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Diagnosis of the lifestyle of students in northern Benin in 2024

Tonon Brigitte Affidéhomé [1, *], Falola Stève Marjelin Donan [1, 2], Sinh Josi-Noelline [3, 4] and Gouthon Gilchrist Fabrice [1, 3, 5]

[1] *Sports, Health, and Evaluation Research Unit. National Institute for Youth, Physical Education, and Sports, University of Abomey-Calavi, Republic of Benin.*
[2] *Biomechanics and Performance Research Unit. National Institute for Youth, Physical Education, and Sports, University of Abomey-Calavi, Republic of Benin.*
[3] *Center for Expertise and Training of Sports Professionals, 12th arrondissement of Cotonou, Republic of Benin.*
[4] *Multidisciplinary Laboratory for Human Movement, Development and Well-being Sciences. National Institute for Youth and Sports, Félix Houphouët-Boigny University, Abidjan, Republic of Ivory Coast.*
[5] *Center for Studies and Research in Education and Social Interventions for Development. National Institute of Youth, Physical Education, and Sports. University of Abomey-Calavi, Porto-Novo, Republic of Benin.*

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Abstract

The lifestyle of students is influenced by sports, hygiene, eating habits, and alcohol and tobacco consumption, especially during a health crisis when lockdown is recommended. This study aimed to examine the lifestyle of students enrolled in middle schools in northern Benin. To this end, the study was conducted in three carefully selected middle schools in northern Benin and involved 1,500 students, including 892 boys, who were selected using a non- random method and random selection technique. A questionnaire was used to collect information on the students' lifestyles. Lifestyles were assessed as good or poor. The results revealed that the lifestyle of 86.3% of the students surveyed was considered poor. Sports, hygiene, eating habits, and food consumption had a strong influence on the students' lifestyles ($p < 0.001$). The poor lifestyle of students requires action to change their behavior in order to maintain and preserve a well-being that is conducive to their overall development and, above all, their academic success.

Keywords: Quality of life; Students; Well-being; Health; Benin

1. Introduction

Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (World Health Organization, 2023). It is assessed in terms of morbidity, mortality, diagnoses, and treatments, and highlights aspects related to lifestyle and, above all, the quality of life (AVISE, 2023) of populations. Lifestyle is considered to be a set of daily practices that take into account the cultural and socioeconomic aspects specific to an individual or social group (Maresca, 2017). Quality of life, on the other hand, encompasses several aspects, including somatic status, psychological status, psychological functioning, well-being, social interactions, physical autonomy, professional activities, and economic resources (HAS, 2022). Several factors are associated with the quality of life of people in a given community. These include health status, beliefs, social relationships, environment, income level, material living conditions, and economic insecurity (UNDP, 2022).

With the aim of promoting population health, health-related quality of life is increasingly being assessed (Alrub *et al.,* 2019; Jang *et al.,* 2018; Le Glatin *et al.,* 2017), and related indicators are used to assess an individual's state of health

* Corresponding author: Tonon Brigitte Affidéhomé

(Tessier, 2018). As a result, health- related quality of life (HRQoL) goes beyond direct measures of population health, life expectancy, and causes of death, impacting their health status (PAHO and WHO, 2022). In

addition, a person's health status is a major component of their well-being and can be assessed using health-related quality of life indicators (Tessier, 2018; INSPQ, 2023). It is necessary to study this concept because it provides a diagnosis that promotes strategies for improving the lifestyle of people belonging to a given population. The lifestyle of these individuals therefore influences their health-related quality of life. Similarly, in certain populations, lifestyle negatively impacts people's health due to physical inactivity, poor eating habits, tobacco and other substance use, and poor hygiene behaviors (Martinez-Lacoba *et al.,* 2018).

Thus, when poor diet is combined with physical inactivity in a population, it impacts the quality of life of its members and, consequently, the organization of health systems (Anne Claire, 2021). Preventing diseases linked to poor diet and sedentary lifestyles would lead to an acceptable lifestyle within populations. In sub-Saharan Africa, several countries are taking action to combat these unhealthy behaviors, which lead to public health problems (Kimbally Kaky *et al.,* 2011). It is therefore essential to ensure that populations, especially those at risk, acquire the knowledge and behaviors conducive to maintaining good health (Shankland *et al.,* 2021).

In Benin, as in all countries, students do not always adopt a healthy lifestyle. They engage in risky behaviors that can affect their health and, consequently, their performance in class. These behaviors are particularly noticeable in the north of the country, where conditions differ from those in the south due to regional disparities in living conditions, socioeconomic factors, education, and health services. An assessment of the lifestyle of students in northern Benin is necessary to present the current state of habits, behaviors, and choices of this group of students. This would provide stakeholders in the health and education systems in Benin with a reference base for strengthening their activities aimed at changing behaviors within educational institutions. The objective of this study is to assess the lifestyle of students in northern Benin.

2. Method

This is a cross-sectional study conducted in the form of a survey in three general education colleges (CEGs). These are CEG 1 N'Dali and CEG Al-Barika in northeastern Benin and CEG 1 Kouandé in northwestern Benin. The administrative authorities of these three CEGs gave their approval for the survey to be conducted. The study population consisted of students enrolled for the 2019-2020 school year in three public general education colleges in northern Benin. To be included in the study sample, each student had to meet the following criteria: have given their free, informed, and written consent; be regularly enrolled for the 2019-2020 academic year in one of the selected secondary schools. A non-random method using accidental sampling was used to select 1,500 students who met the inclusion criteria in the three targeted secondary schools.

Data were collected using a self-administered questionnaire given to the selected students in their respective classrooms on days and dates set in advance by the school principals in consultation with the principal investigator of this study. The questionnaire consisted of 26 items, grouped into five sections relating to identification, sports participation, hygiene, eating habits, and alcohol and tobacco consumption. It was pre-tested twice, one week apart, in two neighboring cities not involved in this study to assess the consistency of the questions and the reliability of the responses.

Lifestyle is a composite variable of sub-variables: sports activities, personal hygiene, eating habits, alcohol consumption, and tobacco use. Each sub-variable consisted of a number of items translated into major or minor questions. Questions for which correct answers were always mandatory were considered major criteria. Questions for which correct answers were not always mandatory constituted minor criteria. To be considered as having a good lifestyle, a respondent had to satisfy all four sub-variables of this variable, i.e., "sports activities, personal hygiene, eating habits, and alcohol and tobacco consumption." The subjects were then classified according to their answers. Lifestyle was assessed through its dichotomous components, which were classified as "Good" or "Bad" (correct answers versus incorrect answers).

The level of sports practice is good if the four major criteria (physical activity in the last seven days: three to five days or six days or more; physical activity in a typical week: three to five days or six days or more; Duration of sitting: less than one hour; Walking or cycling to school: three to five days or six days or more) and one minor criterion (Average time spent traveling from home to school and vice versa: less than 30 minutes) are met.

Hygiene is considered good if the four major criteria are met (personal and oral hygiene: always; frequency of hand washing before eating: always; frequency of hand washing after using the toilet: always; washing hands with soap: always).

With regard to eating habits, the level is good if the three major criteria are met (irregular meals in the past 30 days: never; fruit consumption in the past 30 days: three times or more; vegetable consumption in the past 30 days: three times or more). Alcohol and tobacco consumption is considered good if the four major criteria (alcohol consumption in the past 30 days: never; tobacco consumption in the past 30 days: no days; quitting smoking in the past 12 months: I have never smoked/yes, I have quit smoking; Parents who smoke: none) and the two minor criteria (Amount of alcoholic beverages consumed in the past 30 days: less than one drink; Frequency of drunkenness during lifetime: less than once) are met.

A healthy lifestyle is achieved among respondents if they meet the three sub-variables: sports activities, eating habits, and alcohol and tobacco consumption, which are considered major criteria, and hygiene, which is a minor criterion. A poor lifestyle is defined as one in which a single major criterion is not met, or in which all major criteria are met but none of the minor criteria are met. The quantitative data collected were processed using IBM SPSS Statistics software (Version 20). Descriptive statistics are presented as absolute numbers or frequencies accompanied by the corresponding percentages.

3. Results

The 1,500 students surveyed were aged 18.6 ± 2.6 years. Of all those surveyed (Table I), 902, or 60.1%, had a good level of physical activity. A good level of personal hygiene was achieved by 16, or 1.1%, of those surveyed. Of the 1,500 respondents, 413 (27.5%) had good eating habits. With regard to alcohol and tobacco consumption, 873 (58.2%) of the respondents had good habits (Table I). Only 205, or 13.7% of the students surveyed, had a good lifestyle, based on the standards set for this subject (Table I).

Sports participation ($p < 0.001$), hygiene ($p < 0.001$), eating habits ($p < 0.001$), and food consumption ($p < 0.001$) were strongly associated with lifestyle (Table II). Pearson's chi- square test was used to determine the degree of association between the explanatory factors of lifestyle.

Table 1 Assessment of the lifestyle of students in northern Benin in 2024 (sample size = 1,500)

	Conditions	
Variables	**Good Number (%)**	**Poor Number (%)**
- Sports	902 (60.1)	598 (39.9)
- Hygiene	16 (0.1)	1484 (98.9)
- Eating habits	413 (27.5)	1087 (72.5)
- Alcohol and tobacco consumption	873 (58.2)	627 (41.8)
Lyfes	205 (13.7)	1295 (86.3)

Table 2 Lifestyle of students in northern Benin with associated factors in 2024 (sample size = 1,500)

	Lifestyle	
	p	**p**
- Sports	0,000	0,000
- Hygiene	0,000	0,000
- Eating habits	0,000	0,000
- Alcohol and tobacco consumption	0,000	0,000

4. Discussion

This study was conducted on the basis of two hypotheses. The first was that students in northern Benin have poor lifestyles. The second hypothesis was that sports, hygiene, eating habits, alcohol consumption, and tobacco use are the factors most associated with the lifestyle of these students. To test this hypothesis, a research objective was set. The aim was to study the quality of these students' lifestyles.

This quantitative cross-sectional study was conducted on 1,500 students selected using a non- random sampling technique based on chance. The survey was approved by the Science and Technology of Physical and Sports Activities / Youth and Leisure scientific and sectoral committee of the National Institute for Youth, Physical Education, and Sport. The survey was only possible with the authorization of the principals and parent associations of these secondary schools. The informed written consent of each student concerned was obtained. The operational aspects of the lifestyle components made it possible to assess the quality of these students' lifestyles. All these precautions ensured the high quality and reliability of the results obtained.

Based on the operational aspects, the majority of students surveyed in northern Benin have a poor lifestyle. Several factors such as sports, hygiene, eating habits, alcohol consumption, and tobacco use have negatively influenced the lifestyle of these students. To this end, a study conducted in 2018 revealed that lifestyle had a negative impact on the health of those surveyed due to their failure to observe hygiene rules, their physical inactivity, their eating habits, and their excessive consumption of tobacco and other harmful substances (Martinez- Lacoba *et al.,* 2018).

The results showed that more than half of the students surveyed were physically active. This result can be explained by the fact that many of these students continued to engage in recreational sports activities even after their physical education classes. This personal desire to engage in physical activity has many effects on a person's well-being and lifestyle, positively impacting their health-related quality of life (Bordeau-Lepage and Kotosz, 2022). In this regard, research findings have shown that physical activity reduces a person's risk of developing diabetes, obesity, certain types of cancer in adulthood, and cardiorespiratory and cardiovascular disease (Chassang and Gautier, 2019).

In Benin, research in this area has shown that 30 minutes of moderate-intensity physical activity per day reduces a person's risk of sedentary lifestyle, cardiovascular disease, and mortality in general (Flenon, Mitchikpe, and Hounhouigan, 2018). It would therefore be of great benefit to everyone, especially these students, to engage in physical activity while observing hygiene rules to avoid getting sick, especially during the coronavirus health crisis. In terms of hygiene practices, only a small proportion (1.1%) of respondents adopted good practices. This result could be explained by the lack or absence of reinforcement of health education on hygiene rules. When parents do not teach their children to follow hygiene rules, it is clear that hygiene practices stop at home.

Hygiene measures are therefore particularly important in schools, where students are exposed to the risk of infection (Eduscol, 2008). Education on hygiene rules should focus primarily on washing hands with clean water and soap before and after meals, after touching any object, and after using the toilet (Salou Bachirou, 2019). Everyone (children, young people, and adults) must practice good personal hygiene and have access to personal items for drying their hands and consuming water and meals, even outside of health crises (Van Mechelen, 2013). It is therefore urgent to raise awareness among students about the importance of systematically washing their hands with soap and water. This important step in the process of changing behavior would reduce the risk of contracting hygiene-related diseases.

Furthermore, while adopting and maintaining good hygiene, especially after the COVID-19 pandemic, the ideal would be to eat well in good conditions. This was not the case in the present study, where the majority of respondents did not have good eating habits. In this regard, recent studies have shown that eating several meals a day in a healthy environment, followed by good food hygiene, can prevent sedentary lifestyles, obesity, and cardiovascular disease (Lemoine *et al.,* 2020; Martinez-Lacoba *et al.,* 2018). Therefore, the adoption of good eating habits (EH) in a given population is important in promoting and maintaining good health throughout life (World Health Organization, 2003). With regard to alcohol and tobacco consumption, the results of this research revealed that less than half of the students surveyed consume these substances, which are harmful to health.

However, heavy alcohol consumption among adolescents can impair their mental and physical development (Holligan et al., 2020). Alcohol consumption allows some adolescents to temporarily alleviate anxiety, boredom, feelings of inferiority, and even depression (Oubrayrie-Roussel and Safont-Mottay, 2013). In line with this, a 2009 study conducted in Quebec revealed that the average age of alcohol consumption among students is 14 (Institut de la Statistique du Québec, 2009). Other studies along the same lines have revealed that excessive alcohol consumption tends to begin between the ages of 13 and 15 and can continue into adulthood (Thompson *et al.,* 2014).

There is a great need to raise awareness among the general population, particularly students, of the consequences of consuming these harmful substances. The combination of alcohol and illicit drugs may encourage adolescents and young people to act out, engage in violence, and attempt suicide (Oubrayrie-Roussel and Safont-Mottay, 2013). Repeated awareness campaigns should be considered with the aim of reducing the consumption of alcohol, tobacco, drugs, and other harmful substances among students in order to maintain good health.

Health education is essential to promote healthy lifestyles among the general population, and among students in particular. This would promote good health among people in communities. Even though negative factors in a student's social environment can impact their lifestyle, personal motivation is required to achieve this.

5. Conclusion

In summary, this research aimed to study the lifestyle of students in northern Benin. The results of this study showed that only 1,295 students, or 86.3% of the study sample, had a poor lifestyle, thus confirming the initial hypothesis. Strengthening health education initiatives in schools is necessary to improve students' lifestyles.

It is therefore important to identify the factors that contribute to and reinforce the poor lifestyle observed among students. Awareness-raising activities should focus more on physical activity, hygiene, healthy eating habits, and limiting alcohol and tobacco consumption. Promoting these activities would have a positive impact on the lifestyle of this student population

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

[1] Alrub A, Hyassat D, Khader, Y, Bani-Mustafa R, Younes N, Ajlouni K. Factors Associated with Health-Related Quality of Life among Jordanian Patients with Diabetic Foot Ulcer. Journal of Diabetes. 2019; ID 4706720: 1-8. doi: 10.1155/ 2019/4706720

[2] Anne Claire N. Hygiène de vie et activité physique. Elsevier [En ligne]. 2021 [cité 02 avril 2023]. Disponible sur : https://www.elsevier.com/fr-fr/connect/psy/hygiene-de-vie-et-activite-physique

[3] AVISE. Santé : définition et éclairages. AVISE [En ligne]. 2023 [cité 02 avril 2023]. Disponible sur : https://www.avise.org/articles/sante-definition-et-eclairages

[4] Bourdeau-Lepage L et Kotosz B. Quels effets du grand confinement sur la santé et le bien-être des français. OpenEdition Journals. 2022; 13(2): 6-12. Doi: 10.4000/developpementdurable.21310

[5] Chassang M, Gautier A. Les maladies chroniques. CESE. 2019; 14: 8-12.

[6] Eduscol. L'hygiène et la santé dans les écoles primaires [En ligne]. Paris: CNDP; 2008 [Cité le 21-07-2018]. Disponible: https://eduscol.education.fr/sante

[7] Flenon JA, Mitchikpe CES, Hounhouigan DJ. Facteurs socioéconomiques et de mode de vie associés à l'obésité chez les enfants d'âge scolaire fréquentant les écoles primaires de Cotonou. Int J Biol Chen Sci. 2018; 12(1): 217-32. https://ajol.info/index.php/ijbcs

[8] Haute Autorité de Santé (HAS). Manuel d'évaluation de la qualité des établissements et services sociaux et médico-sociaux. Paris : HAS ; 2022.

[9] Holligan SD, Qian W, deGroh M, Jiang YMD, Leatherdale ST. Microfacteurs associés à la consommation d'alcool et à la consommation excessive d'alcool chez les jeunes dans l'étude COMPASS (2012-2013 à 2017-2018). Promotion de la santé et prévention des maladies chroniques au Canada. 2020; 40(3): 69-76. Doi: https://doi.org/10.24095/hpcd.40.3.01f

[10] Institut National de Santé Publique Québec (INSPQ). Les déterminés de la santé. INSPQ [En ligne]. 2023 [cité 02 avril 2023]. Disponible sur : https://mobile.inspq.qc.ca/exercer-la-responsabilité-populationnelle/determinants-sante

[11] Jang E, Kim J, Kim K, Lee Y, Chung W, Kim I, Sook-Hyang J. Factors associated with health-related quality of life in Korean patients with chronic hepatitis C infection using SF-36 and EQ-5D. Gut and Liver. 2018; 12(4): 440-448. doi: 10.5009/gnl17322

[12] Kimbally Kaky G, Etitiele F, Atipo-Ibara BI, Gombet TR, Ellenga BF. Impact de l'hypertension artérielle sévère dans l'insuffisance cardiaque aigue à Brazzaville (Congo). JL. 2011; 1(22): 98-9. Doi: 10.1684/mst.2011.0017.

[13] Le Glatin L, Hervy Q, Guillaume J, Traboulsie A. Analysis of the quality of life related to the health status of patients consulting for osteopathic care. Review of Osteopathy. 2017; 19(3): 5-10. Retrieved fromhttp://www.larevuedelosteopathie.com/?/ALes-numeros-de-la-revue/pqNumero-19/aAnalyse-de-la-qualite-de-vie-liee-a-l-etat-de-sante-de-patients-consultant-pour-des-soins-osteopathiques/

[14] Lemoine M, Richez C, Lazaro E, Truchetet ME, Schaeverbeke T. Impact du Covid-19 pour la prise en charge des patients atteints de maladies rhumatismales inflammatoires. Ncbi nlm nih gov. 2020; 87(3): 187. Doi: 10.1016/j.jbspin.2020.03.010.

[15] Maresca B. Mode de vie: de quoi parle-t-on? Peut-on le transformer? La Pensée écologique. 2017; (1): 233-51. Doi: 10.3917/lpe.pr1.0013

[16] Martinez-Lacoba R, Pardo-Garcia I, Amo-Saus E, Escribano-Sotos F. Socioeconomic, demographic and lifestyle-related factors associated with unhealty diet: a-cross- sectional study of university students. BMC Public Health. 2018; 18(1241): 2-10. Doi : 10.1186/s12889-018-6149-3.

[17] Organisation Mondiale de la Santé (OMS). Constitution WHO. OMS [En ligne]. 2023 [cité 02 avril 2023]. Disponible sur : https://www.who.int/fr/about/gouvernance/constitution

[18] Organisation Panaméricaine de la Santé (OPS) et Organisation Mondiale de la Santé (OMS). Stratégie et plan d'action sur la promotion de la santé. Dans le contexte des objectifs de développement durable 2019-2030. Genève : OPS ; 2022.

[19] Oubrayrie-Roussel N, Safont-Mottay C. Conduites à risques et dévalorisation de soi: Etude de la consommation de toxiques (tabac, alcool, drogue) chez les adolescents scolarisés. Psicologia, Saúde & Doenças. 2013; 2(1): 59-75.

[20] Programme des Nations Unies pour le Développement (PNUD). Temps incertains, vies bouleversées : façonner notre avenir dans un monde en mutation. New York : PNUD ; 2022.

[21] Salou Bachirou Z, Djossou P, Boni G, Zenontin F, Amoukpo H, Bedie V et al. Disponibilite et fonctionnalité des infrastructures d'hygiène et d'assainissement dans des écoles primaires publiques au Bénin. Environ Risque Santé. 2019; 18: 60-71. doi : 10.1684/ers.2018.1266

[22] Shankland R, Gayet C, Richeux N. Développer la santé mentale des étudiants. Paris : Elsevier Masson ; 2021.

[23] Tersier S. Effets bénéfiques de l'activité physique sur la qualité de vie liée à la santé et la corpulence : une approche épidémiologique et évaluative [Thèse mémoire]. Nancy 1: Université Henri Poincaré; 2018.

[24] Thompson K, Stockwell T, Leadbeater B, Homel J. Association among different measures of alcohol use across adolescence and emerging adulthood. Addict. 2014; 109(6): 894-903. Doi: 10.1111/add.12499

[25] Thompson K, Stockwell T, Leadbeater B, Homel J. Association among different measures of alcohol use across adolescence and emerging adulthood. Addict. 2014; 109(6): 894-903. Doi: 10.1111/add.12499

[26] Van Mechelen N. Introduction aux techniques de promotion de l'hygiène: Manuel de formation [En ligne]. Bukavu: Kidogos; 2013 [Cité le 17-08-2018]. Disponible: https://www.kidogos.org

[27] World Health Organization (WHO. Diet, nutrition and the prevention of chronic diseases. In: Report of a joint WHO/FAO Expert Consultation. 916. Geneva: WHO; 2003. http://apps.who.int/iris/bitstream/10665/42665/1/WHO_TRS_916.pdf