

Original Research Article

Health behaviors of hospital students at the medical sciences training and research unit in Abidjan

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ABSTRACT

Background: The health of medical students is often precarious. Few studies have been carried out on this subject in our country. With the aim of contributing to the improvement of their health, we set out to assess the health behaviours of hospital students at the Training and Research Unit of Medical Sciences in Abidjan.

Methods: This descriptive cross-sectional study was conducted among students enrolled in their second year of the Doctor of Medicine program at the Faculty of Medical Sciences in Abidjan. Data collection took place from September 2022 to January 2023 using an online questionnaire distributed through the WhatsApp application. The questionnaire was structured based on the Behavioral Risk Factor Surveillance System (BFRSS 2003) and the Health Promotion Lifestyle Scale.

Results: We recorded a total of 384 students, with an average age of 27.2 years, and 85.7% of them were male. Most students (90.6%) reported being in good overall health, while 6.8% mentioned experiencing psychological issues like depression. Good health was more common among male students, those living in university residences, those with health insurance, and those who regularly consumed fruit. In terms of behaviors, unprotected sex was noted in 26% of cases, regular alcohol consumption in 22.4%, and tobacco use in 2.3%. Additionally, 70.8% did not have health insurance. The main health needs expressed were a special medical insurance plan for medical students (97.6%) and access to free vaccinations (2.3%).

Conclusions: Students were adopting risky health behaviors. Strategies to promote health in the university environment should be developed and implemented.

Keywords: Behavior, Health, Students, Medical sciences

INTRODUCTION

In today's society, youth is often valued and presented as a model of health and vitality. As students represent a significant proportion of this youth, health is a key element in their success throughout their studies, and tends to take on increasing importance in the analysis of their living conditions and their transition process towards independence and autonomy.¹ However, the health of

university students is often precarious. The risks likely to affect their health are manifold: risk-taking in terms of sexual behavior, harmful use of alcohol and drugs.² What's more, in the hospital environment, healthcare students may be exposed to a variety of healthcare-associated infections, or expose their patients to them. It is against this backdrop that studies on the self-assessed health of student populations have been carried out in countries such as Morocco and USA.^{3,4} While the student

population has been the subject of studies that are now helping to guide the decisions of health authorities, data on hospital students, who remain in constant contact with patients, are scarcely available. Students in general, and medical students in particular, are exposed to multiple risk factors for pathologies, hence the need to assess their behaviors and lifestyles in order to set up preventive actions aimed at reducing the risk of failure during their long university course, and hospital risks, notably Healthcare-Associated Infections.⁵ Given that this field of research remains relatively unexplored in Côte d'Ivoire, and given the importance of the health of hospital students, we conducted a study to assess the health behaviours of hospital students at the Medical Sciences Training and Research Unit in Abidjan.

METHODS

Study type, place and period

This study lasted 5 months, from September 2022 to January 2023, and was a descriptive cross-sectional study. Our study population consisted of students enrolled in the Medical Sciences Training and Research Unit at the Université Félix Houphouët Boigny in Abidjan, and who had given their consent.

Study population, sampling technique, data collection techniques and tools

This was an exhaustive study including all students who agreed to submit to the questionnaire. Data were collected online using an anonymous questionnaire previously tested in a pilot survey of 25 Licence 2 students. Each student received an invitation to complete the questionnaire via the WhatsApp social network. Each student was able to access the questionnaire only once. The questionnaire was based on the Behavioral Risk Factor Surveillance System Scale, BFRSS 2003 and the Health Promotion Lifestyle Scale, a self-assessment questionnaire used in several surveys in the USA, China, Saudi Arabia, France and Rwanda.⁶⁻¹³ The questionnaire consisted of four parts: socio-demographic characteristics, vaccination status and medical and surgical history of students, lifestyle and health needs.

Data analysis

Data for our study were collected anonymously, coded and then entered using Microsoft Office Excel 2016 software. Data processing was carried out using SPSS version 16 software. For quantitative variables, we determined the mean and/or median with standard deviation. Qualitative variables were expressed as proportions and numbers. Chi-square and Fisher tests were used to compare proportions. The significance threshold was set at 5%.

RESULTS

A total of 384 students took part in the survey, representing a participation rate of 78.05% of second-year doctoral students.

Socio-demographic characteristics of our population

Our sample was 85.7% male and 14.3% female, with a sex ratio of 5.99. The mean age of the students was 27.2±2 years, with extremes ranging from 23 to 34 years. In our study, 69% of participants had a normal BMI, while 23.7% were overweight. In addition, 89.1% were single. Some 29.7% of students lived in Cocody, the university commune, and 29.2% in a university residence. Finally, 88% of students said they had no children.

Vaccination status and medical and surgical history

Students reported having been vaccinated at least once against yellow fever (91.9%), tetanus (91.9%), meningitis (89.1%), hepatitis B (89.1%) of which 16.7% had received 3 doses, measles-mumps-rubella (84.11%), tuberculosis (90.1%), typhoid fever (88%) and COVID-19 (74.5%) (Figure 1). Some 7.3% of participants reported suffering from a chronic disease, asthma being the most common, accounting for 46.4% of cases. In addition, 19.5% of respondents reported having experienced a blood exposure accident. In our survey, 13.3% of students wore pharmaceutical glasses, and 7.3% had undergone surgery, appendectomy being the most common at 28.6%.

Table 1: Distribution of respondents according to health status, health behavior survey of 384 medical students in Abidjan in 2023.

Variables	Workforce	Percentage (%)
Do you feel generally healthy? (n=384)		
Yes	348	90.6
No	36	9.4
Reasons for poor health (n=36)		
Cigarette and drug addictions	3	8.3
Flu-like syndrome	15	41.7
Chronic headaches	5	13.9
Sickle cell crises	2	5.5
Lean	1	2.8
Epigastralgia	8	22.2
Chest pain	2	5.5
Depressive states (n=384)		
Yes	26	6.8
No	358	93.2
Need for psychological help (n=26)		
Yes	22	84.6
No	4	15.4

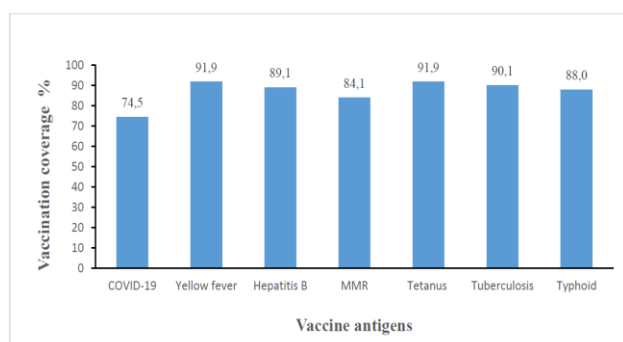


Figure 1: Distribution of respondent according to vaccination status by antigen, health behavior of 384 medical students in Abidjan in 2023.

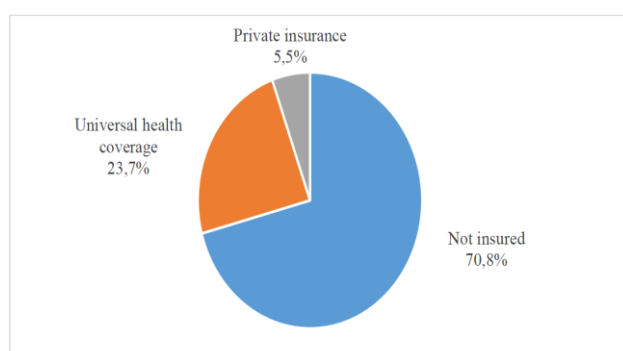


Figure 1: Distribution of respondent according to possession of health insurance, health behavior survey of 384 medical students in Abidjan in 2023.

Lifestyle and health behavior

Some 22.4% of participants drank alcohol regularly, with 23% reporting an average of more than two glasses a day. In addition, 2.3% of those surveyed were smokers, cigarettes being the type of tobacco most commonly consumed in 55.6% of cases. Around 1% of participants reported drug use, mainly cannabis (50% of cases). With regard to sexual behavior, 48.4% of those surveyed said they sometimes had protected sex, and 13.8% said they had several sexual partners. As for physical activity, 22.9% of students said they practiced it regularly, with 51.1% spending between 30 and 60 minutes per session, and 56.8% doing so once à week. Soccer was the most popular activity (36.4%), followed by jogging (17%). In 59.4% of cases, participants reported a sleep time of between 6 and 8 hours. Only 29.2% of respondents had health insurance, the most common of which was Couverture Maladie Universelle (81.2%) (Figure 2). Some 31.8% of participants said it had been more than 5 years since their last visit to a general practitioner, while 56.8% had never visited a dentist. A further 31.8% had never had a biological check-up. Finally, 67.2% of participants said they had never visited the School and University Health Services, Adolescent and Youth Health.

Students' state of health

Among the participants, 9.4% felt they were in poor general health. The main reasons cited were flu-like syndromes (41.7%), epigastralgia (22.2%) and chronic headaches (13.9%). In addition, 6.8% of respondents said they were suffering from psychological problems, particularly depression, and of these, 84.6% said they needed psychological support (Table 1).

DISCUSSION

Vaccination status

At the time of the survey, students reported being vaccinated against tetanus (91.9%), meningitis (89.1%) and viral hepatitis B (89.1%). The tetanus vaccination rate of 91.9% appears to be superposed on studies carried out among French students (95.6%), and higher than the results of Lindley et al, who found that American medical students had 66% vaccination coverage in 2011.^{14,15} This awareness may be linked to the frequency of tetanus in African countries.¹⁶⁻¹⁷ In the case of meningitis, 89.1% of students reported being vaccinated, a result superimposed on the study by Tchamo N, in which the vaccination rate among nursing staff at Mali's Gabriel Touré University Hospital was 88%.¹⁸ This high coverage may be explained by the fact that northern Côte d'Ivoire and Mali are part of the Lapeysonnie meningitis belt. With regard to hepatitis B, 89.1% of students reported being vaccinated, but only 16.7% (57 students) reported having received 3 doses of hepatitis B vaccine. Vaccine protection is only obtained with 3 doses, so we can consider that few of them are protected. However, during their hospital internships, these students are exposed to blood exposure accidents. Moreover, in our study, less than half of our students (43.5%) had a vaccination record. This result is lower than Tah bi's study on the vaccination status of medical students in Bouaké, where 52.7% of students had a vaccination record.¹⁹ This low rate of possession of a vaccination record could be explained by the fact that no checks are carried out by hospital authorities during hospital internships.

Socio-demographic characteristics

The majority of students were male (85.7%). These results are similar to those of the study by Mian et al. among students at the UFR Sciences Médiales in Abidjan, where the male predominance was 62%.²⁰ This male predominance in many African countries could be explained by social and economic factors. In many African societies, social expectations linked to gender roles have long favored the education of boys over that of girls. Girls were often encouraged to take on domestic tasks and marry young, while boys' education was seen as an investment for the family.²¹ Also, in many low-income African families, limited resources are often allocated to the education of boys, perceived as more likely to provide for the family in later life. The average age of the students

was 27.2±2 years. This result is similar to that observed by Kombila et al. who, in their study of graduating medical students at the CHU of Libreville, reported an average age of 28.3±3.2 years.²² Medical students are generally young, for a number of reasons linked to their educational background and the structure of medical studies. For several years now, families have been enrolling their children in school earlier and earlier, usually around the age of 5. In Côte d'Ivoire, the average age of school entry is around 6.²³ In many countries, students begin their medical studies directly after high school, which often puts them between 17 and 20 years of age when they enter medical school. Moreover, medical training is lengthy, lasting a minimum of 7 years, or even longer depending on the specialty chosen. Students therefore start young to ensure they have enough time to complete their studies, specialize and enjoy a longer, active medical career. Medicine requires continuous learning throughout a career, and starting early gives students an extended period in which to train, accumulate experience and develop their career path.

Behaviour and lifestyle

In our study, 22.4% of students drank alcohol regularly. In other countries, such as the USA and Germany, this prevalence is much higher, ranging from 49% to 90%.^{24,25} Comparative studies between countries show that culture plays a key role in establishing norms around alcohol and is an important determinant of the way young people drink.²⁶ For example, the practice of religion can have an effect on reducing young people's alcohol consumption.²⁷ With regard to physical activity, only 22.9% of students took part in regular physical activity, a result lower than that of Adjiri, where 47.3% of students took part in physical activity and sport.²⁸ The WHO recommends that the 18-64 age group should engage in at least 150 minutes of intense or moderate physical activity per week.²⁹ Sedentary behaviour among students is influenced by the academic environment and personal habits. Students, especially medical students, spend many hours studying, between internships and exam preparation, reducing the time devoted to physical activity. In addition, the environment is often not conducive to physical activity. Some universities or student residences lack accessible sports facilities (gyms, sports fields, parks), which discourages physical activity. What's more, students' leisure activities are often sedentary, such as watching TV, playing video games or spending time on social networks, to the detriment of physical activity. The increased use of smartphones and tablets for leisure activities (games, social networking, streaming) encourages sedentary behavior. Online social interactions have replaced some of the physical activities that previously involved travel and face-to-face encounters.^{30,31} In our study, 26% of participants reported having unprotected sex, a higher figure than in the study carried out by Mian et al in 2008 among students in Bouaké, where 23.8% of students reported this behavior.²⁰ This difference could be explained by the

trivialization of condom use among young people, who often justify their non-use by a reduction in sexual pleasure.³² In addition, the decline in the prevalence of HIV infection in recent years, coupled with a reduction in awareness-raising activities, generates a false sense of security among this population.

State of health

In our study, almost 80.6% of students declared themselves to be in good health. This result is comparable to that of the study by Kaitouini et al. where 79.8% of students considered their health to be good or very good.³ However, 6.8% of students reported psychological problems such as depression. This proportion is lower than that of Kaitouini et al in Morocco, where 22.6% of students had psychological problems.³ Severe psychological disorders are strongly implicated in suicide worldwide, suicide is the 2nd leading cause of death after road accidents among young people aged between 20 and 24.³³ It is generally accepted that the prevalence of suicide is not significant in black African societies. However, the conditions of economic development in the countries concerned, and in Côte d'Ivoire in particular, suggest a possible increase in this phenomenon. The study by Ette et al. reported a suicide rate of 4.36% between 1999 and 2001.³⁴

Risk factors

The factors associated with health status after logistic regression were gender, health insurance and fruit consumption frequency. This correlation could be explained by the fact that insured students tend to go to a health center at the slightest symptom, whereas uninsured students certainly encounter difficulties with care (consultations, purchase of medication). In addition, being male reduced the risk of pathological health conditions. This difference could be explained by the fact that, according to the WHO, women remain more vulnerable to illness than men, due to persistent social inequalities.³⁵ Furthermore, while the WHO recommends the consumption of 5 fruits and vegetables a day, consumption is highly variable in our population. Studies on the relationship between fruit and vegetable consumption and the risk of chronic non-communicable diseases clearly indicate a protective effect against cardiovascular disease, with a convincing level of evidence.³⁶

The limitations of this survey, carried out using an online questionnaire, could be linked to selection and information bias. Participants would need to have access to the Internet to complete the survey. This may exclude certain groups of people, creating a bias in the results. In addition, respondents may not take the survey seriously, leading to unreflective or inconsistent responses, which may influence the quality of the answers obtained.

CONCLUSION

University is an environment where students spend a large part of their time and acquire knowledge. To succeed in their studies, it is essential that they are in good health, as a healthy student has a better chance of succeeding in university and, consequently, in the professional world. The study revealed that 91.2% of students considered their health to be good. However, some were engaging in risky behaviors, such as alcohol abuse and unprotected sex. It also identified several priority health needs, including access to health insurance, access to vaccines, integration of sport into academic programs, and access to psychological support.

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