

Characteristic Differences Between School-Based Health Centers With and Without Mental Health Providers: A Review of National Trends

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ABSTRACT

Background: Minority racial/ethnic pediatric populations and those living in poverty are at greater risk of exposure to trauma, development of mental health disorders, and school failure yet are less likely to have access to mental health services (MHS). School-based health centers (SBHCs) staffed with mental health providers may be one strategy for decreasing health care disparities.

Methods: Secondary analysis of the cross-sectional *School-Based Health Alliance Census School Year 2010–2011 Report* was conducted. Descriptive statistics and chi-square analysis were used to describe differences between SBHCs with and without onsite MHS.

Results: A total of 70% of SBHCs offered MHS. SBHCs with more resources, more students, a longer history, and state funding were more likely to offer MHS, and geographic location had no impact on service availability.

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Conclusion: Reviewing SBHC characteristics that enable inclusion of MHS may help stakeholders expand this model of care to address exposure to chronic childhood trauma. *J Pediatr Health Care.* (2017) ■, ■-■.

KEY WORDS

Academic achievement, child and adolescent health, chronic childhood trauma, health care disparities, mental health services, school-based health centers

INTRODUCTION

Approximately 80% of children and adolescents in the United States have experienced childhood trauma in the form of victimization (Turner, Finkelhor, & Ormrod, 2010). Types of victimization include peer-sibling, physical abuse or assault, sexual victimization or assault, exposure to community violence, bullying, maltreatment, and witnessing family violence (Turner et al., 2010). The most common locations for victimization occurrences are in schools (54%) and in the home (44%; Turner, Shattuck, Finkelhor, & Hamby, 2016). Exposure to victimization and chronic childhood trauma is associated with increased risk for behavioral and mental health disorders (Ford, Elhai, Conner, & Frueh, 2010; Turner, Vanderminden, Finkelhor, Hamby, & Shattuck, 2011). Approximately one in five children and adolescents has a diagnosable mental health disorder that can cause severe lifetime impairment, yet estimates indicate that 70% do not receive mental health services, with youth of lower socioeconomic status and/or minority race and ethnicity even less likely to receive care (Alegria, Vallas, & Pumariega, 2010; Guo, Wade, Pan, & Keller, 2010; Merikangas et al., 2010; 2011). Increasing access, utilization, quality, and funding of mental health care is of national concern. Mental health disorders negatively affect academic and social functioning (McLeod, Uemura, & Rohrman, 2012). Poor academic achievement can lead to decreased employment opportunities, with less social mobility advancement, as well as severe disability and early death (Walsemann, Gee, & Ro, 2013).

Schools are an important point of contact for prevention, identification, and treatment of behavioral health problems because of the accessibility of students (Bruns, Walrath, Glass-Siegel, & Weist, 2004). 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 (Keeton, Soleimanpour, & Brindis, 2012). 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 (Anyon et al., 2013; Bains, Franzen, & White-Frese, 2014; Guo et al., 2005; Soleimanpour, Geierstanger, Kaller, McCarter, & Brindis, 2010; Wade et al., 2008). Although school success is influenced by

multiple factors, when comparing students who use an SBHC to those who do not, several studies have found an association between SBHC use and improved school connection, increased academic scores, increased school attendance, and decreased school dropout (Kerns et al., 2011; Strolin-Goltzman, 2010; Strolin-Goltzman, Sisselman, Melekis, & Auerbach, 2014; Van Cura, 2010; Walker, Kerns, Lyon, Bruns, & Cosgrove, 2010).

The SBHC is a successful model of care, yet fewer than 2% of U.S. schools have one, and among those schools with an SBHC, one third of SBHCs do not have a mental health provider as part of their staff (School-Based Health Alliance [SHA], 2016). Of the 70% of SBHCs with mental health providers on staff, there is a wide range of behavioral health services available; however, these do not necessarily equate to comprehensive mental health care (SHA, 2016). The expansion of the SBHC model of care may be a valuable health equity strategy in addressing gaps in the provision of pediatric health and mental health care. SBHCs staffed with mental health providers may be uniquely positioned to mitigate negative health effects from exposure to victimization and childhood trauma, both in the home and in schools. The purpose of this article is to describe factors associated with SBHCs in the United States that are staffed with mental health providers compared with those that are not 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 School Year 2010–2011 Census Report* (SHA, 2013). The SHA, previously known as the National Assembly on School-Based Health Care, is a national advocacy group that has collected data every 2 to 3 years from SBHCs nationwide beginning in 1986. The census report survey of nominal scale items includes demographics of students and schools served, health professional staffing, services available, operations, prevention activities, and clinical services.

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 (SHA, 2016). Most survey items have remained consistent since 2005, although there have been some deletions and additions. Collection of data used in this study 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 (SHA, 2013). Of these, 1,485 (77%) responded to the survey. Of these 1,485 programs, the SHA excluded sites that did not provide primary care services, which led to a final count of 1,381 programs for the census database. Permission to use 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.

Data Analysis

We used descriptive statistics to describe and summarize the characteristics of SBHCs with and without onsite mental health providers at the SBHC. In all analyses, the variable of interest was a dichotomous variable indicating whether or not an SBHC had a mental health provider as part of its staff. Mental health providers listed in the census survey included 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 SBHCs with a mental health provider and those without such providers. Data were analyzed using SPSS, version 22.

RESULTS

Differences Between U.S. School-Based Health Centers With and Without a Mental Health Provider

Of the 1,381 SBHCs in the 2010 to 2011 census survey, 978 (71%) 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 and those without such services. As shown in Table 1, mental health providers were found more often in SBHCs that serve a larger student body (62% vs. 38%, $\chi^2 = 8.16, p < .01$), had been in operation longer (56% vs. 44%, $\chi^2 = 13.88, p < .001$), were open more hours (71% vs. 56%, $\chi^2 = 24.00, p < .001$), used electronic billing (80% vs. 68%, $\chi^2 = 17.23, p < .001$), and had a prearranged source for after-hours care (74% vs. 61%, $\chi^2 = 23.69, p < .001$).

There were many significant differences between SBHCs that had a mental health provider on staff and those without such services.

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 (85% vs. 63%, $\chi^2 = 69.05, p < .001$). They also served students with Medicaid insurance at a significantly higher rate: 86%, compared with 76% of SBHCs without a mental health provider ($\chi^2 = 18.01, p < .001$). A significantly greater proportion of SBHCs without mental health providers served students without insurance (59% vs. 48%, $\chi^2 = 11.08, p < .001$).

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 an SBHC mental health provider (67% vs. 54%, $\chi^2 = 19.14, p < .001$). 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% vs. 76%, $p = .3$). 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, $p < .001$). 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 the design of school services, such as prevention programs (31% vs. 19%), compared with SBHCs without a mental health provider (all values, $p < .001$).

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 grades 9 through 12 (34% vs. 20%, $p < .001$), whereas a greater proportion of SBHCs without a mental health provider served grades kindergarten through 5 (21% vs. 10%, $p < .001$). SBHCs with mental health providers were found in similar proportions among urban, rural, and suburban locations (data not shown). Additionally, there were nonsignificant differences in the proportion of SBHCs with mental health providers and the number of students eligible for a free or reduced-price lunch (data 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. There was a wide range of FTE staffing for each of the occupations found within SBHCs, ranging from 0.06 to 14.86 FTE. Nurse practitioners were present in 79% of SBHCs, physicians were present in 44% of SBHCs, and physician assistants were present in 13% of SBHCs.

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

TABLE 1. Differences between school-based health centers with and without mental health providers

Variable	With MH		Without MH		χ^2	Cramer's V
	Provider (N = 978)		Provider (N = 403)			
	n	%	n	%		
Number of students at school with SBHC					8.16*	0.08
<1,000 students	544	62.2	206	71.5		
≥1,000 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, nonprofit 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

Note. K, kindergarten; MH, mental health; org., organization; SBHC, school-based health center.

* $p < .01$, ** $p < .001$.

included unlicensed social workers (20%), psychologists (15%), alcohol and drug counselors (14%), and psychiatrists (11%). The least commonly employed mental health provider was a psychiatric nurse practitioner, found in only 3% of SBHCs with mental health providers. Twenty-three of the 28 psychiatric nurse practitioners (82%) were located in urban SBHCs.

SBHCs with mental health providers also employed medical assistants (48%), registered nurses (36%), health educators (20%) and licensed vocational nurses (14%). Although fewer in number, SBHCs with mental

health providers also employed a dental hygienists (14%) and dentists (11%).

Mental Health Services Provided Onsite by School-Based Health Centers

Schools both with and without mental health providers offered a range of services categorized as mental health services. However, these services were more often at SBHCs with mental health providers. As shown in Table 3, a significantly higher proportion of SBHCs with a mental health provider, compared with those without,

TABLE 2. Staffing profile of school-based health centers with mental health providers

FTE (35 hours/week) ^a	% 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

Note. FTE, full-time equivalent; Max, maximum.

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

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 < .001). Not surprisingly, a significantly greater proportion of SBHCs with a mental health provider prescribed and managed mental health medications (44% vs. 25%, p < .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 an 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,

TABLE 3. Mental health services provided onsite at school-based health centers

Mental health service onsite	Mental health		No mental health		χ^2	Cramer's V
	Provider (n = 978)		Provider (n = 403)			
	n	%	n	%		
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 < .001.

TABLE 4. Behavioral and health promotion services provided by school-based health centers

Health promotion services	Individual			Small groups			Classroom			Parents			Community		
	%	%	χ^2	%	%	χ^2	%	%	χ^2	%	%	χ^2	%	%	χ^2
Healthy eating, active living, weight management	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	7.5	62.0**	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	13.0	72.1**	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	10.8	85.8**	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	15.8	56.1**	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	6.9	54.0**	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	8.6	58.2**	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	6.1	51.0**	21.5	7.8	33.7**	17.0	6.7	23.0**	11.3	2.2	26.7**

Note. Boldface indicates school-based health centers with a mental health provider (n = 978); regular type indicates school-based health centers without a mental health provider (n = 403).

*p < .01, **p < .001.

parents, or communities were offered at a significantly higher proportion of SBHCs with a mental health provider compared with 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

These data document that 70% of SBHCs participating in the 2010 to 2011 Census Study had a mental health provider onsite. Compared with SBHCs without a mental health provider, those with such providers tended to have more organizational resources. For example, different types and greater numbers of mental health services were made more available to students, including being open more hours and having a prearranged source for after-hours care. SBHCs with mental health providers were also more likely to have established electronic billing and health record systems. Such electronic health records are noteworthy because they can help support better coordination among different types of onsite services and external agencies and can sustain some of their services through billing, thus further leveraging resources. In turn, those SBHCs that were able to bill federal and state funding streams or managed care were able to have more mental health providers on staff.

SBHCs that had mental health providers were also more likely to offer a greater number of services and have sufficient resources to hire different health care providers, such as dentists or health educators, and administrative support. This comprehensive array of providers reflects the ability of these SBHCs to respond to the multiple concurrent needs of the adolescent students, reflecting the capacity of the sponsoring organization to be able to pursue a variety of funding streams

to support such expertise. For example, the ability to have sufficient administrative support is a valuable resource for submitting the necessary billing forms, in light of different funders, ranging from managed care organizations to Medicaid to state sources of funding. The location (urban, suburban, or rural) was not shown to have an effect on the availability of mental health staff, given that more rural settings often have fewer mental health providers available.

The type of sponsoring agency of an SBHC played an important role in whether or not the SBHC had a mental health provider as part of its staff. SBHCs that made a commitment to the provision of mental health providers often had sufficient resources to hire a variety of providers and supported their role outside of the clinic walls so they could work directly throughout the school community. In contrast, SBHCs sponsored by a community health center may have difficulty in identifying and hiring mental health providers, particularly if mental health services do not represent a component of the sponsoring organization's mission.

In general, SBHCs that served younger, elementary-level students were less likely have a mental health provider at the SBHC, whereas SBHCs that served older high school students were more likely to have a mental health provider onsite. This is aligned with research studies that show that adolescence represents the developmental period in which many mental health problems emerge (Paus, Keshavan, & Giedd, 2010). The acceptability of mental health services for older students, as compared with younger students, for whom parents are more likely to play a closer monitoring role and identify needed services for their younger children, reflects the importance of SBHCs as a safe haven for secondary students. Parents too may find it more acceptable to have a school resource that can help

support their offspring once they have provided consent for a wide array of services.

Geographic region was not shown to have an impact on whether or not an SBHC included a mental health provider. Although previous literature has shown that rural areas were less likely to have access to mental health providers (Wang et al., 2005), in this research we found that mental health providers were onsite in similar proportions among urban, rural, or suburban SBHCs. Of SBHCs that had a mental health care provider onsite, there was a nonsignificant difference in employment of a licensed social worker/therapist (62% urban, 65% rural, 69% suburban SBHCs; $\chi^2 = 4.4$; $p = .111$). However, there was variation among the geographic sites in other types of mental health providers. Of SBHCs with mental health providers, a lower proportion of rural sites had psychologists (rural = 7% vs. urban = 13% vs. suburban = 15%; $\chi^2 = 12.15$; $p < .01$), and a higher proportion of suburban sites had alcohol and drug counselors (suburban = 16% vs. rural = 9% vs. urban = 9%; $\chi^2 = 9.56$; $p < .01$). Although few in number, psychiatrists and psychiatric nurse practitioners were found primarily in urban settings.

Making mental health services available across socioeconomic lines is important. Regardless of income, mental health services are needed because of the high incidence of mental health disorders among youth (Merikangas et al., 2010). Fortunately, study results did not find that the percentage of students eligible for free or reduced-price lunch (as a marker of poverty level) differentiated whether an SBHC included a mental health provider. However, children and adolescents living in poverty are at a higher risk for exposure to trauma and development of behavioral and mental health disorders (Wadsworth et al., 2008). Increasing resource allocation to allow all SBHCs to have a mental health provider on staff may be one important strategy for reducing the disparities in access and utilization of mental health care among low-income populations already burdened with the increased risk factor for development of mental health disorders.

More established and better-resourced SBHCs that had mental health services were also more likely to engage in a wide variety of school-wide health promotion and prevention activities that went beyond the array of clinical services provided within clinic walls. These included emotional health and well-being, suicide prevention, and healthy eating. SBHCs' ability to provide individual, small-group, campus-wide, parental, and community behavioral and health promotion interventions may not only provide a continuum of care to clinic patients and school participants but also help normalize

issues related to emotional health and well-being. Mental health providers were also a valuable resource to schools because they participated in comprehensive evaluations and treatment, classroom behavior assessments, and individual learning plans. By providing case management, crisis intervention, and substance abuse and alcohol counseling, SBHCs were in position to lift the load that teachers often have to carry along with their traditional teaching responsibilities.

Mental health stigma also has to be recognized as a factor in the provision of care. When mental health services are provided as an integrated part of primary health care, students may feel safer in seeking such care because the reason for visiting the SBHC would not be evident to others at school. Other factors that may help facilitate such access could result from seeing the same professional offer a variety of prevention and health promotion activities on campus and building a sense of trust that the clinic visit will be confidential (unless the student places himself or another at risk). Another factor that helps SBHCs eliminate barriers to care is the parental consent for services, which is signed by parents at the beginning of the school year and thus does not require parents to necessarily know that the most recent visits were for mental health services. However, this survey did not specify whether parental consent allowed for the provision of confidential care for mental health, substance use, and reproductive health services without parental consent. The bridge between campus and clinic may also help overcome the concerns of some students who may not want to participate in small-group, campus-

wide counseling-related activities for fear their friends will know that they are seeking such services, choosing rather to have individual one-on-one care. A potential area for further growth is the role of SBHCs in providing additional support for parents and offering community-level interventions. In the case of parents, only a subset of schools provided parents with information on drugs, alcohol, and tobacco use. If SBHCs had additional resources, more intergenerational efforts—for example, to help ameliorate the impact of adverse childhood experiences—might be considered helpful and supportive for both students and their families.

There are several workforce implications from this study. 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. However, this survey could not show whether there was integration between primary

When mental health services are provided as an integrated part of primary health care, students may feel safer in seeking such care...

Making mental health services available across socioeconomic lines is important.

care and mental health services or whether the practitioners were siloed within roles. Only about 3% of SBHCs had psychiatric mental health nurse practitioners in the staffing model, although these practitioners are skilled and valued in providing integrated care (Phoenix, 2016).

Very few SBHCs had behavioral health staff who were able to prescribe and manage behavioral and mental health medications. The data show that most SBHCs employed social workers/therapists whose scope of practice does not include prescribing medications (Piotrowski & Doelker, 2001). Psychologists cannot prescribe medications in most states, although this is slowly changing (Van Winkle, 2010). The wide range in licensure, training, and scope of practice among mental health professionals found in SBHCs may influence the types 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 because of variation in experience, language proficiency, sex match, racial/ethnic match, provider attitudes, and types of therapy used. Variances in licensure, FTE status, and attributes of each 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 an SBHC does not necessarily preclude an SBHC from providing mental health services if those services can be provided by primary care practitioners.

This study also highlights how school-employed health practitioners, such as the school nurse and school mental health provider, may not be 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 a decreased ability to coordinate care among the providers and agencies unless school and SBHC staff work at ensuring that adequate coordination occurs. 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, availability of workforce, and resources may be contributing factors.

Not all SBHCs had the same type of mental and behavioral health services. This may be related to size of the program, the level of funding, licensure requirements, total FTE staffing, and/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 the availability of providers or resources in the community. Youth exposed to trauma and youth

with mental health disorders may need different levels of care and different therapeutic 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 with specific needs.

Involving students in SBHC activities other than health care visits was associated with an SBHC having a mental health provider. It is important to assess how student engagement contributes to the school climate. Further qualitative studies may be helpful in disentangling whether student involvement leads to including mental health providers or if it is a reflection of an SBHC with greater resources and a commitment to student well-being and engagement.

Determining the specific behavioral and mental health needs of children and adolescents is important in assessing the need for increased availability of mental health services and behavioral health workforce. Results from the national Youth Risk Behavior Surveillance System indicate that many youth and young adults engage in risky health behaviors; had drunk alcohol, used marijuana, or smoked cigarettes; or had symptoms associated with mental health disorders (U.S. Department of Health and Human Services, 2016).

Limitations

The survey was completed on a voluntary basis, so there is a risk that SBHCs with more resources were more likely to respond to the survey. However, the sample includes a large proportion of all SBHCs in the United States, so this risk is minimized. 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 used a cross-sectional design, we could not 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 victimization and 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 adverse childhood experiences. SBHCs are in a position to ameliorate the impacts of exposure to chronic childhood trauma, because 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 if a coordinated physical and behavioral health care plan can be developed for the individual student. 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. However, further evidence is needed to assess whether the mental health services currently available in SBHCs are adequate in number and if staff are properly trained to mitigate childhood exposure to trauma. Having services available is a first step that should be followed up with more rigorous evaluation research.

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