Journal of the Society for Human Ecologists in Nigeria (JSHE)
An Annual Publication of the Society for Human Ecologists in Nigeria (SHEN)
Vol. 7 No. 1, 2026 | pp. 148–156 | ISSN: 3026-9083 (Print)

DOI: https://doi.org/10.68064/jshe.2026.2lciyvt1

Assessment of Health-Related Lifestyle Practices among Undergraduates in Borgu Local Government Area, Niger State

Ifejika, L.I., Ifejika, P.I. and Ozioko, P.C., Omeje, J. E. and Dauda P.P

[1]Department of Home and Rural Economics, Federal College of Freshwater Fisheries Technology, New Bussa, Niger State, Nigeria
[2]Socio-Economics and Extension Services Department, National Institute for Freshwater Fisheries
[3]Departments of Home and Rural Economics, Federal College of Agriculture, Ishiagu, Ebonyi State, Nigeria
Correspondence: lilianifejika@gmail.com

Abstract
This study assessed the health-related lifestyle practices among undergraduates in Borgu Local government area. Good health can be achieved through maintaining of healthy lifestyles. Primary data was collected from one hundred and ninety-one respondents using proportionate random sampling techniques with the aid of a structure questionnaire. The data were analyzed using frequencies, percentages and mean scores. Findings revealed that the most agreed dietary lifestyles are eating swallow often with good soup ($\bar{x}$=3.05) followed by fried food ($\bar{x}$=2.87). Many agreed that they skip meal in the morning because of their academic tight schedule ($\bar{x}$=2.70), eating spaghetti and noodles is preferred to local dishes. ($\bar{x}$=2.59). There was high adoption of good hygiene practices ($\bar{x}$=3.69), washing of hand before eating/and after using toilet ($\bar{x}$=3.68) and washing under wears ($\bar{x}$=3.66). The result on the involvement of respondents in physical activities reveals that the respondents were active in sporting activities ($\bar{x}$=3.01), some preferred spending time sitting, read, playing games on computer or phone, spend time on social media chatting with friends ($\bar{x}$ =2.89). Most of the respondents disagreed on eight harmful behaviors including use of hard drugs, violent act, smoking, internet addiction and alcoholism. The study concludes that health related lifestyle of undergraduates directly contributes to unhealthy well-being and should be checked for better healthy living. Based on the outcome of feeding habits and sedentary lifestyles, there is need to initiate awareness campaign and training on healthy lifestyles by parents, caregivers and the experts in the field like home economics to enhance resilience to good health
Keywords: Health, Lifestyles, risky behavior, Hygiene Practices

Introduction
Lifestyle behaviors are major determinants of overall health and quality of life. Health-related lifestyles include daily practices such as balanced diet, physical activity, healthy sleep patterns, and social habits that collectively determine an individual's well-being. Leipold, Klier, Dapperger, & Schmidt, (2024) found that a healthy lifestyle is strongly associated with improved quality of life and psychological resilience, indicating that lifestyle assessment is essential in predicting long-term health outcomes. Assessing health-related lifestyles is a fundamental aspect of research because it helps to understand behaviors that influence present and future health outcomes. This plays a crucial role in strengthening health resilience, which refers to an individual's ability to adapt, recover, and maintain well-being in the face of stress, illness, or adversity. World Health Organization, (2023), views lifestyle as the pattern of behaviors and habits that individuals adopt in their daily lives, including dietary practices, physical activity, sleep patterns, substance use and social interactions.

Diet is the greatest factor in lifestyle and has a direct and positive relation with health. Olodu, Muslim, & Ojogbon,2024). Poor diet and its consequences like obesity is a common health problem in urban societies. Unhealthy lifestyle like using fast foods, which are most often unhealthy can lead to increasing problems like nutritional disorder and obesity. Addictions to illicit drugs are also considered as an unhealthy life style. Smoking and use of illicit substance may result to social and health problems such as cardiovascular disease and substance abuse. According to Onoh, Dairo, Balogun, and Fawole, (2023), boys are three times more likely to use tobacco than girls as a result of friendship associations. Azudialu, Nkem, Obi-Nwosu, and Ogunnaya, (2023) added that 43.8 million (12%) of adolescents aged 13 to 15 years use some form of tobacco. Adolescents in this age group in low- and middle-income countries have average tobacco use prevalence rates that range from 11% to 13%**.**

Anosike, Ogbu, Ugochukwu, Osefo, and Nwaji, (2024) pointed that the misuse of technology may result in unpleasant consequences, for example, use of computer and other devices for a long period of time, has effect on the pattern of sleep. Sleep disorders have several social, psychological, economical and healthy consequences such as mental and physical health problems *(*Eze,2024). Addiction to use of mobile phone is also related to depression and inactivity. People follow an unhealthy lifestyle encounter illness, disability and even death. Problems like metabolic diseases, joint and skeletal problems, cardio-vascular diseases, hypertension, overweight, violence are related to lifestyle and health especially among undergraduate students.

The undergraduate period represents a critical stage of transition from dependence to independence, during which students begin to make autonomous decisions about health and wellbeing. The perceived freedom associated with university life and the independence from parental guide is often associated with unhealthy lifestyle choices such as poor dietary habits, irregular sleep patterns, physical inactivity and increased sedentary behavior, **(**Olatona, Onabanjo, Ugbaja, Nnoaham, and Adeleka. 2018). Undergraduate university students seem to adopt poor feeding habits, including meal skipping and frequent consumption of energy-dense fast foods, which negatively affect their nutritional status. In Nigeria, the situation is further compounded by socio-economic and environmental factors such as academic stress, financial limitations, peer influence, and limited access to health-promoting facilities. Ezepue, Ezepue, Okafor and Chukwujindu, (2024) found that lifestyle-related factors, such as risky lifestyle behaviors, poor eating habits, poor living conditions and sleep difficulties, significantly influence general health and wellbeing of undergraduates in Nigeria. These reveals that unhealthy lifestyle practices among students may have adverse consequences for their health and wellbeing.

Students in tertiary institutions make up a meaningful proportion of the young population of every society. The behaviors and lifestyles learned or adopted during this period will influence health of an individual both in the present and future. World Health Organization (2023) found that 70% of premature deaths among adults are due to behaviors such as smoking, illicit drug use and reckless lifestyles. Despite the recognition of these unhealthy lifestyle patterns, there appears to be insufficient empirical data on the comprehensive assessment of lifestyle behaviors among undergraduates within specific institutional contexts. Local evidence is needed to identify prevailing health practices in Borgu that will inform appropriate health-promotion programs. Without such data, it becomes difficult to design effective interventions, policies, and educational programs aimed at promoting healthy living among students. Therefore, early assessment enables preventive actions before health problems become severe or widespread. This study seeks to assess the health-related lifestyles of undergraduate students in Borgu local government area, Niger state, Nigeria.

Objectives of the Study

The specific objectives of the study were to.

1. Ascertain the dietary lifestyles of undergraduates in Borgu Local Government Area, Niger State.
2. Identify the hygiene practices of the students in Borgu Local Government Area, Niger State.
3. Ascertain the physical activities of the students in Borgu Local Government Area, Niger State.
4. Assess the involvement of the students in risky behavior in Borgu Local Government Area, Niger State.

Methodology

Research Design

The study adopted a descriptive survey research design. This design is adopted for social science research were data is collected from a target group seeking for the opinion, attitudes and perceptions about certain phenomenon. The result of such research is generalized to students of other institutions. The study was carried out in Borgu Local Government council of Niger state. It is one of the twenty-five (25) local government areas that make up Niger State in North Central Geo-political Zone of Nigeria.

Population for the Study

The population of the study is 366 HND 2 students in Federal college of freshwater fisheries technology and Federal college of wildlife management in Borgu Local government area Niger state.

Sample for the Study

The sample size is one hundred and ninety-one (191). Proportionate random sampling techniques were adopted in selecting students from the departments of Animal Health and Production, Leisure and Tourism Management, Wildlife and ecotourism, Agricultural Extension and management and Fisheries Technology making a total of 191 students from the two colleges.

Instrument for Data Collection

A structured questionnaire titled “Health related lifestyle Questionnaire (HRLQ) was used for data collection. The survey measured diet, hygiene practices, physical activities and involvement of the students in risky behavior. The responses to the items were based on 4points scale of preference weighted as strongly agree (SA-4), Agree (A-3), Disagree (D-2) and strongly disagree (SD-1). The instrument was subjected to face validation by (3) experts, (2) from the department of Home and Rural economics, and (1) from Agribusiness management department, Federal College of Freshwater Fisheries Technology New- Bussa Niger State. Each expert was given a copy of the questionnaire to edit appropriately by suggesting items relevant to the study. There criticisms and their corrections were affected accordingly and incorporated in the final draft of the questionnaires that were administered to the respondents

Data Analysis Techniques

One hundred and ninety- one (191) questionnaires were administered to the respondents with the help of two research assistants. Out of the one hundred and ninety-one (191) questionnaires administered, one hundred and eighty-seven (187) were retrieved while four (4) were discarded due to irregularities. The 187 retrieved questionnaires were coded and analyzed using descriptive statistical tools of frequency, mean, standard deviation and percentage. Any mean score equal or greater than 2.5 was criteria point for agreement and mean score less than 2.5 was criteria point for disagreement.

Results

Table 1 show the dietary lifestyles of the respondents in the study area, majority of the respondents agreed on the six out of the nine indicators of dietary lifestyle with eating swallow often having the highest mean ($\overline{x}$= 3.05) followed by prefer eating fried food than boiled food ($\overline{x}$=2.87). Many agreed that they skip meal in the morning because of their academic tight schedule ($\overline{x}$=2.70) and also prefer eating spaghetti and noodles for instance indomie to local dishes. ($\overline{x}$=2.59).

Table 1: Responses on Dietary Lifestyle of Respondents

S/No	ITEMS	$\bar{X}$	STD	Remark
1	Eating swallow often as lunch	3.05	0.87	Agreed
2	Taking tea and bread often as breakfast	2.78	0.92	Agreed
3	I like taking beans, akara & pap	2.85	0.93	Agreed
4	Prefer eating fried food such as fried plantain, yam, potatoes than boiled food	2.87	0.85	Agreed
5	I prefer eating noodles, spaghetti/ indomie to local dishes (tuwo/ soup, beans)	2.59	1.06	Agreed
6	Skipping meal especially in the morning because of my academic tight schedule	2.70	1.04	Agreed
7	Skipping meal because I want to look good	2.35	0.99	Disagreed
8	Skip meal because of lack of money	2.25	1.10	Disagreed
9	Prefer taking snacks/drinks (Doughnut, eggroll, Fanta, coke)	2.32	1.10	Disagreed

Table 2 shows the hygiene practices of respondents in the studied area, majority of the respondents agreed on all the eleven indicators of hygiene practices with always keeping my hair tidy and neat having the highest mean ($\bar{x}$=3.69), followed by washing of hand before eating/ after using toilet ($\bar{x}$=3.68), always wash under wears ($\bar{x}$=3.66).

Table 2: Response on the Hygiene Practices of Respondents

S/No	ITEMS	($\bar{X}$)	STD
1	Washing of hand before eating	3.68	0.63
2	Washing of hand after using toilet	3.68	0.57
3	Bathing at least twice in a day	3.44	0.74
4	Always washing my under wears	3.66	0.63
5	Use of clean plate and cutleries	3.63	0.66
6	Drinking clean water	3.66	0.62
7	Cooking food with clean water	3.64	0.62
8	Wearing clean cloth	3.67	0.59
9	Keep my room and surrounding clean always	3.51	0.69
10	Keeping my hair tidy and neat always	3.69	0.62
11	Cutting my finger nails and keeping it clean always	3.54	0.62

Table 3 shows the involvement of respondents in physical activities. Majority of the respondents agreed they are active in sporting activities ($\bar{x}$=3.01), however some preferred spending time

sitting/reading, spending time on social media, playing computer games and engaging in sporting activities, ($\bar{x}$ = 3.01).

Table 3: Responses on Involvement of Respondents in Physical Activities

S/No	ITEMS	($\bar{X}$)	STD	Remark
1	I am active in sporting activities	3.01	0.81	Agreed
2	I don't engage in physical activities such as trekking, riding bicycle, jogging, dancing.	2.37	0.94	Disagreed
3	I prefer staying in a place playing games on computer or phone	2.83	0.91	Agreed
4	In the day time, I spent time on social networks chatting with my friends with phone	2.63	1.01	Agreed
5	I always spend time on social media chatting than sporting activities	2.80	1.03	Agreed
6	I spend time sitting in one place to read than engaging in sporting activities	2.89	0.94	Agreed
7	I spend more time resting in the day than engaging in physical activities	2.61	0.97	Agreed

Table 4 shows the engagement of respondents in risky behavior. Majority of the respondents disagreed on the eight statements of risky behaviors

Table 4: Responses on Risky Behavior of the Respondents

S/No	ITEMS	($\bar{X}$)	STD
1	Alcoholism	1.53	0.94
2	Smoking	1.36	0.72
4	Substance abuse (cocaine, Fentanyl, Heroine, tramadol, codeine)	1.25	0.55
5	Negative peer group associations	1.57	0.86
6	Addictions	1.36	0.69
7	Social media addiction	1.98	1.03
8	Fighting / violence	1.34	0.65

Discussion

Table 1 revealed that respondents reported taking swallow often, Beans and pap, many admitted to skipping breakfast occasionally due to tight academic schedules**,** consuming fried foods, and showing **a** preference for spaghetti over local dishes**.** These findings reflect a mixed pattern of both healthy and unhealthy dietary behaviors among undergraduate students. The practice of skipping breakfast due to academic workload is consistent with findings by Anowai, Chukwuone, and Ogbonnaya (2022), who reported that a significant proportion of undergraduate students skipped breakfast mainly because of lack of time and early morning lectures. Ogundele, Aleru, Bodunde, and Gbero. (2023) revealed that about 36% of students skipped breakfast regularly, reinforcing the widespread nature of this behavior. The preference for fried foods aligns with findings from other studies which show that undergraduate students are more inclined toward energy-dense and convenience foods due to taste, affordability, and accessibility. Ogundele et al. (2023) identified

taste, affordability, and availability as major determinant of food choices among students, which often lead to increased consumption of unhealthy foods such as fried foods.

The preference for noodles and other convenience foods over traditional/local dishes observed in this study is consistent with findings by Mukoru, Adebayo, Oyabambi, Kanmodi, Ojo, Oiwoh,, Agbogidi, Williams, Ibiyo, Samuel, Ogunsuji, and Ogunjimi, (2023), reported substantial consumption of fast foods among young people in tertiary institutions in southwestern Nigeria. This shift is often influenced by factors such as peer influence, ease of preparation, and exposure to modern food culture. According to Ogundele et. al. (2023), sensory appeal and convenience significantly influence students' food preferences, often at the expense of nutritional quality.

Table 2 indicate that majority of respondents engage in good personal hygiene practices such as keeping hair tidy, washing hands before and after eating, washing hands after using the toilet, cleaning underwear regularly, maintaining clean room and surroundings, wearing clean clothes, and cutting fingernails. These findings suggest a generally high level of awareness and practice of personal hygiene among the undergraduate students studied. The high prevalence of hand washing before and after eating and after toilet use observed is consistent with global evidence by UNICEF (2021). Word Health Organization (2022) emphasizes that proper hand hygiene is one of the most effective ways to prevent infectious diseases. Similarly, UNICEF (2023) reports that increased awareness campaigns, especially after the COVID-19 pandemic, significantly improve hand wash practices among young people, including students. Gebreeyessus and Asfaw (2018) reported that many tertiary students in Ethiopia practiced important personal hygiene behaviors, including hand washing before meals and after defecation and regular nail trimming. This aligns with the work of Vivas, Gelaye, Aboset, Kumie, Berhane, Williams. (2019), who found that personal grooming practices are commonly adopted among students due to social acceptance and personal comfort. The practice of washing underwear and maintaining clean living environments is supported by Biran, White, Awe, Greenland, Akabike, Chuktu, Aunger, Curtis, Schmidt, and Van der Voorden, (2022) who highlighted that environmental hygiene, including clean surroundings and clothing, plays a significant role in preventing communicable diseases and promoting overall wellbeing. A Nigerian-based study by Ndinwa (2024) reported that undergraduate students in tertiary institutions in Delta State had relatively high awareness of environmental sanitation, although inadequate sanitation infrastructure, overcrowding, and poorly maintained toilet and bathroom facilities posed challenges to maintaining optimal sanitary conditions.

Table 3 revealed that majority of respondents are active in sporting activities, routine physical activities such as trekking and cycling, while social behavior like playing computer games, chatting, and spending long hours on social media indicates a sedentary lifestyle and its' consequences. The involvement in sporting activities aligns with findings by Keating, Guan, Piñero, and Bridges, (2025), observed that many undergraduates participate in organized sports or recreational activities, especially when such opportunities are available on campus. This does not necessarily translate into overall active lifestyles. The low engagement in everyday physical activities such as trekking/walking and cycling is consistent with Pengpid and Peltzer (2023), report that a large proportion of students globally do not meet recommended levels of daily physical activity. Their study highlighted that students often avoid moderate physical activities like walking, despite participating occasionally in sports. The preference for sedentary activities such as computer games, chatting, and social media observed agrees with **G**uthold, Stevens, Riley, and Bull, (2020), that physical inactivity among young adults is increasing globally due to the rise in screen-based activities. Sodipo, Afolaranmi, Agbo, Envuladu, Lar, Udofia, and Zoakah. (2024) found that 94.2% of adolescents had a sedentary lifestyle**,** assessed partly through screen time, academic demands, lack of motivation, and increased use of digital devices. This supports the present finding that students may be selectively active rather than consistently active. The preference for sedentary activities over physical exercise is a cause for concern, as it has been linked to increased risks of obesity, cardiovascular diseases, and poor mental health. The World Health Organization (2023)

recommends that young adults engage in at least 150 minutes of moderate-intensity physical activity per week, a guideline that many students fail to meet due to sedentary habits.

Table 4 revealed general positive health behavior and responsible lifestyle among the undergraduate students studied. This finding contrasts with several studies conducted in other settings, where substance use among undergraduates is reported to be relatively high. For instance, Ekekezie, Daramola, and Olatona (2024) found that although many students had good knowledge and attitudes toward avoiding substances, about 36.7% still engaged in substance use, influenced largely by peer pressure. This indicates that awareness alone does not always translate into healthy practices. Anyanwu, Nnagha, Ogar and Hemen, (2026) revealed that alcohol remained the most commonly used substance (over 70%) among undergraduates, with many students using it to cope with stress and academic pressure. This highlights that substance use is still prevalent in many tertiary institutions, making the current finding of low involvement particularly significant.

Conclusion and Recommendations

The study concludes that health related lifestyle of undergraduates directly contributes to unhealthy well-being and should be checked for better healthy living.

Based on the result, the following recommendations are made.

1. Parent should provide continuous health education and reinforcement to all members of the household on the health risk associated with unhealthy lifestyle practices
2. Lecturers and Care givers, should encourage undergraduates to adopt healthier dietary practices by reducing frequent consumption of fried foods and instant meals particularly in the morning.
3. Home Economists and other family related professionals especially those in extension, should model appropriate lifestyle for individuals. This can be done through adopting a village prototype for exemplary development.

Reference

Anosike, C., Ogbu, M.-E. A., Ugochukwu, E. J., Osefo, R. C., & Nwaji, J. C. (2024). Effect of smartphone addiction on mental health and sleep quality among undergraduate pharmacy students in a Nigerian public university. *Journal of Mental Health Training, Education and Practice, 19*(4), 201–212. https://doi.org/10.1108/JMHTEP-12-2023-0106.

Anowai, C. C., Chukwuone, C. A., & Ogbonnaya, E. K. (2022). Breakfast meal skipping practices of undergraduate students of University of Nigeria, Nsukka. *Journal for Family & Society Research, 1*(1), 71–82. https://doi.org/10.66043/jfsr.v1i1.9

Anyanwu, C. M., Nnagha, E. M., Ogar, W. A., & Hemen, S. L. (2026). Prevalence and patterns of psychoactive substance use among undergraduates.

Azudialu, B., Nkem, B., Obi-Nwosu, A., & Ogunnaya, F. U. (2023**).** Current prevalence rate of cigarette smoking among adult patients at a tertiary hospital in South East Nigeria. *Asian Journal of Research in Nursing and Health, 6*(1), 406–410.

Biran, A., White, S., Awe, B., Greenland, K., Akabike, K., Chuktu, N., Aunger, R., Curtis, V., Schmidt, W., & Van der Voorden, C. (2022). A cluster-randomized trial to evaluate an intervention to promote handwashing in rural Nigeria. *International Journal of Environmental Health Research, 32*(3), 579–594.

Ekekezie, O. O., Daramola, M. K., & Olatona, F. A. (2024). Substance use among undergraduate students at the University of Lagos. *Journal of Community Medicine and Primary Health Care, 36*(3), 47–63.

Eze, C. (2024). Sleep health among medical students in Abakaliki Nigeria: A descriptive study. *Sleep Medicine: X, 7*, 100103. https://doi.org/10.1016/j.sleepx.2024.100103

Ezepue, E. I., Ezepue, C. O., Okafor, N. R., & Chukwujindu, G. A. (2024**).** *Modeling the effects of health-related habits and lifestyle on the general health of university students.* **Medicine, 103**(41), e39691. https://doi.org/10.1097/MD.0000000000039691

Gebreeyessus, G. D., & Asfaw, Z. G. (2018). Knowledge, attitude, and practice on hygiene and morbidity status among tertiary students: The case of Kotebe Metropolitan University, Addis Ababa, Ethiopia. *Journal of Environmental and Public Health, 2018*, 2094621. https://doi.org/10.1155/2018/2094621

Guthold, R., Stevens, G. A., Riley, L. M., & Bull, F. C. (2020**).** Global trends in insufficient physical activity among adolescents: A pooled analysis of 298 population-based surveys with 1·6 million participants. *The Lancet Child & Adolescent Health, 4*(1), 23–35. https://doi.org/10.1016/S2352-4642(19)30323-2

Leipold, B., Klier, K., Dapperger, E., & Schmidt, A. (2024). Physical activity and nutrition in relation to resilience: *A cross-sectional study. Scientific Reports, 14*, 2272. https://doi.org/10.1038/s41598-024-52753-6

Mukoru, I. L., Adebayo, O., Oyabambi, O. A., Kanmodi, K., Ojo, O. F., Oiwoh, S. O., Agbogidi, J. M., Williams, A., Ibiyo, M. J., Samuel, A., Ogunsuji, O., & Ogunjimi, L. (2023). Fast food consumption habits among young people in south western Nigeria. *Research Journal of Health Sciences, 11*(2), 77–87**.** https://doi.org/10.4314/rejhs.v11i2.1**.**

Ndinwa, G. C. C. (2024**).** Perception, level of awareness and involvement of students from tertiary institutions in environmental sanitation. *Communication in Physical Sciences, **11***(4), 1308–1327.

Olatona, F. A., Onabanjo, O. O., Ugbaja, R. N., Nnoaham, K. E.,and Adeleka, .D. A. (2018). *Dietary habits and metabolic risk factors for non-communicable diseases in a university undergraduate population. Journal of Health, Population and Nutrition, 37*, 21.

Ogundele, O. M., Aleru, E. O., Bodunde, I. O., and Gbero, O. E. (2023). Drivers of food choice and meal patterns among undergraduate students in Nigeria. *World Public Health Nutrition Journal, 6*(2), 112–120.

Olodu, M. D., Muslim, I. O., & Ojogbon, O. (2024). Dietary behavior, knowledge and perception of undergraduate students towards obesity in a Nigerian university. *Nigerian Journal of Nutritional Sciences, 44*(1), 232–243. https://doi.org/10.4314/njns.v44i1.

Onoh, I., Dairo, M. D., Balogun, M. S., & Fawole, O. (2023). Prevalence and predictors of tobacco use among adolescents in Ibadan, Nigeria. *Preventing Chronic Disease, 20*, E40. https://doi.org/10.5888/pcd20.220234

Oyeyemi, A. L., Muhammed, S., Oyeyemi, A. Y., & Adegoke, B. O. A. (2017). *Patterns of Objectively assessed physical activity and sedentary time: Are Nigerian health professional students complying with public health guidelines?* PLOS ONE, 12(12), e0190124.

Pengpid, S., & Peltzer, K. (2023). Health risk behaviours among university students: A global perspective. *International Journal of Environmental Research and Public Health, 20*(5), 3789.

Sodipo, O. Y., Afolaranmi, T. O., Agbo, H. A., Envuladu, E. A., Lar, L. A., Udofia, E. A., and Zoakah, A.I. (2024). *Co-occurrence of non-communicable disease risk factors among adolescents in Jos, Nigeria.* Primary Health Care Research & Development, 16(1), e1–e8

UNICEF. (2023). *Hand hygiene and sanitation report*. UNICEF.

Vivas A, Gelaye B, Aboset N, Kumie A, Berhane Y, Williams MA. (2019**)** Knowledge, attitudes and practices (KAP) of hygiene among school children in Angolela, Ethiopia. *Journal of Preventive Medicine and Hygiene*. 2010;51(2):73–79.

World Health Organization. (2022). *WHO guidelines on hand hygiene in community settings*. WHO.

World Health Organization. (2023). *Guidelines on physical activity and sedentary behavior*. WHO.

World Health Organization (2023). *Non-communicable diseases progress monitor 2023*. WHO.

United Nations Children's Fund (UNICEF). (2021). *State of the world's hand hygiene: A global call to action to make hand hygiene a priority in policy and practice*. World Health Organization.