

Academic health services and health needs of college students around the era of the Covid-19 pandemic

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ABSTRACT

Objective: The university medical services vary around the world (even within each university), but there are only a few publications on the utilization of these services by the students. The available on-campus services of public health care might include general health care, women's centers, mental health care, disability services, wellness resource centers, career counseling, and alcohol and other drug education programs.

Evidence Acquisition: This paper reviews the current literature on the overtime and current (due to Covid-19 pandemic) public health needs of college students based on studies that report the commonest specific diagnostic reasons for using the on-campus health care services.

Results: Special reference is done on mental health problems among students generally and the students of health professions fields (a specific category themselves). Besides, other issues of interest are the substance-related problems among students and their perceptions about mental health problems and on-campus help-seeking services.

Conclusions: It is unanimous that we need further educational and promotional campaigns to enhance the students; help-seeking behaviors, reduce stigmatizing behaviors and create more preventive public health services on campus, but also out-campus due to the Covid-19 pandemic.

Keywords: Health, Service, Covid, 19, College, Student, pandemic, COVID-19

INTRODUCTION

Context: This paper reviews the current literature on the overtime and current public health needs of college students and the use of current on-campus health care services. It is crucial for the academic authorities to know whether the available health care services cover the students; needs and if they don't new educational and promotional campaigns should be scheduled to enhance the students; help-seeking behaviors, reduce stigmatizing behaviors and create more preventive public health services on campus, but also out-campus due to the Covid-19 pandemic

Evidence Acquisition: The university medical services vary around the world (even within each university) and are widespread on college campuses, but there are only a few publications on the utilization of these services by the students. The authors searched the current literature published in Medline, setting appropriate keywords and retrieved articles both from online magazines, structured journals and scientific books. The included articles referred to students and college universities around the world and the supplied health care services, both those of primary care and prevention. Priority was given to scientific publications of the last 10 years which encountered a large sample of students. Although many on-campus providers and administrators retain electronically medical data of the students and their on-campus needs, these information are rarely published in the literature and cannot be used by the public health professionals and academic authorities to reorient the provided services just upon their students; demands (1).

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Currently, clinical data from campus medical facilities are limited to single schools, whereas data are very rare concerning populations of students who seek medical care in university college health services, in spite of the thousands of studies on habits, thoughts of on-campus students (2-5). The American College Health Association (ACHA), records the existence of around 1,500 health services on college campuses addressed to their students, although there are no data on the utilization of these services. According to the literature, the different on-campus services of public health care might include general health care, women's centers, mental health care, disability services, wellness resource centers, career counseling, and alcohol and other drug education programs (1). This paper reviews the current literature on the overtime and current public health needs of college students and aims to stress the need for preventive public health services on campus, thus out-campus due to the Covid-19 pandemic.

RESULTS

On-campus medical needs

In 2014 the College Health Surveillance Network (CHSN) published the results of a large study enrolling thousands of students from 23 universities and reported the demand of university health services. This study concluded that 60% of college students' visits concerned primary care, 13% mental health, 9% vaccination, and 31% other miscellaneous services. The specific diagnostic categories claimed by the students were sorted by descending prevalence and were sorted as preventive, respiratory, skin, hair, and nails; infectious non-sexually transmitted infection, and mental health. This large study used the ICD-9 codes to classify the students visit by symptom or by the preventive or not character of this medical visit (6, 7). They used the models of ADG19 and MDC20 and adjusted the most frequently occurring codes into 118 diagnostic groups categorized by anatomic symptoms or signs, descriptive diagnoses, or specific etiology (e.g., acute upper respiratory tract infection, anxiety, infectious mononucleosis) and finally merged these diagnostic groups only 20 diagnostic categories (e.g., respiratory, mental health, infectious non-sexually transmitted infection (STI), respectively).

In this study the annual utilization rates were significantly higher at private schools than at public ones for all visit types, with females and age categories "<18" and "22-29" years having the highest rates for primary care and mental health visits. Moreover, females tend to use preventive services more than males, especially for reasons of contraceptive advice. Also, younger students; visits usually concern with respiratory and non-sexually transmitted infections. In addition, after a rough statistic evaluation, the previous study concluded that 16% of college students proceeded annually the preventive health services of the campus. Besides, the overall utilization of services by the 3 principal minority groups of the included students (African American, Asian, and Hispanic) was similar, but higher than the whites and Native Americans (6), with the Asians to have the lowest rate on demand of the mental health services probably due to psychological perceptions (3-4).

Also, the most used services were the Prevention-related ones (e.g. contraceptive management, physical examinations for athletics, travel, and work and screenings for STIs, lipid abnormalities, and hypertension, followed by the monitoring of the respiratory system and skin disorders. Dermatologic diseases followed and included contact dermatitis, acne, and skin infections. The next category of specific illnesses (sorted by descending prevalence) was the non-sexually transmitted infections (e.g., influenza, infectious mononucleosis, streptococcal pharyngitis, mumps, chicken pox, conjunctivitis, hepatitis B, herpes zoster, pertussis, and latent tuberculosis), with the mental health disorders coming next. Musculoskeletal disorders, injuries, and abdominal/gastrointestinal symptoms, followed by the disorders of eye, ear and mouth and female reproductive diagnoses filled out the 10 most popular diagnostic categories addressed to the college health services. Remarkably, the sexually transmitted illnesses appeared to the bottom of the ranking category, including human papillomavirus (HPV), genital herpes, chlamydia, gonorrhea, immunodeficiency virus (HIV), and other/unspecified STIs infections (6).

On the other hand, the mental health disorders were among the top 5 diagnostic categories and had the highest number of visits per patient (4.93). This specific category group included anxiety and depression (44% and 34%, respectively), psychosocial stressors (19%), adjustment disorders (17%), drug abuse (13%), attention-deficit/hyperactivity disorder (ADHD) (12%) and alcohol-related disorders (4%). From all the mental health disorders those which reported the highest rate of visits were the eating and personality disorders. These findings stress the need of through-24h available behavioral health care service on-campus for the college students (6).

The previous analyzed data provided by CHSN had been widely known recently and may help the health services campus worldwide to plan and organize adequate preventive and behavioral health care services for their college students. Factors such as sex, age, race should be taken in mind proportionally to the rates of each sub-population into the specific academic community. The epidemiologic data available from CHSN provide a better understanding of the clinical health care needs of subpopulations of students and may help colleges plan appropriate services (6).

Mental health problems among students

Students and stress: A cross-sectional study including students of seven public Krakow universities, investigated the possible relationship between insomnia, stress, stresscoping strategies and selected social and medical factors in this population. They used the Perceived Stress Scale 10, an abbreviated version of the Coping Orientation to Problems Experienced inventory (mini-COPE inventory) and the Athens Insomnia Scale, and found that one tenth of Krakow students perceive a high level of stress especially those with chronic diseases ($p=0.006$) and the cigarette smokers ($p=0.004$). Besides, one-fifth of the respondents suffered from insomnia whose positive correlation with the level of stress was very strong ($p=0.00$; $r=0.44$) (8).

Students of health professions fields and stress: Several studies agree that students in the health professions fields (e.g. students in pharmacy and medical degree programs) are of high risk to deal with multiple stressors factors, like academic

overload, the pressure to succeed, and competition (9-10). The majority of these publications suggest that medical students overall, compared with individuals in the general population of similar age, experience significantly more stress and lower mental health quality of life, with burnout affecting up to 50% of US medical students (11). Besides, 19% -44% of medical students experience anxiety and 27% of them feel depression, although estimates vary widely across studies (18% to 58%) (12-14).

On the other hand, other research data report depression (51%) and anxiety (29%) among pharmacy students, yet lower than those found among medical students (58% and 48% respectively). Although, research studies report conflicting results for the prevalence of anxiety between pharmacy and medical students, it is unanimous that both groups meet few stress (12, 15). Further, a recent study on pharmacy residents found a 40% self-reported depression during their residency similar to the rate of medical students and the general college student population (9, 16).

The previously described psychological distress, including anxiety and depression, degrades students' happiness and well-being and is a definitely risk factor for suicidality (17). Over 25% of medical students have ever considered suicide, with 11% having seriously contemplated suicide within the last year and almost one fifth of them have already attempted suicide (13), whereas there is little respective evidence among pharmacy students. Although the prevalence of suicidal ideation reported among all undergraduate and graduate academic fields is low (4%-11%), scientists of public health emphasize the need of early identification of suicidal ideation, symptoms of hopelessness and depressive symptoms in these students (18-20).

Another issue is the substance-related problems among this group of students which ranges from 17% to 58% during their clinical training (12, 21). Substance use is prevalent among the medical students, with 17%-34% of them reporting alcohol abuse or binge drinking, and about one third are using illicit substances (21-22). Pharmacy students report similar rates, with 25% of them exhibiting excessive drinking, 21% indicating marijuana use, and 41% reporting use of substances without a prescription (23).

All published studies report a high rate of alcohol intake in the past two weeks (77.4%) among students of the health professions fields of both sexes, whereas cigarette smoking rate in the past 30 days tends to be low (3.5%). On the contrary, marijuana use in the previous 30 days differs among medicine (14%) and pharmacy (4.8%) students ($p=0.03$), and cocaine use respectively (3.6% vs 0.2%), while past research data showed lower rates (22).

Perceptions about mental health problems among students: Another cross-sectional analysis was conducted including students from 23 institutions in the United States, aiming to compare the prevalence of mental health problems, help-seeking attitudes, and perceptions among US pharmacy and medical students. This study reported similar rates of depression (18%) between the two groups. Although the prevalence of anxiety in pharmacy students (21% vs 11%) was higher, in the previously mentioned study this group of students used less frequently the student counseling services

(only 11% vs 49%) due to fear of the stigma and very often they ignored where to seek help on campus if needed (18, 24).

The approach or not of the on-campus help services for mental health depends on several perceptions of the college students, taking into account the perceived risk, stigma, insurance, living on- or off-campus, and knowledge of how to use services. Generally, it is reported that despite the awareness of the available services, only a few students (13%) finally use them when they face mental health problem and this depends directly to the disorder, gender, and race/ethnicity. The mental health disease itself affects the possibility of utilization of the respective services, e.g. anxiety (5-35%), depression (3-39%), alcohol-related concerns (3-39%). Females tend to utilize more services than males for all health reasons, whereas non-white race college students (Black, Asian, or Hispanic) usually seek fewer services and receive less treatment versus white students. Those findings prove that it is crucial to increase awareness on mental health diseases and encourage students facing those problems to address to the appropriate health services by ensuring the confidence and the avoidance of stigma (1, 25).

Medical students may be less likely to seek help from campus-based services due to concerns around confidentiality, especially when seeking help for stigmatized conditions, including mental health problems (26). Among pharmacy residents, a perceived need for mental health services exists, with 26% indicating they believe they would benefit from mental health resources (16). However, less is known about the help-seeking attitudes and behaviors of pharmacy students. Studies including students of all health professions fields found that they prefer rather to speak about their problems with friends (43%), significant others (37.7%), family members (36.9%), and/ or roommates (16.8%) than address to other professionals for mental or emotional health support. However, one third of this population avoid speaking to anyone and just one tenth finally ask for academic personnel help. (27, 28) Although, medical students often face distress, burnout, anxiety, depression and suicidal ideation (8-9, 18), they rarely seek mental health services (10-13), thinking about lack of confidentiality, waste of time, cost, perceived stigma, potential repercussions, and unwanted interventions (21, 29). Furthermore, antidepressants are the most commonly prescribed category of drugs in most studies (10.8%), with the pharmacy students to account the most prescriptions from a primary health care physician versus the medical students (6).

Very often the medical students already have mental health diseases even prior to medical school (36%), or report a decline in their mental health during medical school training (47%) (27, 30). Actually, few reports converge to this finding (8, 31) attributing this mental decline of medical students to excessive workload, pressure to succeed, fatigue, ethical conflicts, accumulating debt, and exposure to death and human suffering (13, 32-33). The disclosure of this mental disease on a Medical Board license application is usually avoided by the college medical students, due to fear of stigmatization, of repercussions, and perception of the irrelevance of this information (30, 32).

Finally, it is unanimous that we need further educational and promotional campaigns to enhance the students; help-seeking

behaviors and reduce stigmatizing attitudes. Academic authorities should focus on information and promotion about the available health services and strengthen their discretion and confidentiality. It is encouraging that the American Association of Colleges of Pharmacy Student Affairs Standing Committee recently charged institutions to focus on student wellness by promoting self-awareness and well-being. Nowadays, the interest of academic authorities and ministries of Education around the world is focused on stressing the awareness about mental health issues, suicide prevention and stigma reduction into the college campuses (30, 34).

Impact of COVID-19 in students

The COVID-19 pandemic has influenced the academic community in various ways. Education procedures are mainly done via internet platforms, social relationships and on-campus athletic and cultural activities have been postponed and minimal physical activity is limited in-house. Several studies have assessed mental health issues and reported many reasons acting as stress factors between various groups of population. In the Covid-19 era, many people face stress, anxiety or even depressive symptoms due to fear of death, frustration, boredom, inadequate supplies, inadequate information, financial loss, and stigma (35). So far most research studies are focused on the impact of this pandemic on health workers, patients, children, and the general population (36, 37). Currently, only a few preliminary studies coming from China, detect a slight trend on psychological or mental health worsening of college students due to quarantine and reduction of physical activity and social isolation (38-41). Another study conducted in the university system of Texas reported increased stress and anxiety (71%) within the students; population due to the COVID-19 outbreak. The most commonly mentioned stress factors were fear and worry about their own health and of their loved ones (91%), difficulty in concentrating (89%), intermittent sleep (86%), decreased social relationships due to isolation (86%), and worries for academic performance (82%). All these degrade the mental health of the campus students and make urgent the generation of out-campus preventive initiatives and services which will be primarily scheduled to support the mental health of the college students. (34, 42, 43).

CONCLUSIONS

The university medical services vary around the world (even within each university), but there are only a few publications on the utilization of these services by the students. The available on-campus services of public health care might include general health care, women's centers, mental health care, disability services, wellness resource centers, career counseling, and alcohol and other drug education programs. Academic authorities and Ministries of Education should focus on serving the overtime and current (due to Covid-19 pandemic) public health needs of college students, their mental health problems (generally and among students of health professions fields) and the substance-related problems among students. Finally, it is unanimous that we need further educational and promotional campaigns to enhance the students; help-seeking attitudes, reduce stigmatizing behaviors and create more preventive public health services on campus, thus out-campus due to the Covid-19 pandemic.

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