O	O
Pregnancy testing	O	O	O
Prenatal care	O	O	O
Relationship violence (counseling/intervention)	O	O	O
Sexual orientation education and counseling	O	O	O

Other, please specify:

b. Indicate which of the following contraceptive/barrier methods are provided to individual students:

	Dispense onsite	Prescribe onsite	By referral	Not provided or referred
Birth control pills	O	O	O	O
Condoms (female)	O	O	O	O

Condoms (male)	O	O	O	O
Dental dams	O	O	O	O
Depo-Provera	O	O	O	O
Diaphragm	O	O	O	O
Emergency contraception	O	O	O	O
Implant (Implanon)	O	O	O	O
IUD	O	O	O	O
Patch (OrthoEvra)	O	O	O	O
Ring (NuvaRing)	O	O	O	O
Spermicides	O	O	O	O

Other, please specify:

c. Is the dispensing of prescribed contraceptives prohibited in the health center?

O Yes O No (skip to e)

d. By whom is this prohibition made?

Yes	No	
O	O	State law/regulation
O	O	State policy
O	O	School district policy
O	O	School policy
O	O	Sponsor policy
O	O	Health center policy
O	O	Do not know

Other, please specify:

e. Which of the following are barriers to HIV testing in your health center?

Yes	No	*Barriers to HIV testing*
O	O	Cost
O	O	Transporting specimen
O	O	Existing policy prohibits testing
O	O	Not a priority for health center
O	O	Not developmentally appropriate
O	O	Concern about confidentiality

Other, please specify:

9. MENTAL HEALTH

a. Indicate which of the following mental health services are provided on-site.

Yes	No	
O	O	Comprehensive individual evaluation and treatment
O	O	Individual assessment and treatment of learning problems
O	O	Crisis intervention
O	O	Case management
O	O	Peer mediation
O	O	Substance abuse counseling (individual or group)
O	O	Classroom behavior/learning support (individual, group, or classroom)

Other, please specify:

b. Does the health center prescribe and manage behavioral health medications?

O Yes O No

c. Which of the following are barriers to providing mental health services in the health center?

Yes	No	
O	O	Private space to allow confidential visits
O	O	Availability of qualified providers
O	O	Affordability of providers
O	O	Reimbursement
O	O	Consent policies
O	O	HIPAA-FERPA issues

Other, please specify:

10. ORAL HEALTH

a. Indicate which of the following services are provided to individuals by the health center (NOTE: Unless indicated, check off the services provided at your health center regardless of who provides the service.):

	Provide onsite	Provide through mobile unit	By referral only	Not provided or referred
Oral health education	O	O	O	O
Dental screenings (e.g. visual inspection)	O	O	O	O
Dental examination by a dentist	O	O	O	O
Dental examination by a dental hygienist	O	O	O	O
Dental sealants	O	O	O	O
Fluoride mouthrinse	O	O	O	O
Fluoride varnish	O	O	O	O
Fluoride supplements	O	O	O	O
Dental cleaning	O	O	O	O
General dental care (e.g. fillings, extractions)	O	O	O	O
Specialty care (e.g. orthodontics, oral surgery)	O	O	O	O

Other, please specify:

b. In which of the following ways are primary medical care professionals involved in oral health care?

Yes	No	
O	O	Risk assessment
O	O	Diagnosis
O	O	Treatment
O	O	Preventive services: fluoride varnish
O	O	Preventive services: sealants
O	O	Guidance/referral
O	O	Education

Other, please specify:

c. Which of the following are barriers to providing oral health services in your health center?

Yes	No	
O	O	Space
O	O	Equipment
O	O	Reimbursement
O	O	Cost
O	O	Provider availability
O	O	Funding

Other, please specify:

11. HEALTH PROMOTION AND DISEASE PREVENTION

a. Indicate which of the following activities are provided by the health center staff and to whom (select all that apply):

	Individuals	Small groups	Classroom/ school-wide	Parents	Community members	Not offered
Alcohol, tobacco, drug use prevention						
Tobacco (e.g. cigarettes, chewing)	O	O	O	O	O	O
Alcohol use (e.g. beer, wine, liquor)	O	O	O	O	O	O
Drug use (e.g. marijuana, meth)	O	O	O	O	O	O
Other, please specify	O	O	O	O	O	O
Injury and violence						
Unintentional injury prevention (e.g. use of seat belts and helmets, driving safety, gun safety)	O	O	O	O	O	O
Violence prevention (e.g. bullying and cyber-bullying prevention, weapon avoidance)	O	O	O	O	O	O
Suicide prevention	O	O	O	O	O	O
Sexual assault/rape prevention & counseling	O	O	O	O	O	O
Intimate partner/teen dating violence prevention & counseling	O	O	O	O	O	O
Gang violence	O	O	O	O	O	O
Other, please specify	O	O	O	O	O	O
Sexual health and behaviors						
HIV/STD prevention	O	O	O	O	O	O
Pregnancy prevention (abstinence only)	O	O	O	O	O	O
Pregnancy prevention (comprehensive)	O	O	O	O	O	O
Sexuality education (forming attitudes, values, and beliefs that support the sexual health of youth)	O	O	O	O	O	O
Sexual orientation/gender identity differences (LGBTQ respect)	O	O	O	O	O	O
Teen parenting classes	O	O	O	O	O	O
Other, please specify	O	O	O	O	O	O
Healthy living						
Healthy eating/active living/weight management	O	O	O	O	O	O
Interpersonal relationships (race relations, conflict resolution)	O	O	O	O	O	O
Emotional health and well-being (stress management, hopefulness)	O	O	O	O	O	O
School safety/climate	O	O	O	O	O	O
Positive youth development (e.g. skills building, youth engagement, multiculturalism)	O	O	O	O	O	O
Chronic disease management (asthma, diabetes)	O	O	O	O	O	O
Other, please specify	O	O	O	O	O	O

Successful learning						
Dropout prevention	O	O	O	O	O	O
School/academic performance intervention	O	O	O	O	O	O
School attendance	O	O	O	O	O	O
Other, please specify _____	O	O	O	O	O	O

b. Generally, on the scale below, what best describes your selection of prevention programs/curriculum? An evidence-based program has been rigorously evaluated, the results of which are often published in peer-reviewed journals. (Select one.)

- O Only programs/curriculum designed by your staff or sponsor organization
- O A mix of your own programs/curriculum and evidence-based programs/curriculum
- O Only use evidence-based programs/curriculum
- O Do not know

12. HEALTH INFORMATION TECHNOLOGY

a. Is the health center able to access the student's educational data (e.g. attendance records, discipline action, grades)?

O Yes O No O Do not know

b. Indicate whether the health center uses any of the following:

	Yes	No	Plan to adopt in next 12 months	Do not know
Electronic health/medical record (EHR/EMR)	☐	☐	☐	☐
Management information system/Practice management system	☐	☐	☐	☐
Clinical Fusion	☐	☐	☐	☐
Electronic billing system	☐	☐	☐	☐
Electronic prescribing	☐	☐	☐	☐
Telemedicine system (e.g. telehealth, telemental health)	☐	☐	☐	☐

c. Are any of the providers in your SBHC (physicians, nurse practitioners, physician assistants, oral health providers, etc) participating in the CMS Medicaid and Medicare EHR Incentive Program?

O Yes O No O Do not know

d. If the health center uses an EHR/EMR, is it able to document the following Meaningful Use criteria? *(Meaningful use is intended to define a level EHR/EMR implementation that indicates the system can support health care quality, efficiency and patient safety.)*
(See: https://www.cms.gov/EHRIncentivePrograms/Downloads/EP-MU-TOC.pdf)

	Yes	No	Do not know
Implement drug formulary checks	☐	☐	☐
Incorporate clinical lab-test results into EHR as structured data	☐	☐	☐

Generate patient lists by specific conditions to use for quality improvement, reduction of disparities, research, or outreach	☐	☐	☐
Send patient reminders per patient preference for preventive/follow-up care	☐	☐	☐
Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, and allergies) within 4 business days of the information being available to the provider	☐	☐	☐
Identify patient-specific education resources and provide those resources to the patient if appropriate	☐	☐	☐
Perform medication reconciliation by the Eligible Professional who receives a patient from another provider of care or believes an encounter is relevant	☐	☐	☐
Provide patients' summary care record for each transition of care or referral the Eligible Professional hands over to another provider	☐	☐	☐
Submit electronic data to immunization registries or immunization information systems and actual submission according to applicable law and practice	☐	☐	☐
Submit electronic syndromic surveillance data to public health agencies and actual submission according to applicable law and practice	☐	☐	☐

e. If the health center uses an EHR/EMR, is it able to document the following Meaningful Use criteria that are aligned with the Children's Health Insurance Program Reauthorization Act (CHIPRA) initial children's health care core quality measures established by Agency for Healthcare Research and Quality (AHRQ) and the Centers for Medicare and Medicaid Services (CMS)?
(See: http://www.ahrq.gov/chipra/corebackground/corebacktab.htm and http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage)

	Yes	No	Do not know
Child immunization status	☐	☐	☐
BMI assessment for Children/Adolescents	☐	☐	☐
Chlamydia screening	☐	☐	☐
Appropriate testing for children with pharyngitis	☐	☐	☐
Weight assessment counseling for children and adolescents	☐	☐	☐
Asthma assessment	☐	☐	☐
Use of appropriate medications for asthma	☐	☐	☐
Asthma pharmacologic therapy	☐	☐	☐
Initiation and engagement of alcohol and other drug dependence treatment	☐	☐	☐

13. BILLING AND REIMBURSEMENT

a. Does your health center bill for services provided to students with:

	Yes	No	Do not know	N/A
Medicaid: Managed Care Organization (MCO)	☐	☐	☐	☐
Children's Health Insurance Program (CHIP)	☐	☐	☐	☐
Medicaid: State agency	☐	☐	☐	
Private/commercial insurance	☐	☐	☐	
Tri-Care (military insurance program)	☐	☐	☐	
State family planning programs	☐	☐	☐	
State programs for the medically indigent	☐	☐	☐	
No insurance/self-pay/sliding scale	☐	☐	☐	

Other, please specify:

b. Who does the billing for the SBHC?

	Yes	No	Do not know
SBHC	☐	☐	☐
Medical sponsor	☐	☐	☐
Centralized SBHC billing service	☐	☐	☐

Other, please specify:

c. Indicate the extent to which the following are a barrier to billing and reimbursement for services at your health center:

	Not at all	Somewhat	Always
Missing information about insurance coverage	☐	☐	☐
Explanation of benefits (EOB) statements sent to parents	☐	☐	☐
Inadequate staff/time to do billing at health center	☐	☐	☐
Improper/incorrect coding	☐	☐	☐
Not recognized by HMOs/provider networks as an eligible provider	☐	☐	☐
Inadequate infrastructure to support billing and collecting	☐	☐	☐
Not following up with rejection of claims by insurance companies	☐	☐	☐
Sponsor is not designated as a Medicaid provider	☐	☐	☐
Unable to attribute reimbursement to SBHC	☐	☐	☐

Other, please specify:

d. Estimate the percent of your total operational expenses that are covered by billing revenue.

_____%

e. How does your health center assist in enrolling children/families in Medicaid or CHIP? (Check all that apply)

- ☐ Enrollment completed onsite at health center
- ☐ Assistance completing forms provided by health center
- ☐ Referred to enrollment site outside of health center
- ☐ No assistance

f. Is your health center a facilitated enroller for CHIP or Medicaid?

○ Yes ○ No ○ Do not know

g. In which of the following ways does any managed care company recognize your health center staff?

	Yes	No	Do not know
As a PCP/preferred provider	☐	☐	☐
As specialty care provider (e.g., mental health, family planning)	☐	☐	☐
As co-PCP	☐	☐	☐
Not recognized as preferred provider, but get reimbursed for some services	☐	☐	☐

Other, please specify:

14. FUNDING

a. Sources of revenue/funding that support the health center are (do not include in-kind donations):

	Yes	No	Do not know
Federal government	☐	☐	☐
State government	☐	☐	☐
County/city government	☐	☐	☐
Tribal government	☐	☐	☐
Private foundations	☐	☐	☐

	Yes	No	Do not know
Corporations/businesses	☐	☐	☐
Hospital	☐	☐	☐
School/school district	☐	☐	☐
Managed care organization or private insurer	☐	☐	☐
State network/association	☐	☐	☐
NASBHC	☐	☐	☐

Other, please specify:

b. If you receive support from the federal government, indicate the funding sources for your health center:

Federal Funding Sources	Yes	No	Do not know
American Recovery and Reinvestment Act (ARRA) programs	☐	☐	☐
Community Transformation grants	☐	☐	☐
Indian Health Services	☐	☐	☐
Nurse-Managed Health Clinics T56 (Affordable Care Act)	☐	☐	☐
Substance Abuse and Mental Health Services Administration's (SAMSHA) Centers for Substance Abuse Treatment and Prevention's Safe School/Health Communities	☐	☐	☐
School-Based Health Center Capital Program (HRSA)	☐	☐	☐
Section 330 PHSA (community/migrant/rural health centers)	☐	☐	☐
TANF (Temporary Assistance to Needy Families)	☐	☐	☐
Teen Pregnancy Prevention programs	☐	☐	☐
Title I ESEA (Elementary Secondary Education Act)	☐	☐	☐
Title V SSA (Social Security Act-maternal and child health block grant)	☐	☐	☐
Title X PHSA (Public Health Service Act-family planning)	☐	☐	☐
Title XX SSA (social services block grant)	☐	☐	☐

Other, please specify _____

c. The 340B Drug Pricing Program extends discounts on pharmaceuticals to eligible entities. (LINK: http://www.hrsa.gov/opa/introduction.htm) These entities include federal qualified health centers and disproportionate share hospitals, among others. Does your sponsor participate in the 340B program? (You may need to ask your administrator to answer this question.)

○ Yes ○ No ○ Do not know

15. HEALTH CENTER ACCESS POLICIES

a. Do parents have the ability to restrict access to specific services? (For example, parents can cross off specific services on the consent form.)

O Yes O No O Do not know

b. Indicate which of the following best describes student access to services in your health center.

O in accordance with state law
O more restrictive than state law
O do not know

16. QUALITY ASSURANCE

a. Indicate which of the following components of a quality assurance system are used by the health center:

	Yes	No	Do not know
Chart audits	☐	☐	☐
Staff credential and training requirements	☐	☐	☐
Policies and procedures	☐	☐	☐
Standards for the physical environment	☐	☐	☐
Measures of patient knowledge	☐	☐	☐
Clinical Laboratory Improvement Act (CLIA) certification	☐	☐	☐
Measures of patient satisfaction	☐	☐	☐
Data reports from electronic medical record	☐	☐	☐
Review of claims data	☐	☐	☐

Other, please specify:

b. Does the health center collect quality assurance data based on:

	Yes	No	Do not know
Healthcare Effectiveness Data and Information Set (HEDIS) measures (http://www.ncqa.org/Portals/0/HEDISQM/HEDIS%202011/HEDIS%202011%20Measures.pdf)	☐	☐	☐
Joint Commission on Accreditation of Health Organizations guidelines (http://www.jcrinc.com/Joint-Commission-Requirements/Ambulatory-Care/)	☐	☐	☐

	Yes	No	Do not know
Recommended core set of child health quality measures (CHIPRA/Medicaid) (http://www.ahrq.gov/chipra/corebackground/corebacktab.htm)	☐	☐	☐
NCQA Patient-centered medical home standards (http://www.ncqa.org/tabid/631/Default.aspx)	☐	☐	☐
State-defined tool/measures	☐	☐	☐
Sponsor-specific tool/measures	☐	☐	☐
SBHC-developed tool/measures	☐	☐	☐
NASBHC Productivity Template ("Report Card") (http://www.nasbhc.org/site/c.jsJPKWPFJrH/b.2952683/k.6F36/EQ_Productivity_for_SBHCs.htm)	☐	☐	☐
NASBHC CQI for SBHC Tool (http://www.nasbhc.org/site/c.jsJPKWPFJrH/b.2719357/k.6312/EQ_Quality_Improvement.htm)	☐	☐	☐
NASBHC mental health program evaluation template (http://www.nasbhc.org/site/c.jsJPKWPFJrH/b.6186951/k.976A/MHPET_Intro.htm)	☐	☐	☐

Other, please specify:

c. Has your health center been accredited, directly or through your sponsoring agency by any of the following:

	Yes	No	Do not know
Joint Commission	☐	☐	☐
National Committee on Quality Assurance (NCQA) Patient Centered Medical Home Recognition	☐	☐	☐
State certification (indicate type_____)	☐	☐	☐
Other, please specify _____	☐	☐	☐

17. SCHOOL/CAMPUS DEMOGRAPHICS

This section is for **school-based health centers only**. School-linked and mobile programs skip to last section.

a. Indicate the grade levels for the school in question 2. (For campuses with more than one school served by the health center, include every grade.) If you are uncertain about this answer, you can find the information at http://nces.ed.gov/globallocator/.

Pre-K	K	1	2	3	4	5	6	7	8	9	10	11	12

b. What is the 2010-2011 academic year official school enrollment for the school/campus in which the health center is located? (If you are uncertain about this answer, you can find the information at http://nces.ed.gov/globallocator/): _____

c. What is the total student health center enrollment for 2010-11 academic year (students with consent to use or registered to use the health center, although they do not have to be seen)?:_____

d. In the 2010-2011 academic year, the ethnic/racial profile of the student population at the school/campus in which the health center is located was (if you are uncertain about this answer, you can find the information at http://nces.ed.gov/globallocator/):

Hispanic or Latino of any race	_____ %
For individuals who are non-Hispanic/Latino:	
American Indian or Alaskan Native	_____ %
Asian	_____ %
Black or African-American	_____ %
Native Hawaiian or other Pacific Islander	_____ %
White	_____ %
Two or more races	_____ %
TOTAL	100%

e. In the 2010-2011 academic year, what percent of the student population at the school/campus in which the health center is located was eligible for the free- or reduced-price lunch program? If you are uncertain about this answer, you can find the information at http://nces.ed.gov/globallocator/.

_____%

f. Does your health center serve individuals other than students in your school?

O Yes O No O Do not know

g. Which of the following populations are eligible to use the health center services?

Yes	No	
☐	☐	Students from other schools
☐	☐	Out-of-school youth
☐	☐	Faculty/school personnel
☐	☐	Family of students users (e.g. siblings, parents, or infants of students)
☐	☐	Other people in the community

Other, please specify:

h. Has your health center ever ceased operation and then reopened (not including summer or holidays)?

O Yes O No O Do not know

i. If yes, why did it cease operation?

Yes	No	
☐	☐	Moved to another school location
☐	☐	Change in level of interest/support from school/school district
☐	☐	Change in need of school population
☐	☐	Competition from another provider in the community
☐	☐	Difficulty recruiting clinicians or other staff
☐	☐	Insufficient funding/cuts in funding
☐	☐	Insufficient planning/community development process
☐	☐	Low utilization
☐	☐	School closed; therefore, SBHC closed

Other, please specify:

j. Can the school in which you are located be characterized as any of the following? (If there is more than one school in the building in which you are located and you provide services to those students include that type of school in your selection.)

Yes	No	
☐	☐	Title I school –receives funding from US Dept of Ed to meet needs of at-risk and low-income students (If you are uncertain about this answer, you can find the information at http://nces.ed.gov/globallocator/.)
☐	☐	Charter school (public school operated independently of the local school board, often with a curriculum and philosophy different from the rest of the district)
☐	☐	Parochial/private school (funded by a religious organization, individuals, or corporation)
☐	☐	Alternative school (offers nontraditional educational ideals, methods of teaching, or curriculum)
☐	☐	Vocational school (often on the secondary level and offers instruction and practical experience in skilled trades)
☐	☐	Magnet school (public school with specialized curriculum and student body representing a cross section of the community)
☐	☐	Traditional public school (supported by public funds and providing free education for children of a community or district)
☐	☐	Community school (school with a school site leadership team including school staff, families, community members, and partner organizations with a designated coordinator responsible for coordinating partnerships focused on results e.g. Beacon school, full-service school)

18. YOUTH INVOLVEMENT

a. Other than as patients, are youth involved in your health center in any of the following ways?

	Yes	No	Do not know
Participate in organizing center-sponsored health education events (e.g. health fair)	☐	☐	☐
Participate in peer mentoring, counseling, or education	☐	☐	☐
Advocacy activities (local, state, or national)	☐	☐	☐
Participate in health center committees, advisory council, or Board	☐	☐	☐
Participate in the design and delivery of health services	☐	☐	☐
Provide feedback to the health center	☐	☐	☐

Other, please specify:

b. Which of the following methods do you use to communicate with parents and students (check all that apply)?

	Parents	Students
Email	☐	☐
Social media (e.g. Twitter, Facebook)	☐	☐
SBHC website or school website	☐	☐
Phone	☐	☐
Text message	☐	☐
Written material (e.g. brochure, newsletter)	☐	☐

Other, please specify:

c. Do you use text messaging to communicate patient reminders?

O Yes O No O Do not know

Do you have a compelling story that could be used as an advocacy tool for describing the value of school-based health care to policy makers and elected officials? Please write a short description here and be sure you do NOT include any patient identifying information.

NOTE: By submitting this information, you give consent to have it be used in NASBHC materials.

FOR SCHOOL-LINKED AND MOBILE PROGRAMS ONLY

For each school that is served by a linked health program or by a mobile program, identify:

	Grade level [Select all that apply]						Operations in school					
School name:	Elementary	Middle	High	Elementary/ Middle	Middle/High	K to 12	Days per week	Hours per week	Total 2010-2011 school enrollment	Number of health center enrollees from school	Year established	Prearranged source of after-hours care?
	☐	☐	☐	☐	☐	☐						☐

APPENDIX B

CALIFORNIA healthy kids SURVEY

Core Module

High School Questionnaire

2013–2014

This survey asks about your behavior, experiences, and attitudes related to your school, health, and well–being. It includes questions about use of alcohol, tobacco, and other drugs, and about bullying and violence.

You do not have to answer these questions, but your answers will be very helpful in improving school and health programs. **You will be able to answer** whether or not you have done or experienced any of these things.

Please do not write your name on this form or the answer sheet. Do not identify yourself in any other way.

Please mark all of your answers on the answer sheet. Fill in the bubbles neatly with a **#2 pencil**. Do not write on the questionnaire. Mark only one answer unless told to ***"Mark All That Apply."***

This survey asks about things you may have done during different periods of time, such as during your **lifetime** (for example, did you ever do something?), or the past **12 months**, or **30 days.** Each provides different information. Please pay careful attention to these time periods.

Thank you for taking this survey!

CALIFORNIA healthy kids SURVEY

Core Module

Begin by writing your school's name at the top of the answer sheet.

1. **Fill in the bubble for the letter "B."**

2. **Fill in the bubble for the letter "G."**

Next, we would like some background information about you.

3. **How old are you?**
   - A) 10 years old or younger
   - B) 11 years old
   - C) 12 years old
   - D) 13 years old
   - E) 14 years old
   - F) 15 years old
   - G) 16 years old
   - H) 17 years old
   - I) 18 years old or older

4. **What is your sex?**
   - A) Male
   - B) Female

5. **What grade are you in?**
   - A) 6th grade
   - B) 7th grade
   - C) 8th grade
   - D) 9th grade
   - E) 10th grade
   - F) 11th grade
   - G) 12th grade
   - H) Other grade
   - I) Ungraded

6. **Are you of Hispanic or Latino origin?**
   - A) No
   - B) Yes

7. **What is your race?**
   - A) American Indian or Alaska Native
   - B) Asian
   - C) Black or African American
   - D) Native Hawaiian or Pacific Islander
   - E) White
   - F) Mixed (two or more) races

Core Module

8. **If you are Asian or Pacific Islander, which groups best describe you?** ***(Mark All That Apply.)***
If you are not of Asian/Pacific Islander background, mark "A. Does not apply."

A) Does not apply; I am not Asian or Pacific Islander
B) Asian Indian
C) Cambodian
D) Chinese
E) Filipino
F) Hmong
G) Japanese
H) Korean
I) Laotian
J) Vietnamese
K) Native Hawaiian, Guamanian, Samoan, Tahitian, or other Pacific Islander
L) Other Asian

9. **What best describes where you live? A home includes a house, apartment, trailer, or mobile home.**

A) A home with one or more parents or guardian
B) Other relative's home
C) A home with more than one family
D) Friend's home
E) Foster home, group care, or waiting placement
F) Hotel or motel
G) Shelter, car, campground, or other transitional or temporary housing
H) Other living arrangement

10. **What is the highest level of education your parents completed?** ***(Mark The Educational Level Of The Parent Who Went The Furthest In School.)***

A) Did not finish high school
B) Graduated from high school
C) Attended college but did not complete four–year degree
D) Graduated from college
E) Don't know

11. **During the past 12 months, how would you describe the grades you mostly received in school?**

A) Mostly A's
B) A's and B's
C) Mostly B's
D) B's and C's
E) Mostly C's
F) C's and D's
G) Mostly D's
H) Mostly F's

12. **During the past 12 months, about how many times did you skip school or cut classes?**

A) 0 times
B) 1–2 times
C) A few times
D) Once a month
E) Once a week
F) More than once a week

Core Module

13. In the past 30 days, did you miss school for any of the following reasons? *(Mark All That Apply.)*

A) Does not apply, I didn't miss any school
B) Illness (feeling physically sick), including problems with breathing or your teeth
C) Felt very sad, hopeless, anxious, stressed, or angry
D) Didn't get enough sleep
E) Didn't feel safe at school
F) Had to work
G) Had to take care of or help a family member or friend
H) Wanted to spend time with friends who don't go to your school
I) Wanted to use alcohol or drugs
J) Were behind in schoolwork or weren't prepared for a test or class assignment
K) Were bored with or uninterested in school
L) Were suspended
M) Other reason

How strongly do you agree or disagree with the following statements?

		Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
14.	I feel close to people at this school.	A	B	C	D	E
15.	I am happy to be at this school.	A	B	C	D	E
16.	I feel like I am part of this school.	A	B	C	D	E
17.	The teachers at this school treat students fairly.	A	B	C	D	E
18.	I feel safe in my school.	A	B	C	D	E
19.	I try hard to make sure that I am good at my schoolwork.	A	B	C	D	E
20.	I try hard at school because I am interested in my work.	A	B	C	D	E
21.	I work hard to try to understand new things at school.	A	B	C	D	E
22.	I am always trying to do better in my schoolwork.	A	B	C	D	E

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Please mark on your answer sheet how TRUE you feel each of the following statements is about your SCHOOL and things you might do there.

At my school, there is a teacher or some other adult ...

		Not At All True	A Little True	Pretty Much True	Very Much True
23.	who really cares about me.	A	B	C	D
24.	who tells me when I do a good job.	A	B	C	D
25.	who notices when I'm not there.	A	B	C	D
26.	who always wants me to do my best.	A	B	C	D
27.	who listens to me when I have something to say.	A	B	C	D
28.	who believes that I will be a success.	A	B	C	D

At school, ...

		Not At All True	A Little True	Pretty Much True	Very Much True
29.	I do interesting activities.	A	B	C	D
30.	I help decide things like class activities or rules.	A	B	C	D
31.	I do things that make a difference.	A	B	C	D

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The next questions ask about the use of alcohol, tobacco, marijuana, and other drugs, including pills or medications to get "high" or for reasons other than medical *(without a doctor's order).*

Keep the following definitions in mind.

- **One drink of ALCOHOL**, or alcoholic drink (beverage), means one regular size can/bottle of beer or wine cooler, one glass of wine, one mixed drink, or one shot glass of liquor.
- Questions about alcohol do **not** include drinking a few sips of wine for religious purposes.
- **DRUG** means any substance other than alcohol or tobacco, including pills and medications, used to get "high" ("loaded", "stoned", or "wasted") or for purposes other than they were prescribed by a doctor.

*During your **life**, how many times have you used the following substances?*

		Number of Times					
		0 Times	1 Time	2 Times	3 Times	4–6 Times	7 or More Times
32.	**A whole cigarette**	A	B	C	D	E	F
33.	**Smokeless tobacco** (dip, chew, or snuff such as Redman™, Skoal™, or Beechnut™)	A	B	C	D	E	F
34.	**An electronic cigarette or any other nicotine delivery device**	A	B	C	D	E	F
35.	**One full drink of alcohol** (such as a can of beer, glass of wine, wine cooler, or shot of liquor)	A	B	C	D	E	F
36.	**Marijuana** (pot, weed, grass, hash, bud)	A	B	C	D	E	F
37.	**Inhalants** (things you sniff, huff, or breathe to get "high" such as glue, paint, aerosol sprays, gasoline, poppers, gases)	A	B	C	D	E	F
38.	**Cocaine, Methamphetamine, or any amphetamines** (meth, speed, crystal, crank, ice)	A	B	C	D	E	F
39.	**Derbisol** (DB, derbs, dirt)	A	B	C	D	E	F
40.	**Ecstasy, LSD, or other psychedelics** (acid, mescaline, peyote, mushrooms)	A	B	C	D	E	F
41.	**Prescription pain killers** (Vicodin™, OxyContin™, Percodan™, Lortab™), **tranquilizers, or sedatives** (Xanax™, Ativan™)	A	B	C	D	E	F
42.	**Diet Pills** (Didrex, Dexedrine, Zinadrine, Skittles, M&M's)	A	B	C	D	E	F
43.	**Ritalin™ or Adderall™** (JIF, R–ball, Skippy) or other prescription stimulant	A	B	C	D	E	F

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*During your **life**, how many times have you used the following substances?*

		Number of Times					
		0 Times	1 Time	2 Times	3 Times	4–6 Times	7 or More Times
44.	**Cold/Cough Medicines** (Triple–C's, Coricidin Cough, Sudafed, TheraFlu, Tylenol Cough) or other over–the–counter medicines	A	B	C	D	E	F
45.	**Any other drug, or pill, or medicine** to get "high" or for other than medical reasons	A	B	C	D	E	F

*During your **life**, how many times have you been ...*

		Number of Times					
		0 Times	1 Time	2 Times	3 Times	4–6 Times	7 or More Times
46.	very drunk or sick after drinking alcohol?	A	B	C	D	E	F
47.	"high" (loaded, stoned, or wasted) from using drugs?	A	B	C	D	E	F
48.	drunk on alcohol or "high" on drugs **on school property**?	A	B	C	D	E	F

About how old were you the first time you did any of these things?

		Years of Age									
		Never	10 or Under	11	12	13	14	15	16	17	18 or Over
49.	Had a drink of an alcoholic beverage (other than a sip or two)	A	B	C	D	E	F	G	H	I	J
50.	Smoked part or all of a cigarette	A	B	C	D	E	F	G	H	I	J
51.	Used smokeless tobacco or other tobacco products	A	B	C	D	E	F	G	H	I	J
52.	Used marijuana or hashish	A	B	C	D	E	F	G	H	I	J
53.	Used any other illegal drug or pill to get "high"	A	B	C	D	E	F	G	H	I	J

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Core Module

*During the past **30 days**, on how many **days** did you use ...*

		0 Days	1 Day	2 Days	3 – 9 Days	10 – 19 Days	20 – 30 Days
54.	**cigarettes?**	A	B	C	D	E	F
55.	**smokeless tobacco** (dip, chew or snuff)?	A	B	C	D	E	F
56.	**an electronic cigarette or any other nicotine delivery device?**	A	B	C	D	E	F
57.	**one drink of alcohol?**	A	B	C	D	E	F
58.	**five or more drinks of alcohol in a row, that is, within a couple of hours?**	A	B	C	D	E	F
59.	**marijuana** (pot, weed, grass, hash, bud)?	A	B	C	D	E	F
60.	**inhalants** (things you sniff, huff, or breathe to get "high")?	A	B	C	D	E	F
61.	**prescription pain medications to get "high" or for reasons other than prescribed** (such as Vicodin™, OxyContin™, Percodan™, Ritalin™, Adderall™, Xanax™)?	A	B	C	D	E	F
62.	**any other drug, pill, or medicine to get "high" or for other than medical reasons?**	A	B	C	D	E	F
63.	**two or more drugs at the same time** (for example, alcohol with marijuana, ecstasy with mushrooms)?	A	B	C	D	E	F

*During the past **30 days**, on how many days **on school property** did you ...*

		0 Days	1 Day	2 Days	3 – 9 Days	10 – 19 Days	20 – 30 Days
64.	smoke cigarettes?	A	B	C	D	E	F
65.	use smokeless tobacco?	A	B	C	D	E	F
66.	have at least one drink of alcohol?	A	B	C	D	E	F
67.	smoke marijuana?	A	B	C	D	E	F
68.	use any other illegal drug or pill to get "high"?	A	B	C	D	E	F

How much do people risk harming themselves physically and in other ways when they do the following?

		How Much Risk or Harm			
		Great	Moderate	Slight	None
69.	Smoke cigarettes occasionally	A	B	C	D
70.	Smoke 1–2 packs of cigarettes each day	A	B	C	D
71.	Drink alcohol occasionally	A	B	C	D
72.	Have five or more drinks of an alcoholic beverage once or twice a week	A	B	C	D
73.	Smoke marijuana occasionally	A	B	C	D
74.	Smoke marijuana once or twice a week	A	B	C	D

Core Module

How difficult is it for students in your grade to get any of the following substances if they really want them?

		Very Difficult	Fairly Difficult	Fairly Easy	Very Easy	Don't Know
75.	Cigarettes	A	B	C	D	E
76.	Alcohol	A	B	C	D	E
77.	Marijuana	A	B	C	D	E

78. **How do you feel about someone your age smoking one or more packs of cigarettes a day?**
   - A) Neither approve nor disapprove
   - B) Somewhat disapprove
   - C) Strongly disapprove

How many times have you tried to quit or stop using ...

		Does Not Apply, Don't Use	0 Times	1 Time	2–3 Times	4 or More Times
79.	cigarettes?	A	B	C	D	E
80.	alcohol?	A	B	C	D	E
81.	marijuana?	A	B	C	D	E

82. **During your life, how many times have you ever driven a car when you had been drinking alcohol, or been in a car driven by a friend when he or she had been drinking?**
   - A) Never
   - B) 1 time
   - C) 2 times
   - D) 3 to 6 times
   - E) 7 or more times

Next are questions about violence, safety, harassment, & bullying on school property.

83. **How safe do you feel when you are at school?**
   - A) Very safe
   - B) Safe
   - C) Neither safe nor unsafe
   - D) Unsafe
   - E) Very unsafe

Core Module

*During the past **12 months**, how many times **on school property** have you ...*

		Happened on School Property			
		0 Times	1 Time	2 to 3 Times	4 or More Times
84.	been pushed, shoved, slapped, hit, or kicked by someone who wasn't just kidding around?	A	B	C	D
85.	been afraid of being beaten up?	A	B	C	D
86.	been in a physical fight?	A	B	C	D
87.	had mean rumors or lies spread about you?	A	B	C	D
88.	had sexual jokes, comments, or gestures made to you?	A	B	C	D
89.	been made fun of because of your looks or the way you talk?	A	B	C	D
90.	had your property stolen or deliberately damaged, such as your car, clothing, or books?	A	B	C	D
91.	been offered, sold, or given an illegal drug?	A	B	C	D
92.	damaged school property on purpose?	A	B	C	D
93.	carried a gun?	A	B	C	D
94.	carried any other weapon (such as a knife or club)?	A	B	C	D
95.	been threatened or injured with a weapon (gun, knife, club, etc.)?	A	B	C	D
96.	seen someone carrying a gun, knife, or other weapon?	A	B	C	D
97.	been threatened with harm or injury?	A	B	C	D
98.	been made fun of, insulted, or called names?	A	B	C	D

*During the past **12 months**, how many times **on school property** were you harassed or bullied for any of the following reasons?* [You were **bullied** if you were shoved, hit, threatened, called mean names, teased, or had other unpleasant physical or verbal things done to you repeatedly or in a severe way. It is **not bullying** when two students of about the same strength quarrel or fight.]

		0 Times	1 Time	2 to 3 Times	4 or More Times
99.	Your race, ethnicity, or national origin	A	B	C	D
100.	Your religion	A	B	C	D
101.	Your gender (being male or female)	A	B	C	D
102.	Because you are gay or lesbian or someone thought you were	A	B	C	D
103.	A physical or mental disability	A	B	C	D
104.	Any other reason	A	B	C	D

105. **During the past 12 months, how many times did other students spread mean rumors or lies about you on the internet (i.e., Facebook™, MySpace™, email, instant message)?**
   A) 0 times (never)
   B) 1 time
   C) 2–3 times
   D) 4 or more times

106. **Do you consider yourself a member of a gang?**
   A) No
   B) Yes

107. **During the past 12 months, did you ever feel so sad or hopeless almost everyday for two weeks or more that you stopped doing some usual activities?**
   A) No
   B) Yes

108. **During the past 12 months, did you ever seriously consider attempting suicide?**
   A) No
   B) Yes

109. **Did you eat breakfast today?**
   A) No
   B) Yes

110. **How many questions in this survey did you answer honestly?**
   A) All of them
   B) Most of them
   C) Only some of them
   D) Hardly any

111. **Is your father, mother, or caretaker currently in the military (Army, Navy, Marines, Air Force, National Guard, or Reserves)?**
   A) No
   B) Yes
   C) Don't know

112. **Which of the following best describes you? *(Mark All That Apply.)***
   A) Heterosexual (straight)
   B) Gay or Lesbian or Bisexual
   C) Transgender
   D) Not sure
   E) Decline to respond

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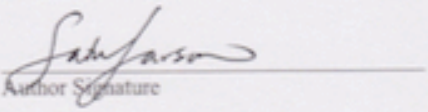

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Date