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Travis Cheng

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Student Health Services on Community College Campuses in California

By

Travis Cheng

A Thesis Quality Research Project
Submitted in Partial Fulfillment of the
Requirements for the
Masters Degree
In

PUBLIC ADMINISTRATION

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San Jose State University
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INTRODUCTION

Higher education is highly valued in many developed societies as it is known to generate greater professional opportunities, and acquiring such an achievement (degree or certificate) in higher education generally provides better life outcomes (Hermannsson, K., Lisenkova, K., Lecca, P., McGregor, P., & Swales, J., 2017). Not only is higher education attainment tied to better occupational results, but higher education achievement leads to better health outcomes. Lower levels of education are often linked to “major diseases such as cancer, heart disease, stroke, diabetes, and generally poor health status” (McFadden, 2015). Postsecondary education attainment is known to lead to better life outcomes as it protects workers from unemployment (Schudde and Goldrick-Rab, 2015), and many underserved populations seeking to better their life outcomes attend community colleges.

A community college's main mission is to provide access to education and providing access to basic healthcare bolsters success and lessens the educational disparity gap. Furthermore, community colleges provide greater opportunities for social and physical well-being by offering student health care as one of its services. Besides contributing to the limited body of literature on the topic of student health centers on community college campuses in California, the purpose of this research is to gain a better understanding of how the student health centers on community college campuses have evolved in California regarding the services provided, and to explore the general health needs of the student population. Thus, the research question for this study is, “*What range of services do student health centers on community college campuses typically offer in California, and do they generally meet the needs of their students?*”

Community colleges are known to have open access for people from all walks of life and allow for disadvantaged populations experiencing inequities to achieve upward mobility in terms of earning potential and career opportunities (Schudde and Goldrick-Rab, 2015). According to Pokhrel, Little, and Herzog (2014), community college students generally are: “lower socioeconomic background, ethnic minorities, part- or full-time workers, individuals with dependents, and individuals pursuing ‘blue-collar’ professions”. To meet the needs of these under-resourced students, the environments for success that community colleges provide are unique in terms of health and healthcare services.

Health plays a role in student achievement because unhealthy students will most likely be absent from classes and have poor academic performance, which can impact retention and success rates (Henry, Cormier, Hebert, Naquin, and Wood, 2018). Those rates are crucial to community college campuses because they have already been experiencing low degree or program completion rates, as evidenced by the fact that less than 40% of students entering community colleges fail to complete any degrees or certificates within six years (Bailey, 2017). Other factors may contribute to low student retention and success rates, but the health of students is one observable factor that can directly affect student performance. Henry et al. (2018) point out in their study that college officials will encounter challenges in addressing health-related issues that threaten the academic performance of the students on their campuses. College campuses need to understand what health-related issues need to be addressed on their sites so that they may create interventions and programming to address them. Doing so will optimize their students' learning, and ultimately improve their student retention rates (Henry et al., 2018).

Currently, there are very few studies and literature on the relationship between student health and community college students' success (McFadden, 2014). This study aims to provide

more insight and knowledge regarding existing health services in California community colleges, which may lead to further studies on the relationship between student health and student success on community college campuses across the nation.

LITERATURE REVIEW

Community Colleges

Community colleges in the United States have evolved from the first such college with less than one hundred students at Illinois' Joliet Junior College in 1901. Today there are more than 1,100 community colleges across the nation that serve over 12 million students annually (Floyd, 2003; American Association of Community Colleges, 2019). Community colleges are being chosen over four-year colleges by many students as the tuition for four-year colleges has increased significantly in recent years. Other factors that make community colleges attractive are open admissions, affordable tuition, close proximity to home (as there are many community colleges dispersed geographically within a region), and programs for non-traditional students (Floyd, 2003; Greenblatt, 2018). These factors help explain the growth of community college enrollment, which has increased five times over the last 40 years, while the enrollment for four-year universities has only doubled within the same period (Chiauzzi, Donovan, Black, Cooney, Buechner, and Wood, 2011).

Today, enrollment across many community colleges in the United States is experiencing a decrease (Korn, 2016). This trend is mainly attributed to funding cuts by the states and the pressures to improve outcomes on the campuses (Floyd, 2003). As Floyd (2003) has emphasized, a school should support measures to create a healthy environment for learning if it is truly dedicated to promoting education. Student health programs in community colleges can definitely be complementary and instrumental in helping to improve student outcomes, because healthy students lead to a higher probability of student success.

The main goal of community colleges is to provide greater accessibility to higher education for the public. However, while maintaining retention and student success rates,

community colleges do need to evaluate and support their programs to help students succeed and progress through their curriculum. One of these programs is student health services (also known as a “student health center”) on their campuses. As a student services program (non-categorical), student health services were established to help “enhance student equity, access, retention, persistence toward goal completion, and successful outcome” (Aduddell, 1999).

Chiauzzi, Donovan, Black, Cooney, Buechner, and Wood (2011) point out that there are programming challenges on community college campuses, which include: shortage of funding and lack of staffing. Students are generally part-time commuters who do not have incentives to stay on campus to participate in health programs, as they generally have to tend to work and/or family responsibilities. Community colleges do need further investment in their programing to become competitive with their support offerings to students, as the literature still indicates that a negative cultural bias exists toward community colleges. Community colleges have provided vocational training to the community since their inception, and they continue to carry a stigma of being “lesser” educational institutions compared to a four-year university (Schudde and Goldrick-Rab, 2015).

California has one of the largest community college systems in the United States, consisting of 114 community colleges. According to the California Community Colleges Chancellor's Office's (CCCCO) “State of the System 2019 Report”, the 114 community colleges of California have served more than 2.1 million students in 2018. The community colleges serve all of California's 58 Counties.

Map of Community Colleges in California

(California Community Colleges Chancellor's Office, nd-a).

Approximately 80,000 students transfer to the University of California and California State University systems annually. During the academic year of 2016-2017, the Community College Research Center reported that 38% of all undergraduates (approximately 8.7 million students) in the United States attended community colleges. Based on these figures, California's community college population makes up approximately 24% of the entire community college population in the United States.

Student Health Centers on Community College Campuses in California

Nationally, 42% of all community colleges have a student health center (Burkhart and Moreno, 2019). A student health center is present on 74% of community college campuses in California (Aduddell, 1999). Student health centers and programs are considered non-categorical programs, meaning that they are not considered a mandated program by the State of California. Education code sections (ED. CODE 76355, 76401, 76403, 76407 ; TITLE 5: 53411, 54702, 54706, 54708, 5341) govern a community college campus' student health program, and they only require that the student health program on campus be supervised at least by a nurse with a master's degree and a public health nursing certification (Quinn, 2016). The education code stipulates that if a community college campus collects a student health fee, that fee must solely be allocated for student health programming purposes.

Programming resources for student health services are generally very lean. Since fees associated with the cost of community college attendance are low to promote affordability and accessibility, there is less funding for programs on campuses, such as student health services. This is worth noting because it limits the potential to better serve the student populations within those campuses. Due to the limited services driven by inadequate funding (Bravender, 2014),

health services on community college campuses are generally dismissed from being legitimate places to address the health concerns of the students on their campuses (Floyd, 2003). In addition to funding challenges for student health services programs on community college campuses, there is no central mechanism to evaluate compliance with the education code (Quinn, 2016) by the California Community College Chancellor's Office, which further delegitimizes student health programs, and ignores the concerns of student health on community college campuses.

Floyd (2003) states that there are few studies on student health services in the community college setting. The existing body of literature predominantly features and focuses on student health within four-year colleges and universities. Floyd (2003) further explains that the reasons for the small body of literature and research on student health within the community college setting can be attributed to the fact that campus stakeholders have overlooked the relevance and importance of student health on community college campuses for many years. Community colleges have been seen mostly as commuter schools where students are hard to capture for data because they are generally mobile and do not stay on campus for extended periods like their four-year college counterparts. The community college student population also differs academically, economically, and socially from their four-year college peers, leading to differences in their health behaviors (Heller and Sarmiento, 2016). This distinction is important to note because most college health surveys disproportionately underrepresent community college students compared to their four-year counterparts.

A study by Heller and Sarmiento (2016) further accentuates this point:

Seven million or 40% of all undergraduate students (total = 17.5 million students) in the United States attend community colleges; however, the majority of research on college student health

behaviors have been conducted at 4-year colleges and universities... The published reference group data sets on the ACHA-NCHA Web site from Fall 2008 to Fall 2015 reported only 105 of 1,141 institutional data sets for 2-year colleges; this means that only 9% of all the surveys conducted nationally were with students attending community colleges (p. 652).

Furthermore, Pokhrel, Little, and Herzog (2014) point out in their study that a recent systematic review of literature only yielded 42 peer-reviewed published studies on health behaviors of community college students. This validates the fact that more studies need to be done on community college students and health, as there is a significant number of community college students within the State of California alone, and maintaining healthy students on campus is not only important for better learning outcomes, but equally important for public health. Student health services in higher education not only provide medical attention and resources for students in need, they also collaborate with community resources, such as the public health department, to manage and prevent communicable diseases (Borgen, 2010).

Students' Health in Community Colleges

Given that studies and surveys on college health focus mostly on four-year university students, it is vital to delineate the differences between the health needs of the community college and those of the four-year university students. Henry, Cormier, Hebert, Naquin and Wood (2018) have noted that community colleges and universities may experience low retention and graduation rates due to unhealthy students. Overall, they further point out that all college students generally experience many health-related issues such as poor diet, irregular sleep

patterns, limited access to health care, and risky sexual behaviors. Most of the students in their study reported good overall health, but reported poor lifestyle habits (poor diet and sleep) and notable mental health concerns that focus on anxiety (Henry et al., 2018). Other research has indicated that unhealthy behaviors such as poor sleep hygiene and diet habits negatively impact academic performance among college students (Ruthig, Marrone, Hladkyj, and Robinson-Epp, 2011). As a whole, students in higher education continue to have evolving health care needs, and college campuses must address them (Bravender, 2014). Ruthig, Marrone, Hladkyj and Robinson-Epp (2011) have pointed out that most students undergo a change in health as they transition into higher education, because students are facing a new environment with the increased pressure to perform well academically while adjusting to new social relationships. They further encourage higher education administrators to provide support and recognize that these transitional changes can negatively impact student health (Ruthig, Marrone, Hladkyj, and Robinson-Epp, 2011).

Furthermore, the following generations of college students are experiencing a higher prevalence and severity of mental illness (Locke, Wallace, and Brunner, 2016). In a 2013 survey with a sample size of 202,344 students conducted by the American College Health Association, 51% reported overwhelming anxiety, 44.8% reported hopelessness, 33.6% reported overwhelming anger, and 31.1% reported debilitating depression (Locke, Wallace, and Brunner, 2016). The self-reported top reasons for poor academic performance among students are mostly psychological, indicating that there is a growing need to provide mental health services on campuses.

While the above pertains to all college students, there is a marked difference in health behaviors between students in community colleges and their peers in four-year universities.

Studies indicate that community college students “have higher rates of regular cigarette smoking, lower rates of alcohol use, lower rates of regular physical activity, poorer dietary intake, and more risky sexual and reproductive health behaviors” than their university counterparts (Heller and Sarmiento, 2016). Despite lower rates of alcohol use compared to four-year students, Cleveland, Turrissi, Reavy, Ackerman, and Buxton’s (2018) study reaffirms that community college students are more likely to report illicit behaviors and alcohol-related transgressions such as driving under the influence.

Burkhart and Moreno (2019) further point out in their research that community college students are more likely to drive under the influence, use higher levels of drugs (cocaine, marijuana, and amphetamines), eat fewer meals, have unprotected sex, use unreliable birth control, experience unplanned pregnancies and experience greater stress, as they have access to fewer resources compared to their counterparts at the four-year universities. Pelletier, Lytle, and Laska (2016) found that community college students also have a higher incidence of being overweight/obese, tend to have diverse racial backgrounds, and be economically disadvantaged. Overall, the student population on community college campuses possesses higher health risks than students at a four-year university (Burkhart and Moreno, 2019).

Consequently, student health services in community colleges necessarily require more resources and attention to address the aforementioned health risks, as community colleges generally serve more minority and vulnerable populations who are more disadvantaged. A significant portion of community college students is first-generation college students that cannot afford to - and are not prepared to - attend four-year universities (McFadden, 2016). To better understand how to provide services that mitigate these health risks to improve student outcomes

and counter student attrition, further studies must be done regarding student services in order to promote and enhance greater success and retention of these vulnerable student populations.

METHODOLOGY

Given that student health services is a multidimensional program in scope and varies from campus to campus, a mixed method of research was utilized in this descriptive study. Qualitative and quantitative data were used in this study to provide a better understanding of student health services across California (Sylvia and Sylvia, 2012). The data collecting methods involved in this research include anonymously surveying a subgroup (students at one community college in CA); and cataloging existing public information regarding the services offered by each California community college's health center, to yield relevant data to answer the research question.

An anonymous voluntary survey was offered to students visiting the student health center by a front desk employee (not the researcher) at the campus of San Jose City College to gather data, which served as a case study to illustrate, demonstrate, or refute findings from the literature. The students who chose to participate were instructed to deposit the surveys in a box within the student health center's waiting room, and all surveys were collected at the end of each day by the researcher. The survey did not contain any identifiers and only contained 4 questions that inquired about (1) category of service being used during that visit, (2) additional services students feel the health center should offer, (3) whether students possessed any type of health insurance at time of visit, and (4) level of satisfaction/need addressed during the visit to student health services at San Jose City College. Surveys were offered on December 2, 2019, through December 20, 2019, and January 27, 2020, through February 28, 2020. These windows of survey distribution allowed for eight weeks of data collection. The surveys captured data at the end of one semester and data at the beginning of another semester with a winter break in between.

Cataloging the student health services' offerings of the 114 community colleges in California was done manually by the researcher through visiting each campus' website. Services were broken down into five categories, and each category or component is indicated on a comprehensive chart (Table 1). The five categories are: (1) nursing services, which include first aid, (2) general consultations with a doctor or nurse practitioner, (3) mental health services, (4) family planning services, which includes birth control counseling coupled with contraceptive offerings, and (5) vaccinations, which include tuberculosis screenings and immunization requirements. Student enrollment for each campus during the academic year of 2017-2018 was extracted from the California Community Colleges Chancellor's Office's website to provide scale for student populations among the different colleges. Once again, as student health services are a non-categorical program on community college campuses in California, statistical data is not required to be annually reported to the State of California (Quinn, 2016). Due to this, there is no centralized body or resource to access information on services provided by each community college in California, so manually cataloging the health services of each community college campus had to be done to develop a comprehensive catalog of services. After having gathered and cataloged all the data, the range of services at San Jose City College was benchmarked against all the other community colleges within California for a comparative analysis.

Given the anonymous randomized method of survey data collection that posed no risks to the students, this research was excluded from the review of the San Jose State University Institutional Review Board (IRB). The survey research used data that was "irrevocably de-identified" in such a way that the researcher and collaborators cannot "ascertain the identity of a living individual," which excludes it from IRB requirements so that "the project does not need to be reviewed by the IRB and is not subject to oversight by the Office of Research" (San Jose State

University Office of Research, 2019, n.p.). Additionally, the data collected from the websites of all 114 community colleges is public information, so no additional review is required.

FINDINGS

Table 1 catalogs the services offered onsite at each of the student health centers across all 114 community colleges in California. This information was gathered from each community college's health center's webpage in December of 2019.

The categories of services in the Table 1 are defined as follows:

Nursing – This refers to services provided by a registered nurse, which include first aid, health education and basic health assessments that include blood pressure and temperature monitoring.

Registered nurses are also able to carry out orders from advanced practitioners of medicine.

Doctor / NP – This refers to whether there is an advanced practitioner on site to expand the scope of services. Doctors and Nurse Practitioners have an advanced scope of practice to diagnose,

treat, and distribute medicine prescriptions to students. Vaccinations – This refers to whether vaccinations beyond the flu vaccine are offered at the school campus. Such vaccines commonly include Tdap (tetanus, diphtheria, and pertussis), MMR (measles, mumps, rubella), and Hepatitis

B. “0” indicates that no vaccinations are offered. “1” indicates that other vaccinations and flu vaccinations are offered, while “2” indicates that flu vaccines are only provided. Family

Planning – This refers to services that include birth control counseling, sexually transmitted infections testing, and dispensing of birth control via prescription or onsite. Mental Health – This refers to services that include personal counseling and psychological services. School Enrollment

2017-2018 – This includes all students enrolled within the academic year of 2017-2018 and excludes students who were concurrently enrolled in K12 (kindergarten through high school).

This information was collected from the California Community Colleges Chancellor's Office's database.

Table 1. Community Colleges and Services Offered and 2017-18 Enrollment

	Name of Community Colleges	Nursing	Doctor / NP	Vaccinations	Family Planning	Mental Health	School Enrollment 2017-18
1	Allan Hancock College	1	1	1	1	1	20,296
2	American River College	0	0	0	0	1	47,504
3	Antelope Valley College	1	1	1	1	1	18,267
4	Bakersfield College	1	1	2	0	1	28,961
5	Barstow College	0	0	0	0	0	4,723
6	Berkeley City College	1	0	2	0	1	10,018
7	Butte College	0	1	1	1	1	15,848
8	Cabrillo College	1	1	1	1	1	16,983
9	Canada College	1	1	1	1	1	9,916
10	Cerritos College	1	1	1	1	1	32,590
11	Cerro Coso Community College	0	0	0	0	0	8,463
12	Chabot College	0	1	1	1	1	19,630
13	Chaffey College	1	1	1	1	1	30,017
14	Citrus College	1	1	1	1	1	20,194
15	City College of San Francisco + Center	0	1	1	1	1	78,629
16	Clovis Community College	1	0	1	0	1	11,040
17	Coastline Community College	0	0	0	0	0	24,297
18	College of Alameda	1	1	2	1	1	9,268
19	College of Marin	1	1	1	0	1	8,557
20	College of San Mateo	0	1	1	1	1	13,551
21	College of the Canyons	1	1	1	1	1	31,141
22	College of the Desert	1	1	1	0	1	16,415
23	College of the Redwoods	1	1	1	0	1	6,893
24	College of the Sequoias	1	0	1	0	1	14,989
25	College of the Siskiyous	1	0	0	0	1	6,354
26	Columbia College	0	1	0	0	1	3,963
27	Contra Costa College	0	0	0	0	0	9,621
28	Copper Mountain College	0	0	0	0	0	2,991
29	Cosumnes River College	1	0	0	0	0	20,333
30	Crafton Hills College	1	1	1	1	1	8,522
31	Cuesta College	1	1	1	1	1	13,042
32	Cuyamaca College	1	0	0	0	1	13,241
33	Cypress College	1	1	1	1	1	20,800
34	DeAnza College	1	1	1	1	1	29,914
35	Diablo Valley College	0	0	0	0	1	27,676
36	East Los Angeles College	1	1	1	1	1	54,455
37	El Camino College	1	1	1	1	1	31,969
38	El Camino College - Compton Center	1	1	1	1	1	11,114
39	Evergreen Valley College	1	1	1	1	1	13,204
40	Feather River College	1	1	1	1	1	3,296
41	Folsom Lake College	1	0	0	0	0	12,401
42	Foothill College	1	1	1	1	1	32,219

Table 1. Community Colleges and Services Offered and 2017-18 Enrollment (Cont'd)

43	Fresno City College	1	0	1	1	1	34,842
44	Fullerton College	1	1	1	1	1	31,711
45	Gavilan College	0	0	0	0	0	9,411
46	Glendale Community College	1	1	1	0	1	26,195
47	Golden West College	1	1	1	1	1	17,960
48	Grossmont College	1	0	1	0	1	25,256
49	Hartnell College	0	0	0	0	1	17,333
50	Imperial Valley College	1	1	1	0	1	10,889
51	Irvine Valley College	1	1	1	1	1	21,730
52	Lake Tahoe Community College	0	0	0	0	0	6,550
53	Laney College	1	1	2	1	1	15,399
54	Las Positas	0	1	1	1	1	12,608
55	Lassen College	0	0	0	0	0	4,444
56	Long Beach City College	1	1	1	1	1	34,554
57	Los Angeles City College	1	1	1	0	1	27,803
58	Los Angeles Harbor College	1	1	1	0	1	13,139
59	Los Angeles Mission College + ITV	1	1	1	1	1	17,800
60	Los Angeles Pierce College	1	1	1	1	1	28,716
61	Los Angeles Southwest College	1	1	1	1	1	12,123
62	Los Angeles Trade Tech College	1	1	0	1	1	22,885
63	Los Angeles Valley College	1	1	1	1	1	26,935
64	Los Medanos College	0	0	0	0	0	12,354
65	Mendocino College	0	0	0	0	1	5,616
66	Merced College	1	1	0	0	1	16,927
67	Merritt College	1	1	1	1	1	10,089
68	MiraCosta College	1	1	1	0	1	24,568
69	Mission College	1	1	1	0	1	13,530
70	Modesto Junior College	1	1	1	0	1	25,118
71	Monterey Peninsula College	1	1	0	0	1	12,790
72	Moorpark College	1	1	1	1	1	19,159
73	Moreno Valley College	1	1	1	1	1	14,753
74	Mt. San Antonio College	1	1	1	1	1	69,204
75	Mt. San Jacinto College	1	1	1	0	1	23,847
76	Napa Valley College	0	1	1	1	1	8,997
77	Norco College	1	1	1	1	1	14,579
78	Ohlone College	0	1	1	1	1	13,697
79	Orange Coast College	1	1	2	1	1	28,919
80	Oxnard College	1	1	1	1	1	10,794
81	Palo Verde College	0	0	0	0	0	7,261
82	Palomar College	1	1	1	1	1	36,154
83	Pasadena City College	1	1	1	1	1	41,613
84	Porterville College	1	0	1	0	0	4,972
85	Reedley College	0	1	1	1	1	14,945
86	Rio Hondo College	1	1	2	0	1	30,683
87	Riverside Community College	1	1	1	1	1	30,680

Table 1. Community Colleges and Services Offered and 2017-18 Enrollment (Cont'd)

88	Sacramento City College	1	1	1	1	1	32,169
89	Saddleback College	1	1	1	1	1	39,635
90	San Bernadino Valley College	1	1	1	1	1	19,637
91	San Diego City College	1	1	1	1	1	24,858
92	San Diego Mesa College	1	1	1	1	1	34,710
93	San Diego Miramar College	1	1	1	0	1	27,351
94	San Joaquin Delta College	0	0	0	0	1	23,594
95	San Jose City College	1	1	1	1	1	13,850
96	Santa Ana College	1	1	2	1	1	65,961
97	Santa Barbara Community College	1	1	1	1	1	21,849
98	Santa Monica City College	1	1	1	1	1	45,063
99	Santa Rosa Junior College	1	1	1	1	1	37,970
100	Santiago Canyon College	1	1	1	1	1	29,871
101	Shasta College	1	1	2	0	1	13,612
102	Sierra College	1	1	1	1	0	24,762
103	Skyline College	1	1	1	1	1	13,806
104	Solano Community College	1	0	0	1	0	12,685
105	Southwestern College	1	1	1	0	1	26,323
106	Taft College	0	0	0	0	0	11,927
107	Ventura College	1	1	1	1	1	18,516
108	Victor Valley College	0	0	0	0	0	16,519
109	West Hills College - Coalinga	0	0	0	0	0	5,299
110	West Hills College - Lemoore	0	0	0	0	0	6,703
111	West Los Angeles College	1	1	1	1	1	21,052
112	West Valley College	1	1	1	0	1	13,648
113	Woodland Community College	1	1	0	1	1	5,171
114	Yuba College	1	1	2	0	1	11,842

*Highlighted Colleges indicate that services are offered via offsite or telemedicine.

San Jose City College offers all five types of services found on California community college campuses.

Figure A: Medical Services on Campuses

Figure A provides data on campuses that do offer/do not offer medical services onsite.

Figure B: Scope of Medical Practice on Campuses

Figure B displays data on the type of medical professionals that are onsite on the campuses that do offer medical services.

Figure C: Campuses that offer Various Vaccinations

Figure C provides data on all campuses and their vaccinations offering.

Vaccinations Offerings On Campuses

Figure D: Family Planning Services Offered on Campuses

Figure D provides data on all campuses that do offer family planning services.

Family Planning Services on Campuses

Figure E: Mental Health Services on Campuses

Figure E provides data on all campuses that do offer mental health services.

Survey Results

A voluntary survey was offered to students who visited the student health center at San Jose City College. The anonymous survey was used to gauge how well the services provided at San Jose City College Student Health Center met the needs of their students.

The surveys were offered to students after services were provided and 61 out of 61 surveys distributed were completed by students who used services at the San Jose City College Student Health Services between December 2, 2019, through December 20, 2019, and January 27, 2020, through February 28, 2020.

Tables 2, 3, 4, and 5 will display the responses from the survey.

Table 2: Responses to Survey Question 1.

1. Please (✓) Check the category that best applies to your visit today:

_____ Nursing (First Aid, Vitals)

_____ Doctor

_____ Mental Health (Case Manager, Counselor)

_____ Family Planning Services (Birth Control Counseling, STI screening, Contraceptives)

_____ Vaccinations/Immunizations/TB-Test

Category of Visits		
Category	Number of Visits	Percentage
Doctor	8	13.1%
Vaccination	23	37.7%
Nurse	8	13.1%
Mental Health	22	36.1%
Totals	61	100%

Table 3: Responses to Survey Question #2.

1. What additional service(s) does the Student Health Center at SJCC need to offer?

Additional Services for Health Services		
Responses	Number of Responses	Percentage
None at the moment	55	90.2%
Expand Services*	2	3.3%
Beyond Scope**	3	4.9%
Unclear Answers***	1	1.6%
Totals	61	100%

* Answers indicate to expand services:

(1) “Offer long-term mental health services.”

(2) “Provide free STI testing and education.”

** Answers provided were beyond the scope of student health services:

(1) “Childcare program”

(2) “Offer health insurance”

(3) “Transgender HRT”

*** Answer provided did not have context:

(1) “Everything.”

Table 4: Responses to Survey Question 3.

1. Do you have any health insurance coverage (such as Aetna, BlueShield, Kaiser Permanente, Medi-Cal, Santa Clara Family Plan, etc.)?

Yes_____ No_____ I don't know_____

Health Insurance Coverage		
Responses	Number of Responses	Percentage
Yes	35	57.4%
No	15	24.6%
Don't Know	11	18.0%
Totals	61	100%

Table 5: Responses to Survey Question 4.

4. My needs were met today during today's visit. Please circle your response (circle one):

0	1	2	3	4
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

Needs Met During Visit		
Responses	Number of Responses	Percentages
1-Strongly Disagree	1	1.6%
2-Disagree	0	0.0%
3-Agree	10	16.4%
4-Strongly Agree	50	82.0%
Totals	61	100%

ANALYSIS

One of the objectives of this research is to explore what health-related services are being offered across all 114 community college campuses in California. The data extracted from their respective websites reveals that 82.5% of community college campuses in California offer at least some type of medical services with a student health center onsite, while 15.8% of them do not offer any medical services, and 1.8% of the community colleges offer offsite access to medical services or telemedicine. This study further provides an update with regards to the growth of student health centers on community college campuses since Aduddell's study in 1999, which reported that 74% of community colleges in California had a student health center on campus. As in previous studies, student health services continue to be a non-categorical program, so it is not mandatory to provide medical services on campus, as long as the community college campus does not collect a student health fee from its student population at any given school term as part of its mandatory student fees.

Of the 94 community colleges that do provide medical services onsite in California, 78.7% of those health centers were staffed by a combination of medical doctors, nurse practitioners, and registered nurses, while 11.7% employed registered nurses only, and 9.6% employed a nurse practitioner or doctor only. With the presence of advanced practitioners such as nurse practitioners and medical doctors on campuses, student health centers are able to offer a greater range of health services that exceed and complement the medical scope of a registered nurse.

Offering low to no-cost immunizations on community college campuses is important because they are instrumental to supporting public health by preventing communicable diseases,

especially when college campuses generally have a high density of student traffic (Sandler et al. 2019). The data reveals that 74.6% of campus health centers offer the seasonal flu vaccine, while 25.4.% of them do not offer any vaccines.

Additionally, the data indicates that 56.1% of campuses offer family planning services, while 43.9% do not offer any family planning services. College students are widely known to be sexually active (Hopkins et al. 2018) and family planning services, especially for women ages 18-24, are crucial for maintaining sexual health and preventing unintended pregnancies, which can negatively impact academic careers. Despite the declining rates of unintended pregnancies in recent years in the general population due to increased access to and use of contraception, women ages 18-24 continue to have the highest rates of unintended pregnancy (Hopkins et al. 2018).

Furthermore, the cataloged data indicates that 83.3% of community college campuses do offer mental health services to students, while 16.7% of community college campuses do not offer mental health services in California. According to the data, mental health services was the service that was provided by most of the community colleges in California (95 out of 114 campuses). Stress-related mental health issues have been prevalent among the college student population, and it is known to decrease student retention, as a result (Bettis et al. 2018).

The second objective of this study is to see whether the health services on community college campuses meet the needs of the students. That objective was challenging to achieve, given the time restrictions and limited resources of this study, so surveys were administered to one of the community colleges in California as a case study. An anonymous survey was administered at the student health center in San Jose City College, and results are used to generate the following findings to cultivate more insight for further study.

The survey data indicates that students used immunizations services the most at 37.7%, followed closely by mental health services at 36.1%. According to the survey data, services provided by the medical doctor and nurse measured at 13.1% each, with no services rendered for family planning to the participants in this survey. Overwhelmingly, 90.2% of the 61 respondents indicated that no additional services were necessary, while the remaining respondents provided suggestions to expand current levels of service, offer services that are beyond the scope of student health services, or provided an unclear answer with no context. A majority of respondents (57.4%) reported that they had health coverage at the time of services, while 24.6% of respondents indicated that they had no health coverage, while the remaining 18% of respondents were unsure about their health coverage status.

Along with other 46 community colleges in California, San Jose City College offers a wide range of services that include all of the categories listed in this study. San Jose City College is part of the 41.2% of all community colleges within California that offer nursing visits, doctor visits, various immunizations, family planning, and mental health services on campus. Overall, 98.4% of the survey respondents strongly agreed that their needs were met during their visits in the student health center at San Jose City College. The remaining 1.6% (1 respondent) strongly disagreed that their needs were met during their visit. Finally, 90.2% of respondents reported that there were no additional services that were needed to be provided by Student Health Services at San Jose City College at the time of their visits.

Based on these findings from the student survey administered at San Jose City College's student health services, a community college that provides a wide range of services that include nursing hours, doctor visits, a variety of immunizations, family planning, and mental health

suggests that it would be able to meet the general needs of the students who seek out health services at its on-campus student health centers.

The following figures serve as a brief comparison of the student demographics across all community colleges in California and the student demographics of San Jose City College. In figures F and G, the ethnic breakdown of the student populations between all community colleges and San Jose City College mirror each other in terms of the distribution within its student population among the different ethnicities. Figure H and I also displays a similar distribution of student population among the different gender categories with female students accounting for most of the enrollment in 2017-2018. Finally, Figures J and K account for the student distribution within different age brackets that are enrolled in community colleges in California. San Jose City College's age distribution among its students is fairly similar to all of the community colleges in California. Given all of this information, while San Jose City College may only have an enrollment of 13,850 students for the year of 2017-2018, the demographics within its student population mostly mirrors the aggregate student population of all community colleges within California, which supports the value of the data extracted from the surveys administered on the San Jose City College campus.

Figure F: Statewide Community Colleges 2017-2018- Ethnicity

(California Community Colleges Chancellor's Office, nd-b).

Figure G: San Jose City College 2017-2018- Ethnicity

(California Community Colleges Chancellor's Office, nd-b).

Figure H: Statewide Community Colleges 2017-18 - Gender

(California Community Colleges Chancellor's Office, nd-b).

Figure I: San Jose City College 2017-2018- Gender

(California Community Colleges Chancellor's Office, nd-b).

FIGURE J: Statewide Community Colleges 2017-2018- Age

(California Community Colleges Chancellor's Office, nd-b).

Figure K: San Jose City College 2017-2018- Age

(California Community Colleges Chancellor's Office, nd-b).

LIMITATIONS

It is important to note that the findings within this study should be considered with some limitations in mind. The first limitation of the findings within this study is the accuracy of the services cataloged from the websites of all 114 community colleges in California. The webpages of each student health center may or may not have been updated with the most current information with regards to the current services provided on campus, and the definition of services may differ from one college campus to another.

Second, the sample size of survey is of only 61 respondents and was only administered to one community college campus. Given the small sample size and the 13,850 students enrolled at San Jose City College, it is difficult to generalize these findings to represent the large 2.1 million (2017-2018) students enrolled in community colleges across California (California Community Colleges Chancellor's Office, 2019). A larger sample size of surveys would be necessary to reach a greater degree of certainty about the generalization of the results.

Third, the limited time to conduct the survey, the limited peer reviewed literature about the topic, and the limited data available to answer the research question have served as a challenge for the research, limiting the complexity of the analysis that can be provided. As mentioned previously within this study, there is no centralized body or database that collects data from the student health centers on community colleges for further evaluation or analysis. The purpose of this descriptive study is to provide additional insight and contribute to the small body of existing literature for furthering studies of this area.

In addition to this research, further in-depth studies need to be performed on the effectiveness of student health services within community college campuses. These studies could

provide a foundation for a better system for delivering a standard or uniform level of services to the underserved populations that frequent these educational institutions. For example, partnerships with community-based organizations or county public health departments might be indicated for the campuses that currently lack comprehensive student health services, but without surveys of those students and their needs it is difficult to make the case for allocating scarce resources to them.

CONCLUSION

Student health centers on community college campuses provide access to basic health services for the underserved populations that aid in keeping students healthy, which propels positive student outcomes. This research shows that a majority of community colleges in California do provide, at a minimum, a basic level of nursing care to their student populations. A significant number of the 82.5% of community colleges that do offer medical services on campus provide a wider scope of services associated with advanced practitioners, who are medical doctors or nurse practitioners. As evidenced by the anonymous surveys conducted at San Jose City College, providing a greater range of services on these community college campuses can meet the needs of community college students seeking health services on their campuses, according to the limited data collected in this study. Providing more types of health services on campus can allow for the opportunities to address more needs of community college students.

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APPENDICES

Appendix A: Sample Student Survey

Date_____ Time_____ Survey#_____

1. Please (✓) Check the category that best applies to your visit today:

_____Nursing (First Aid, Vitals)

_____Doctor

_____Mental Health (Case Manager, Counselor)

_____Family Planning Services (Birth Control Counseling, STI screening, Contraceptives)

_____Vaccinations/Immunizations/TB-Test

2. What additional service(s) does the Student Health Center at SJCC need to offer?

3. Do you have any health insurance coverage (such as Aetna, BlueShield, Kaiser Permanente, Medi-Cal, Santa Clara Family Plan, etc.)?

Yes_____ No_____ I don't know_____

4. My needs were met today during today's visit. Please circle your response (circle one):

0	1	2	3	4
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree