RESEARCH ARTICLE

A Collaborative Analysis of Trends in Referrals to the Pennsylvania Student Assistance Program from 2013 to 2018

DEEPA L. SEKHAR, MD[a] ERIC W. SCHAEFER, MS[b] ALICIA M. HOKE, MPH[c] PERRI ROSEN, PhD[d] ROBERTA A. CHUZIE, BS[e] DANA M. MILAKOVIC, PsyD[f]

─── ABSTRACT ───

BACKGROUND: The Student Assistance Program (SAP) is mandated kindergarten to 12th grade in Pennsylvania schools to address barriers to student academic success. Following student referral, SAP teams use a systematic process to inform recommendations for school or community-based services. To evaluate program outcomes, a review of student SAP referral trends over a 5-year period was undertaken.

METHODS: The Pennsylvania Network for Student Assistance Services (PNSAS), the state leadership providing oversight of SAP, partnered with Penn State College of Medicine in a retrospective analysis of student referral data from 2013 to 2018. Public school enrollment demographics were used for comparison. Frequencies and percentages were calculated.

RESULTS: Referrals (total n = 352,640) increased by 24% over the 5 years; demographics 55% male, 69% non-Hispanic white, 16% non-Hispanic black, and 10% Hispanic. Referrals were most commonly for behavioral concerns (31%). Discontinued referrals (39%) were primarily for parent refusal/no permission. Trends included rising minority and elementary referrals over the study period.

CONCLUSIONS: SAP referral demographics were consistent with state public school enrollment race/ethnicity breakdown suggesting lack of systematic bias. The proportion of behavioral referrals was consistent with rising youth behavioral health needs. PNSAS must consider strategies to support rising referral numbers and trends.

Keywords: Student Assistance Program; school-based supports; behavior-based referrals.

Citation: Sekhar DL, Schaefer EW, Hoke AM, Rosen P, Chuzie RA, Milakovic DM. A collaborative analysis of trends in referrals to the Pennsylvania student assistance program from 2013 to 2018. J Sch Health. 2022; DOI: 10.1111/josh.13267

Received on April 19, 2022
Accepted on November 2, 2022

The Pennsylvania Student Assistance Program (SAP) was established in 1984 with the primary goal of identifying and addressing issues which pose a barrier to a student's academic success.[1] SAP is jointly overseen by the Pennsylvania Network for Student Assistance Services (PNSAS), a collaboration between the Pennsylvania Department of Drug and Alcohol Programs, Pennsylvania Department of Education (PDE) and Pennsylvania Department of Human Services. Mandated in all Pennsylvania state school entities, SAP teams consist of a group of trained professionals who use a 4-step process to gather and review data on observable behaviors prompting a student referral.[1] These 4 steps include referral, team planning, intervention and recommendations, and support and follow-up.[1] SAP referrals may be

[a] Associate Professor of Pediatrics, (dsekhar@pennstatehealth.psu.edu), Department of Pediatrics, Penn State College of Medicine, Hershey, PA.

[b] Biostatistician, (eschaefer@pennstatehealth.psu.edu), Department of Public Health Sciences, Penn State College of Medicine, Hershey, PA.

[c] Senior Project Manager, (ahoke1@pennstatehealth.psu.edu), Department of Pediatrics, Penn State College of Medicine, Hershey, PA.

[d] Consulting Psychologist, (c-prosen@pa.gov), Pennsylvania Network of Student Assistance Services, Commonwealth of Pennsylvania, Harrisburg, PA.

[e] Statewide Mental Health Student Assistance Program Coordinator, (c-rchuzie@pa.gov), Pennsylvania Network of Student Assistance Services, Commonwealth of Pennsylvania, Harrisburg, PA.

[f] Mental Wellness and Trauma Specialist, (damilakovi@pa.gov), Pennsylvania Network of Student Assistance Services, Commonwealth of Pennsylvania, Harrisburg, PA.

Address correspondence to: Deepa L. Sekhar, Associate Professor of Pediatrics, (dsekhar@pennstatehealth.psu.edu), Department of Pediatrics, 90 Hope Drive, A145, Hershey, PA 17033.

Funding was received from Pennsylvania Office of Mental Health and Substance Abuse Services. The funder did not influence the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

from a teacher, peer, parent, or even self-referral. In the team planning step, the SAP team gathers objective information regarding the referral concern from school personnel and family and meets with the student and parent to formulate a plan that may include in-school or community-based activities and services.[1] In the intervention and recommendation step, the plan is put into action. Finally, for support and follow-up, the SAP team continues to work with and monitor the student.[1] SAP teams are further supported by SAP liaisons, a varied group of professionals from county mental health and drug and alcohol agencies who have expertise in mental health, substance use, and general counseling. SAP liaisons support school teams through consultation and by providing a variety of services which may include behavioral health screenings and/or level of care assessments.[2] SAP programs are promoted by the Substance Abuse and Mental Health Services Administration.[3] Recognizing that students are better able to learn when their physical, mental, and behavioral health needs are met, PNSAS also fits well within the Centers for Disease Control and Prevention's (CDC) the Whole School Whole Community Whole Child (WSCC) model.[4]

While there has been mounting awareness of the potential for bias in reliance on behavior-based referrals, schools provide a critical access point for unmet behavioral and physical health needs among students.[5-7] The PDE retains records for all referrals to SAPs, but there has been limited opportunity to critically analyze these data for trends and potential biases in referrals. In 2020, PNSAS began an academic-public health partnership with Penn State College of Medicine to support SAP evaluation. The partnership was based on prior collaborative work.[8] This manuscript is a report on the partnership's collaborative program evaluation of trends in the demographics of SAP team referrals from 2013 to 2018. The goal of the evaluation was to identify disparities in referrals as well as the most common referral sources, types of referrals, and recommended treatments/services in order to inform PNSAS regarding SAP areas of strength and target areas for improvement.

METHODS

Participants

Deidentified records of all student SAP referrals from 2013 to 2018 were obtained in collaboration with the PDE after submission and approval of a data request form and review/approval by the PDE Institutional Review Board and the Penn State Institutional Review Board. These data come primarily from Pennsylvania public schools. Private schools in the state are not required to have SAP teams, and even if they do, are not mandated to report data to the state. Consistent with PNSAS statewide data reporting, data from the School District of Philadelphia were excluded as their current integration of SAP into their school system is unique and does not allow for comparison to other school districts, thus inclusion of their data would significantly skew the results.

Instrumentation

Data were originally collected on the PDE-4092 form, completed by school district teams to track each student referral and outcome.[9,10] These data are submitted annually to the state by June 30 of each academic year.[9] The PDE-4092 forms are intended to capture basic information about each student referred and the resulting recommendations and outcomes.[10]

Procedure

In preparation for the analysis, PDE-4092 forms were reviewed from the 2013 to 2014, 2014 to 2015, 2015 to 2016, 2016 to 2017, and 2017 to 2018 academic years. While the form undergoes regular revision, this 5-year range was selected as this was the most recent timeframe during which the PDE-4092 form was most consistent. New or different questions and response categories added in revisions to the form across the data period were collapsed and/or omitted as needed in order to arrive at a standard set of variables tracked throughout the 5-year time period. For example, on the 2013-2014 and 2014-2015 versions of the PDE-4092 form, ''bullying'' was listed as a referral reason. Starting in 2016-2017, this category was divided on the PDE-4092 form into ''bullied by others'' and ''bullying (perpetrator).'' In order to conduct the analysis across all 5 years, this was collapsed back into the single referral category of ''bullying.'' Main variable categories included month of referral, student sex and race/ethnicity, grade level, referral source, primary referral reason, success of parent contact and consent, and reasons for discontinuation of the SAP process; a total of 35 variables were considered. If the student proceeds through SAP, the PDE-4092 includes data on the recommended school and community-based services.

In addition, to provide a metric for comparison over time, public school enrollment data from PDE was used to obtain the number of students enrolled in public schools during this time period and basic student demographics (sex, race/ethnicity).[11]

Data Analysis

Frequency counts and percentages were calculated for all items on the PDE-4092 form for the entire study period and by academic school year. Relevant percentages by academic school year were presented graphically. The large sample size in the evaluation

ensured even small fluctuations in percentages over time were statistically significant regardless of the actual clinical/educational implications. Thus, we have not presented tests of significance and instead interpreted results with respect to clinically or educationally relevant changes.

RESULTS

There were 352,640 referrals to SAP during the study period (Table 1). Referred students were majority male (55%) and non-Hispanic white (69%). Referrals for high school students were 50% of the total, and referrals peaked in September and October of the academic year (Table 2). Referrals were most commonly made by school staff (both instructional [37%] and non-instructional [26%]). Parent and self-referral were 8% and 5%, respectively (Table 3).

The most common primary referral reason for students was a behavioral concern (31%) followed by academic (14%) and family (10%) concerns. Academic concerns were highest among elementary students (21.1%) as compared to middle and high school students (both at 11.9%). High school students (8.5%) had more referrals for suspected drug and alcohol issues than middle (2.6%) or elementary students (0.1%). Referrals for self-harm (4.6%) and suicidal ideation (4.2%) were highest among middle school students versus high school (2.4% and 3.6%, respectively) and elementary school (0.6% and 1.2%, respectively). Thirteen percent of students had more than 1 referral in the academic year. In 91% of the total cases, SAP referral was deemed warranted (Table 4). Of these warranted referrals, written parent/guardian permission to proceed with the SAP process was obtained for 68% of cases, and parents/guardians participated in the SAP process with their student in a majority (86%) of these cases. Of all warranted referrals, 39% were ultimately discontinued, primarily due to parent refusal or lack of permission to proceed with the SAP process.

In terms of school-based services, students were most commonly recommended to one-to-one counseling or follow-up with a school counselor, school

Table 1. Number of Students with a Student Assistance Program Referral

Academic School Year	Total (n = 352,640), n (%)	State Public School Enrollment[11]
13/14	64,215 (18.2)	1,750,159
14/15	67,248 (19.1)	1,739,559
15/16	68,061 (19.3)	1,731,588
16/17	73,362 (20.8)	1,722,619
17/18	79,754 (22.6)	1,719,336

Table 2. Demographics of Referrals to the Student Assistance Program 2013-2018

Characteristic	Total (n = 352,640), n (%)
Gender	
Male	195,379 (55.4)
Female	157,261 (44.6)
Race/ethnicity	
Non-Hispanic white	243,671 (69.1)
Non-Hispanic black	55,330 (15.7)
Hispanic (any race)	34,374 (9.7)
Asian	3945 (1.1)
American Indian/Alaskan Native	555 (0.2)
Native Hawaiian or Other Pacific Islander	817 (0.2)
Multi-racial	13,948 (4.0)
Grade/school	
Elementary school (PreK/K4-5th grade)	71,480 (20.3)
Middle school (6th-8th grades)	105,710 (30)
High school (9th-12th grades)	175,252 (49.7)
Adult	43 (< 0.1)
Ungraded	44 (< 0.1)
Unknown	111 (< 0.1)
Local education agency category	
Career and technical center	4793 (1.4)
Charter school	16,500 (4.7)
Diocese	2437 (0.7)
Intermediate unit	360 (0.1)
Licensed, private academic school	12 (0)
School district	328,538 (93.2)
Month of referral	
January	34,908 (9.9)
February	35,142 (10.0)
March	35,795 (10.2)
April	24,949 (7.1)
May	13,650 (3.9)
June	1876 (0.5)
July	543 (0.2)
August	6523 (1.8)
September	63,204 (17.9)
October	61,735 (17.5)
November	43,617 (12.4)
December	30,698 (8.7)

psychologist, or SAP team member or other school personnel (42%). This was followed by recommendations for in-school support groups (15%) and academic supports (13%). Only 8% of referrals did not include recommendations for any school-based services. The most common community-based recommendation was for screening by a SAP liaison (ie, county mental health or drug and alcohol agency representatives; 48%). Twenty-four percent of students had no recommendation for community-based services, and 13% were recommended to continue current mental health treatment services. The primary recommendation following liaison screening was for further mental health, behavioral health or drug and alcohol assessment (55%). In 23% of cases following liaison screening recommendations were for one-to-one, for example, a brief, focused intervention, with a liaison.

Table 3. Student Assistance Program 2013-2018, Referral Source and Reasons

	Total (n = 352,640), n (%)
Incoming referral source	
Instructional staff	130, 311 (37.0)
Non-instructional staff	90, 803 (25.7)
Disciplinarian	38, 253 (10.8)
Administrative, non-disciplinarian	29, 370 (8.3)
Parent/guardian	29, 305 (8.3)
Self	16, 427 (4.7)
Other	12, 853 (3.6)
Peer	5318 (1.5)
Primary referral reason	
Behavioral concern	110, 899 (31.4)
Academic concern	48, 607 (13.8)
Family concern	33, 868 (9.6)
Social concerns	27, 387 (7.8)
Attendance (school day)	25, 470 (7.2)
Other	18, 209 (5.2)
Suspected drug and alcohol issues	17, 706 (5.0)
Suicide ideation/gesture/attempt (follow-up to crisis plan)	11, 593 (3.3)
Violated school policy, D&A	11, 055 (3.1)
Self-harm, injury (follow-up to crisis plan)	9431 (2.7)
Suffered recent loss	8186 (2.3)
Continuation of case from another SAP team	5282 (1.5)
Bullying	4392 (1.2)
Violated school policy (other)	3384 (1.0)
Suspected child abuse/neglect	3123 (0.9)
Violated school policy, violence/weapons	2918 (0.8)
Witness/victim of traumatic event	2710 (0.8)
Tobacco violation or self-reported tobacco use	2381 (0.7)
Involvement in legal system	1516 (0.4)
Homelessness	1330 (0.4)
Class cutting	1169 (0.3)
Unexplained drop in grades	814 (0.2)
Teen pregnancy	427 (0.1)
Parent incarceration	358 (0.1)
Transient living conditions	209 (0.1)
Runaway	176 (< 0.1)
Gambling	21 (< 0.1)
Military connectedness	19 (< 0.1)

D&A, Drug and Alcohol; SAP, Student Assistance Program.

Time Trends in Referrals

The number of referrals increased over time from 64,215 to 79,754 (a 24% increase) despite declining state public school enrollment (a 1.8% decrease from 2013-2014 to 2017-2018).[11] The percent of referrals by sex remained steady over time (Figure 1). Referrals among non-Hispanic white and black students declined, with an increasing number of referrals for Hispanic (8.5% in 2013/2014 to 11.1% in 2017/2018) and multiracial students (3% in 2013/2014 to 4.9% in 2017/2018). While high school students consistently comprised the greatest number of referrals (>50%), referrals for elementary students increased over time (17.7% in 2013/2014 to 23% in 2017/2018). Behavioral concerns remained the greatest primary referral reason across all grade levels throughout the

Table 4. Parent Participation and Student Assistance Program Recommended Services

Question Variable	n (%)
Was the SAP process warranted? (n = 352,640)	
Missing	16
No	31, 049 (8.8)
Yes	321, 575 (91.2)
Parent/guardian written permission to continue SAP process? (n = 321,575)	
Missing	1056
No	101, 227 (31.6)
Yes	219, 292 (68.4)
Was SAP discontinued? (n = 321,575)	
No	195, 835 (60.9)
Yes	125, 740 (39.1)
Reason SAP discontinued (n = 125,740)	
Parent refusal/written permission not obtained	87, 003 (69.2)
Other	17, 040 (13.6)
Student already in treatment	12, 636 (10.0)
Student refusal	9061 (7.2)
Did parent/guardian participate in the SAP process (n = 195,835)	
Missing	653
Yes	168, 015 (86.1)
No	27, 167 (13.9)
Primary school service recommended (n = 195,835)	
Missing	39
One-to-one counseling with a school mental health professional, for example, guidance counselor, school psychologist, etc.	45, 680 (23.3)
One-to-one follow-up with team member or other school personnel	35, 921 (18.3)
In-school support groups	29, 933 (15.3)
Academic supports	25, 864 (13.2)
No school services recommended	15, 047 (7.7)
Other school services	12, 146 (6.2)
Team intervention	10, 723 (5.5)
Services by/from the school social worker	8142 (4.2)
Crisis intervention	7195 (3.7)
Alternative school placement	5145 (2.6)
Primary community service recommended (n = 195,835)	
Missing	47
Screening by mental health SAP liaison	50, 266 (25.7)
No community/agency services recommended	46, 924 (24.0)
Screening by behavioral health SAP liaison (ie, combined D&A and MH)	30, 450 (15.6)
Continuing mental health treatment services	24, 839 (12.7)
Other community/agency services	16, 761 (8.6)
Screening by drug and alcohol SAP liaison	12, 615 (6.4)
Natural community supports	6082 (3.1)
Children and youth	5569 (2.8)
Continuing drug and alcohol treatment services	2282 (1.2)
Specific screening services (primary) for those recommended by community service for further screening (n = 93,331)	
Mental health assessment	34, 325 (36.8)
One-to-one with mental health liaison	18, 250 (19.6)
Behavioral health assessment (ie, combined D&A and MH)	9522 (10.2)
Drug and alcohol assessment	7442 (8.0)
Other social service community agencies (ie, children and youth and family services)	5173 (5.5)
Screening did not occur	5027 (5.4)
Referral to in-school support group	4259 (4.6)
No recommendation	3908 (4.2)
One-to-one ATOD with drug and alcohol liaison	3186 (3.4)
Information not available	2239 (2.4)

D&A, Drug and Alcohol; SAP, Student Assistance Program; MH, Mental Health; ATOD, Alcohol, Tobacco, Drug Education.

Figure 1. **Trends in Sex, Race/Ethnicity, Grade, Primary Referral Reason and Student Assistance Program Process Discontinuation From 2013 to 2018**
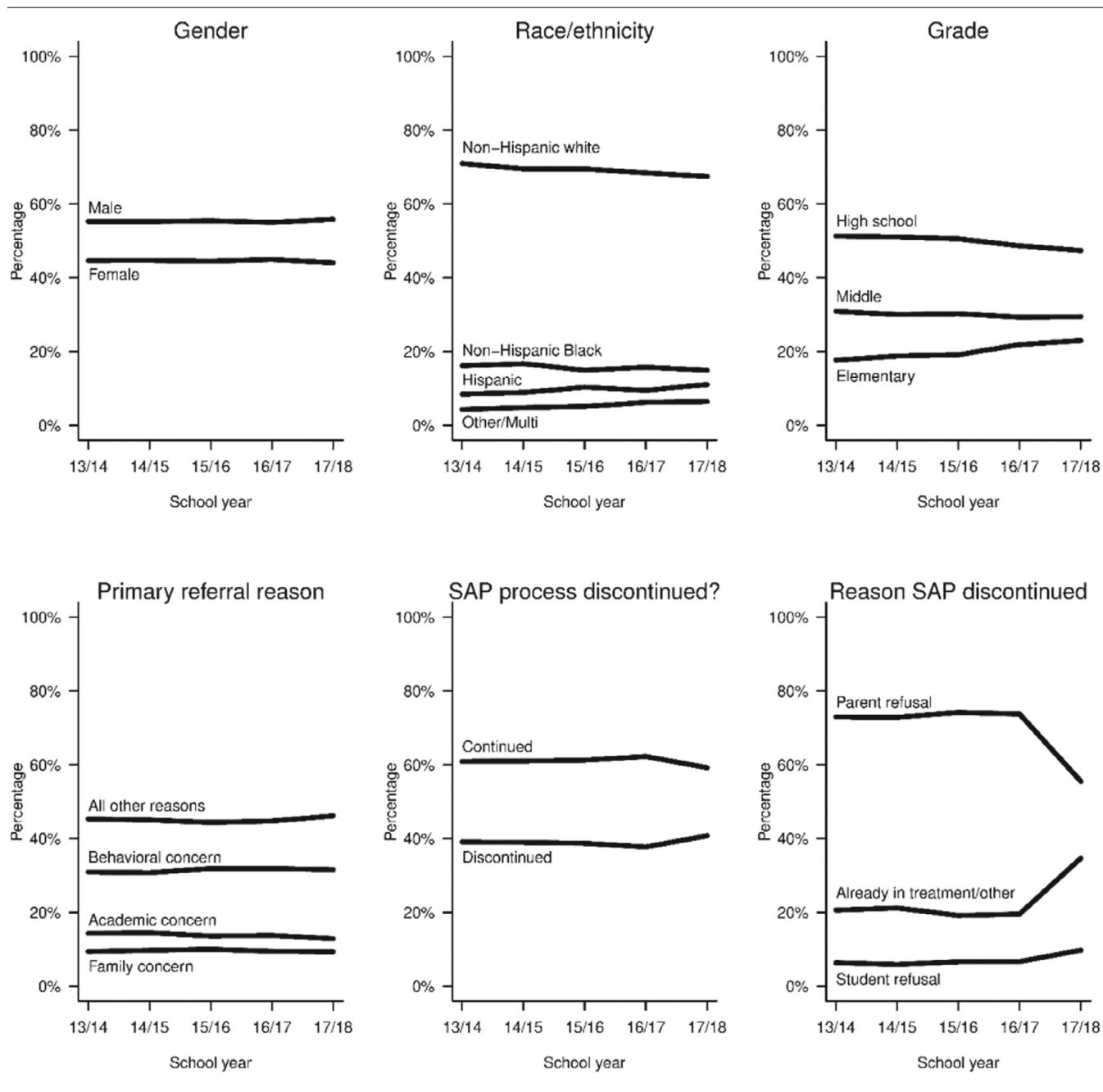
study period (31-32%). Primary school-based service recommendations remained consistent throughout with one-to-one counseling, school support groups, and academic supports as the top 3 suggested supports. Parent refusals noticeably declined after 2016-2017 with a slight increase in student refusals.

SAP Permissions and Discontinuation by Sex and Race/Ethnicity

Additional analysis examined variations in SAP permissions by sex and race/ethnicity (see Tables S1 to S7). Written permission was more likely to be obtained for female (70%) versus male (68%) students. Written permission was least likely to be obtained for Hispanic students (65%) relative to other racial/ethnic groups (non-Hispanic white 68%, non-Hispanic black 70%, and other/multiracial 70%). Females were more likely to cite already receiving treatment as a reason for discontinuing the SAP process when compared to male students (12% vs 9%). Refusal was higher for male versus female students (8% vs 6%), as well as the parents of male versus female students (70% vs 69%).

Non-Hispanic black students were least likely to already be in treatment (8% vs 9-11% for non-Hispanic white, Hispanic, and Other/multiracial). Student refusal was greatest for Hispanic students (11% vs 7% non-Hispanic white, non-Hispanic black, and other/multiracial).

DISCUSSION

This collaborative analysis of SAP data from 2013 to 2018 demonstrates that the program continues to manage a growing number of referrals with elementary students making up a greater percentage of these referrals over time. The percentage of students referred by race/ethnicity was consistent with public school enrollment by race/ethnicity from 2013 to 2018 implying no overt disparities in the referral process by race/ethnicity.[11] Referral trends paralleled the slight decline in the overall percentage of non-Hispanic white (69% in 2013/2014 to 66% in 2017/2018) and non-Hispanic black (15.1% in 2013/2014 to 14.7% in 2017/2018) students enrolled during this time period, with corresponding increases in the percentage of Hispanic and Other/Multiracial students enrolled.[11] In contrast, regarding referrals by sex, males consistently constitute a greater percentage of referrals relative to their Pennsylvania public school enrollment during this time period (51% from 2013 to 2018).[11] SAP boasts high levels of parent engagement (86%) among referrals that proceeded through the process. Examination of trends in the inability to obtain SAP parent/guardian permission and reasons for discontinuation of the SAP process identified differences by sex and race/ethnicity that may be responsive to targeted efforts to improve program engagement beyond the initial point of referral.

The increasing numbers of SAP referrals relative to state public school enrollment during this time period may be reflective of the reported rise in behavioral health needs during this time period. The rate of youth suicide increased by greater than 50% from 2007 to 2018, and suicide is now the second leading cause of death among US adolescents.[12,13] Similarly, the prevalence of major depressive disorder increased from 8.3% in 2008 to 14.4% in 2018.[14] In addition, diagnoses of attention-deficit hyperactivity disorder (ADHD) continued to rise during this time period.[15] Further, data point toward increased behavioral health needs in the context of the COVID-19 pandemic.[16,17] These national trends are paralleled in Pennsylvania where the percent of high school students attempting suicide in the past 12 months increased from 5.7% in 2009 to 7.8% in 2019.[18] Middle and high school students reporting feeling depressed or said most days in the past 12 months increased from 31.7% in 2013 to 38.1% in 2017 to 40.1% in 2021.[19,20] Finally, based on data from the National Survey of Children's Health, the prevalence of ADHD diagnosis and medication treatment in Pennsylvania paralleled the nationwide increase.[21] Greater student needs and growing utilization of SAP support the need to continue, and to strengthen existing programming.

Behavioral referrals were the most common type managed by SAP. This was a general, "catch-all" category, and PDE-4092 forms were revised after the analysis period to distinguish internalizing versus externalizing behavior. Males are more likely to exhibit externalizing behaviors,[22] which may in part explain the higher numbers of males versus females identified by behavior for SAP referral. The disparity in referrals by sex raises consideration for the value of using data more proactively (eg, review of attendance records, universal screening) in identifying students who may not come to the attention of school staff based on observable behavior. SAP personnel also continue to work on awareness building of programming and resource development for families who serve as critical referral sources and integral partners throughout the SAP process. In addition, SAPs have previously partnered in research work on universal depression screening, which resulted in increased odds of SAP referral and subsequent treatment initiation.[23,24]

In contrast to sex differences in SAP referrals, patterns in referral by race/ethnicity broadly paralleled the demographics of state public school enrollment. This is reassuring in terms of indicating that the SAP referral process was not biased on targeting a certain race/ethnicity. Schools have been identified as a setting to mitigate disparities in unmet behavioral health needs.[6] However, racial/ethnic disparities in SAP permissions emerged with Hispanic students demonstrating greater rates of failure to obtain written parent permission and student refusal to honor the referral. These findings similarly parallel national data on poorer treatment engagement for Hispanic adolescents.[25,26] This may be due to a variety of factors including cultural mistrust and lack of representation of racially/ethnic concordant providers.[26] The findings have implications for training and resource development to support school SAP teams and SAP liaisons in culturally competent practices and family engagement strategies.

The state SAP model in Pennsylvania is based on partnerships between school SAP teams and community-based SAP liaisons who follow a systematic process to promote a continuum of supports for students. An in-school support or service was recommended for a majority of cases (92%). PNSAS has been actively encouraging teams to utilize in-school supports, encouraging recognition of the benefits of the team-based process, the value of monitoring identified students, and consideration of additional in-school resources that may further support student success. Though, this may come with additional costs

that school districts are not able to assume. Teams also identified the need for screening by a SAP liaison for nearly half of referrals, a majority (61%) of which led to recommendation for additional behavioral health assessment which may ultimately lead to treatment referral. Together, these findings reinforce the opportunities for school-community linkages through the state's SAP model. Unfortunately, a growing number of SAP referrals were discontinued when a student was already engaged in treatment. This is a trend for PNSAS to monitor and address via opportunities for training and technical assistance to teams.

It was notable that females referred to SAP were more likely to already be in treatment, and that refusal from both parents and students was higher among males. Data about behavioral health treatment engagement by sex vary by diagnosis and age. National data demonstrate higher rates of mental health treatment engagement among females, and this is mirrored in Pennsylvania.[25,27-29] Males may face a greater perception of stigma and shame related to help-seeking[27] and these findings point to the need for both statewide and local stigma reduction and awareness messaging regarding the availability and goals of SAP to multiple stakeholders, particularly parents and students.

IMPLICATIONS FOR SCHOOL HEALTH POLICY, PRACTICE, AND EQUITY

The Pennsylvania SAP may serve as a model program for other state SAP programs similarly looking to evaluate their programming.[30] Schools may specifically consider the following:

1. Addressing equity concerns and improving training for staff around diversity, equity, and inclusion.
2. Bolstering the use of data to drive referrals and address refusals.
3. Increasing family and student awareness and engagement with available programming.
4. Considering current trends in behavioral health, increasing training and collaborating with community mental health organizations, students, and families in building behavioral health promotion programs.[16]

Educational institutions play a critical role in supporting student behavioral health, which has been sharply highlighted during the COVID-19 pandemic.[16,17] The analysis presented in this paper is timely and valuable in summarizing past data such that schools may leverage the information in planning for behavioral health needs tied to the pandemic and beyond.

Limitations

This study was limited in that the data used were cross-sectional by year and based on what information schools provided to the state as part of the school's annual SAP report. Limited outcomes data on student attendance, policy violations, academic performance and matriculation following referral are included on the PDE-4092 form but were missing for half of the referrals and were not analyzed. In addition, as some of the questions/categories (eg, referral reason ''bullying'') on the 4092 form changed over the 5-year period, the data may have been limited by the necessity of standardizing categories for the analysis. However, overall trends across the time period of this study highlight increasing use of SAPs as a mechanism to address student barriers to academic success. This finding supports ongoing PNSAS goals to improve fidelity to the state SAP model through a large-scale revision of statewide SAP training, which is currently underway. PNSAS leadership confirmed certain trends, for example, increase in elementary referrals, corresponded to efforts by PNSAS to reinforce the state mandate for SAPs at the elementary level while providing continued technical assistance regarding implementation. The decrease in parent refusals to allow their student to participate in SAPs in 2016-2017 corresponded to a statewide push to address this issue. Other outcomes, such as consistently low rates of referral by parents and students, align with PNSAS goals to expand marketing of SAP statewide and reinforce recent efforts to engage with parent advocacy organizations for resource development. Finally, outcomes of this program evaluation reflect the value of academic partnerships, presenting opportunities for PNSAS to use data for decision-making purposes, disseminate SAP-related outcomes to the field, and identify key areas for program improvement.

Conclusions

SAP referral demographics were consistent with trends in state public school enrollment by race/ethnicity breakdown suggesting lack of systematic bias when making referrals to SAPs. The proportion of SAP behavioral referrals is consistent with rising youth behavioral health needs. SAP must consider strategies to support schools in managing rising referral numbers and trends.

Human Subjects Approval Statement. This study was reviewed and approved by the Department of Education Institutional Review Board and the Penn State Institutional Review Board.

CONFLICT OF INTEREST

The authors do not have any conflicts of interest to disclose.

REFERENCES

1. Pennsylvania Network for Student Assistance Services. What is the student assistance program? July 2019. Available at: http://pnsas.org/Portals/0/About%20SAP/General%20SAP%20In%20PA/WhatIsSAP%207-31-19.pdf?ver=2020-01-27-165154-607. Accessed November 9, 2021.

2. PNSAS-Network for Student Assistance Services. Student Assistance Program. Liaison Frequently Asked Questions and Best Practice Responses. December 2019. Available at: https://pnsas.org/Portals/0/About%20SAP/SAP%20Liaisons/SAP%20Liaison%20FAQ%20Best%20Practice%2012.2019.pdf. Accessed November 9, 2021.

3. Substance Abuse and Mental Health Services Administration. Student Assistance: A Guide for School Administrators. SAMHSA Publication No. PEP19-03-01-001. Rockville, MD, Substance Abuse and Mental Health Services Administration, 2019. Available at: https://store.samhsa.gov/sites/default/files/SAMHSA_Digital_Download/PEP19-03-01-001_508C.pdf. Accessed February 21, 2022.

4. Centers for Disease Control and Prevention. Whole School, Whole Community, Whole Child (WSCC). Updated March 23, 2021. Available at: https://www.cdc.gov/healthyschools/wscc/index.htm. Accessed November 9, 2021.

5. Green JG, Keenan JK, Guzmán J, Vinnes S, Holt M, Comer JS. Teacher perspectives on indicators of adolescent social and emotional problems. *Evid Based Pract Child Adolesc Ment Health*. 2017;2(2):96-110. https://doi.org/10.1080/23794925.2017.1313099.

6. Cummings JR, Ponce NA, Mays VM. Comparing racial/ethnic differences in mental health service use among high-need subpopulations across clinical and school-based settings. *J Adolesc Health*. 2010;46(6):603-606. https://doi.org/10.1016/j.jadohealth.2009.11.221.

7. McLoughlin GM, McCarthy JA, McGuirt JT, Singleton CR, Dunn CG, Gadhoke P. Addressing food insecurity through a health equity lens: a case study of large urban school districts during the COVID-19 pandemic. *J Urban Health*. 2020;97(6):759-775. https://doi.org/10.1007/s11524-020-00476-0.

8. Hoke AM, Kraschnewski JL, Pileggi F, Rosen P, Sekhar DL. Leveraging community-engaged research to address adolescent depression with Pennsylvania public schools and communities. *Prog Community Health Partnersh*. 2022;16(2):217-225. https://doi.org/10.1353/cpr.2022.0025.

9. PNSAS. Student Assistance Program: Frequently Asked Questions and Best Practice Responses. Updated February 2021. Available at: https://pnsas.org/Portals/0/About%20SAP/SAP%20Teams/SAP%20FAQ%20revision%202020%20-final_.pdf. Accessed November 9, 2021.

10. SAP Blank PDE 4092 Form. Available at: https://www.safeschools.pa.gov/BlankReports/2020-2021/SAP_Blank_Pde4092_Form_20_21.pdf. Accessed November 11, 2021.

11. Pennsylvania Department of Education. Public School Enrollment. Available at: https://www.education.pa.gov/DataAndReporting/Enrollment/Pages/PublicSchEnrReports.aspx. Accessed November 10, 2021.

12. Curtin SC. State suicide rates among adolescents and young adults aged 10-24: United States, 2000-2018. *Natl Vital Stat Rep*. 2020;69(11):1-10.

13. Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2019 on CDC WONDER Online Database, released in 2020. Data are from the Multiple Cause of Death Files, 1999-2019, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Available at: http://wonder.cdc.gov/ucd-icd10.html. Accessed July 25, 2021.

14. Healthy People.gov. Healthy People 2020 Objectives. Mental health and mental disorders. MHMD-4.1 Reduce the proportion of adolescents aged 12-17 years who experience major depressive episodes. Available at: https://www.healthypeople.gov/2020/data-search/Search-the-Data?nid=4813. Accessed February 24, 2021.

15. Centers for Disease Control and Prevention. Attention-Deficit/Hyperactivity Disorder. Available at: https://www.cdc.gov/ncbddd/adhd/timeline.html. Accessed December 12, 2021.

16. Thakur A. Mental health in high school students at the time of COVID-19: a student's perspective. *J Am Acad Child Adolesc Psychiatry*. 2020;59(12):1309-1310. https://doi.org/10.1016/j.jaac.2020.08.005.

17. Hertz MF, Barrios LC. Adolescent mental health, COVID-19, and the value of school-community partnerships. *Inj Prev*. 2021;27(1):85-86. https://doi.org/10.1136/injuryprev-2020-044050.

18. YRBS explorer. High school students who actually attempted suicide. Available at: https://yrbs-explorer.services.cdc.gov/#/tables?questionCode=H28&topicCode=C01&year=2019. Accessed August 1, 2022.

19. PA Commission on Crime and Delinquency, PA Department of Drug and Alcohol Programs, PA Department of Education. 2021 Pennsylvania Youth Survey. Available at: https://www.pccd.pa.gov/Juvenile-Justice/Documents/2021%20PAYS/County%20Reports%202021%20PAYS/State%20Reports_State%20of%20Pennsylvania%20Profile%20Report.pdf. Accessed August 1, 2022.

20. PA Commission on Crime and Delinquency, PA Department of Drug and Alcohol Programs, PA Department of Education. 2013 Pennsylvania Youth Survey. Available at: https://www.pccd.pa.gov/Juvenile-Justice/Documents/2013%20PAYS%20State%20Report%20Final%2006112014.pdf. Accessed August 1, 2022.

21. Centers for Disease Control and Prevention. Attention-Deficit/Hyperactivity Disorder. Available at: https://www.cdc.gov/ncbddd/adhd/data/state-profiles/pennsylvania.html. Accessed August 1, 2022.

22. Olivier E, Morin AJS, Langlois J, Tardif-Grenier K, Archambault I. Internalizing and externalizing behavior problems and student engagement in elementary and secondary school students. *J Youth Adolesc*. 2020;49(11):2327-2346. https://doi.org/10.1007/s10964-020-01295-x.

23. Husky MM, Kaplan A, McGuire L, Flynn L, Chrostowski C, Olfson M. Identifying adolescents at risk through voluntary school-based mental health screening. *J Adolesc*. 2011;34(3):505-511. https://doi.org/10.1016/j.adolescence.2010.05.018.

24. Sekhar DL, Schaefer EW, Waxmonsky JG, et al. Screening in high schools to identify, evaluate, and lower depression among adolescents: a randomized clinical trial. *JAMA Netw Open*. 2021;4(11):e2131836. https://doi.org/10.1001/jamanetworkopen.2021.31836.

25. Merikangas KR, He JP, Burstein M, et al. Service utilization for lifetime mental disorders in U.S. adolescents: results of the National Comorbidity Survey-Adolescent Supplement (NCS-A). *J Am Acad Child Adolesc Psychiatry*. 2011;50(1):32-45. https://doi.org/10.1016/j.jaac.2010.10.006.

26. Mennies RJ, Birk SL, Norris LA, Olino TM. The main and interactive associations between demographic factors and psychopathology and treatment utilization in youth: a test of intersectionality in the ABCD study. *Res Child Adolesc Psychopathol*. 2021;49(1):5-17. https://doi.org/10.1007/s10802-020-00687-8.

27. Lipari RN, Hedden S, Blau G, Rubenstein L. *Adolescent mental health service use and reasons for using services in specialty, educational, and general medical settings*. The CBHSQ Report: May 5, 2016. Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. Rockville, MD.

28. Lu W. Treatment for adolescent depression: national patterns, temporal trends, and factors related to service use across

settings. *J Adolesc Health*. 2020;67(3):401-408. https://doi.org/10.1016/j.jadohealth.2020.02.019.

29. Pennsylvania 2019 Mental Health National Outcome Measures (NOMS): SAMHSA Uniform Reporting System. Available at: https://www.samhsa.gov/data/sites/default/files/reports/rpt27970/Pennsylvania%202019%20URS%20Output%20Tables/Pennsylvania%202019%20URS%20Output%20Tables.pdf. Accessed August 10, 2022.

30. California Department of Education. Student Assistance Programs. Updated March 26, 2021. Available at: https://www.cde.ca.gov/ls/he/at/sap.asp. Accessed November 9, 2021.

SUPPORTING INFORMATION

The following Supporting Information is available for this article:

Table S1. Primary referral reason by grade/school.

Table S2. Parent/guardian written permission obtained SAP referrals that were warranted by referral year.

Table S3. Parent/guardian written permission obtained SAP referrals that were warranted by sex.

Table S4. Parent/guardian written permission obtained SAP referrals that were warranted by race/ethnicity.

Table S5. Reason for SAP discontinuance by school year SAP referrals that were warranted and discontinued.

Table S6. Reason SAP discontinuance by sex SAP referrals that were warranted and discontinued.

Table S7. Reason SAP discontinuance by race/ethnicity SAP referrals that were warranted and discontinued.

Additional supporting information may be found online in the Supporting Information section at the end of the article.