

Breakfast Meal Skipping Practices of Undergraduate Students of University of Nigeria, Nsukka

Anowai, C. C.¹, Chukwuone, C. A.¹. & *Ogbonnaya, E. K.¹.

¹Department of Home Economics and Hospitality Management Education
University of Nigeria, Nsukka, Enugu State

*Corresponding Author: ezeda.ogbonnaya@unn.edu.ng

Abstract

The study examined breakfast meal skipping practices of undergraduate students of University of Nigeria, Nsukka. Specifically, the study ascertained the rate of skipping breakfast meals by the students, their causes and strategies for improving the meal consumption practices among them. The study used descriptive survey research design. Population for the study was 3,550 students from two Faculties of Education in the university. Two hundred randomly selected students formed the study sample. A forty-two item questionnaire was used to generate data for the study. Data were analyzed using percentage and mean with decision benchmarks at 50% and 2.50 scores respectively. Results showed that many students (52%) skipped breakfast meals seven times in a week. Reasons for skipping breakfast meals were: lack of time (\bar{x} =3.42), food spoilage (\bar{x} =3.33) and early morning lectures (\bar{x} =3.28) among others. Fourteen strategies were identified in improving students' breakfast meal consumption practices. They included: encouraging students to take up paid part-time jobs to financially support themselves (\bar{x} =3.89), providing students with enough up keep money (\bar{x} =3.54); equipping the students with skills of food budgeting (\bar{x} =3.16) and adhering to their food budget (\bar{x} =3.21). Others included regular supply of electricity to students' hostel (\bar{x} =3.25) and provision of cafeteria in each of the students' hostel (\bar{x} =3.02). It was recommended that very early morning and impromptu lectures should be stopped among others. Further research will be needed to examine student's socio-demographic variables in relation to their breakfast meal skipping practices and academic performance.

Keywords: Undergraduates, Food, Breakfast, Meals, Skipping,

Introduction

Food is a life necessity which can be in solid or liquid form. Food when eaten and digested provides the body with nutrients for; growth, repair and regulation of body processes. Anyakoha (2015) posits that food substances are categorized as; water, carbohydrate, protein, fats and oils, minerals and

vitamins. The author further explains that when foods are eaten and assimilated by the body they become sources of energy and antibodies that protect the body from disease causing infections and ill-healths. Foods are often prepared and served as meals at different time periods as breakfast, lunch, supper or dinner in a day.

Breakfast meals are eaten in the morning while lunch and supper otherwise called dinner meals are eaten in middays and in the evenings respectively.

Breakfast is the first and most important meal of the day. It is consumed to break the long fast after long night sleep (Badrasawi et al., 2021). The authors maintain that breakfast should be consumed within 2 to 3 hours of waking up and before 10 a.m. Consumption of breakfast meals plays an important role in meeting the people's daily macro and micro nutrients requirements (Murphy, 2017) including that of undergraduate students. As the most important meal of the day, Mohiuddin (2019) posits that the breakfast meal decks 20% to 35% of peoples' daily energy needs. Earlier, Nicklas (2004), explains that for most people breakfast meal supplies one quarter of their essential micronutrients such as iron, folic acid, zinc, calcium, vitamins A and B. The nutrients according to Mohiuddin (2019) are needed in kick starting daily body metabolism especially among undergraduate students whose rapid physiological changes, active lifestyle and academic pursuit demand adequate consumption of three square meals to stay healthy and concentrate in their studies.

Undergraduate students are people pursuing a first degree course of study in the university after secondary school level education. According to Ibeanu et al. (2012) they are people between 19 to 30 years of age and by implication are young active adults, who are in need of large quantities of quality meals (Nzeagwu & Akagu, 2011). This is to say that undergraduate students should

have a healthy eating habit that is devoid of skipping meals in order to stay healthy and succeed in their academic pursuits. Unfortunately, early adulthood which most of the undergraduate students find themselves in is the stage of freedom from parental control with associated challenges that could include skipping meals.

Skipping meals means missing or not eating all the three meals of breakfast, lunch and dinner, or any two or one of them in a day. Skipping meals is a normalcy for most young adults according to Nzeagwu and Akagu (2011). Supporting this view, Mohiuddin (2019) states that skipping meals is highest among the transitory young adults while Sakamaki et al. (2005) reported that breakfast meal is the most frequently skipped when compared with lunch and supper meals. Under researched however, is the breakfast meal skipping practices of undergraduate students of University of Nigeria, Nsukka which informed this research with a view to improving their breakfast meal consumption for healthiness.

Adequate breakfast meal consumption is an aspect of healthy lifestyle and may be associated with positive developmental outcomes including healthy lifestyle among pupils and students in schools. Such positive outcomes according to Adolphus et al. (2019) include; better school attendance and performance, improved social and mental activities, good physical fitness and healthier weight among others. In addition, Adolphus et al. (2013) found a significant relationship between frequency of breakfast consumption and academic performance and better test

scores among pupils and students that eat breakfasts than those that skipped the meal. Benefits inherent in consumption of breakfast meals underline efforts that target breakfast meal consumption by students which invariably would eliminate causes of skipping the meal among others.

Reasons for skipping breakfast meals could be as varied as individual students' socio-demographic variables, lifestyle and food habits. Feye et al. (2021) reported that some students skip meals due to lack of time, appetite, and inability to cook, while Eldisoky (2003) and Danquah et al. (2010) had earlier noted that fasting in the context of religious observances and not being hungry, weight reduction measure, late supper consumption and laziness as reasons for skipping breakfast meals.

Skipping breakfast meals has been associated with students' unhealthy conditions and poor school learning outcomes. Accordingly, Murphy (2017) found that habitual students' breakfast meal skippers were two thirds deficient in their recommended dietary allowance (RDA), including being less physiologically, socially and mentally ready for serious academic studies. Rampersaud, (2005) equally noted poor academic performance and subsequent lack of employable skills among undergraduate breakfast meal skippers.

The ever growing population of unskilled and unemployable graduates from Nigerian universities is a common knowledge (Olukanni et al., 2014) and is not unconnected with rising wave of insecurity evident in high rate of; prostitution, armed robbery, internet fraud and kidnapping which Aderoju, et al. (2017) stated are challenging Nigeria

today. Dealing with the hydra headed problems beckons for empirical evidence that informed this research work given dearth of information on breakfast meal skipping practices of students of University of Nigeria for policy decisions.

In this circumstance, a strategy that will metamorphose into more undergraduate students of the university improving their breakfast meal consumption would contribute in the production of more knowledgeable and skilled university graduates, who subsequently would contribute effectively to national growth. This was the bottom line outcome sought to be achieved through contributions of this research work.

Purpose of the study

The general purpose of the study was to investigate breakfast meal skipping practices of undergraduate students of University of Nigeria, Nsukka. Specifically, the study investigated;

1. the rate of skipping breakfast meals in a week among undergraduate students of University of Nigeria, Nsukka;
2. reasons for skipping breakfast meals among the undergraduate students and
3. strategies for improving breakfast meals consumption among the undergraduate students.

Methodology

Design of the Study: The study adopted descriptive survey research design.

Area of study: The Study was carried out in University of Nigeria, Nsukka. Universities are for training of high level manpower throughout the world. University of Nigeria Nsukka (UNN) is

among the first generation Federal Universities in Nigeria. The university took off in 1960 at the end of the colonial era. The university operates 102 academic departments across 17 faculties that offer 82 undergraduate programmes and 211 postgraduate programmes for a total student population of over 36,000. The university has four campuses: Nsukka, Enugu campus (UNEC); University of Nigeria Teaching Hospital (UNTH) in Ituku-Ozalla, and University of Nigeria Aba campus (UNAC).

Population of the study: The population of the study comprised all the 3,550 registered undergraduate students in Faculties of Education (3,000) and Vocational and Technical Education (550) of the University in 2021. The Nsukka campus houses eleven faculties that include Faculties of Education and Vocational Technical Education. The university's total undergraduate population was twenty-seven thousand and nine hundred and seventeen students (27,917) as at 2021 of which twelve thousand, five hundred and ninety-three were males (12,593) while fifteen thousand three hundred and twenty-four (15,324) were female students. Faculties of Education and Vocational and Technical Educations are producers of educators who facilitate teaching and learning at secondary level of education, Colleges of Education, Faculties of Education and Vocational and Technical Educations at tertiary level of education. As educators they make fundamental contributions in the motivation of learning processes as well as form bridges between individual students, their families and society at large. This explains why student

educators from the two faculties were used for the study.

Sample: A proportionate sampling technique was used in selection of the study sample. Out of the total number of 3,000 in the Faculty of Education and 550 from Faculty of Vocational and Technical Educations, a proportionate sample of 5.6% of each was randomly selected out of which gave 31 and 169 respectively that constituted the study sample.

Instrument for Data Collection: A structured forty-two items (42) questionnaire was used for data collection. The questionnaire consisted of three sections made up of 7, 21 and 14 item questions that answered research questions 1 to 3 respectively. A four-point rating scale of; Strongly agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD) with values of 4,3,2,1 provided responses in each of the sections.

Validation and reliability test of the instrument: The questionnaire was face validated by three experts from the Department of Home Economics and Hospitality Management Education in University of Nigeria, Nsukka. The experts' corrections were reflected in the development of the final copy used for the study. The questionnaire was administered to twenty-five students who were not part of the study. The students were randomly selected from University of Nigeria, Nsukka. The internal consistency reliability of the instrument was determined using Cronbach Alpha procedure which recorded the alpha coefficient of 0.85, indicating high internal consistency of the questionnaire items.

Ethical Approval and informed consent: The academic boards of both Faculties of Education and Vocational and Technical Educations approved of the study after review. A written informed consent was obtained from all the respondents before the data collection. All students were informed that their participation was not compulsory and that the data would be used only for research purposes.

Method of data collection: An invitation letter was given to each respondent. Two hundred copies of the questionnaire were distributed by hand to individual respondents and all were retrieved back after their completion. They were given sufficient time to read the questionnaire before responding to it. The 200 completed copies of the questionnaire were collected immediately after they were filled giving a 100% return.

Data Analysis and Statistical Analysis: Data were analyzed with Statistical Package of Social Sciences (SPSS) version 20, using frequencies, percentages, means and standard deviations. The benchmarks for decision were 50 % and 2.50 mean scores. Percentage and mean scores of items ≥ 50 and ≥ 2.50 were accepted as 'agreed' respectively while percentage and mean scores < 50 and < 2.50 were taken as 'rejected respectively.'

Results

Table 1 shows frequency and percentage responses of the respondents on the rate at which they skip their breakfast meals in a week. The result indicates that more than half (52%) of the undergraduate students skipped their breakfast meals seven times in a week. Ten percent skipped once a week, and 8.5% skipped twice and thrice a week.

Table 1: Frequency and percentage responses on skipping breakfast meal practices by the respondents

How often do you skip breakfast?	Frequency	Percentage (%)
Not at all	0	0
Once in a week	20	10
Twice in a week	17	8.5
Thrice in a week	17	8.5
Four times in a week	16	8
Five times in a week	12	6
Six times in a week	14	7
Seven times in a week	104	52
Total	200	100

In Table 2, the data show the mean and standard deviation responses of undergraduate students on reasons for skipping their breakfast meals. The implication is that skipping of breakfast meals by students are as a result of: time constraints ($\bar{x} = 3.42$), spoilt meals ($\bar{x} = 3.33$) early morning lectures ($\bar{x} = 3.28$)

and impromptu early morning lectures ($\bar{x} = 3.15$) that holds before 8.a.m., expensive private cafeteria meal services ($\bar{x} = 3.22$) which are not within easy reach ($\bar{x} = 2.54$), unavailability of wished breakfast meals in food vendors' offers ($\bar{x} = 2.95$), observance of religious practices ($\bar{x} = 2.68$), insufficient pocket

money (\bar{x} =2.53) which often is delayed in accessing (\bar{x} =2.55), lack of cooking fuels (\bar{x} =2.65), acquired family food habit (\bar{x} =2.64) and lack of planning breakfast meals in advance (\bar{x} =2.66) - all

with a grand mean of 2.89 and standard deviation 1.04. Others are not reasons for skipping breakfast meal by the students.

Table 2: Mean and standard deviation responses on reasons for skipping breakfast meals among the respondents.

Reasons for Skipping Breakfast Meals include;	Mean	Standard Deviation	Remarks
Lack of time to prepare the meal	3.42	0.70	Strongly Agreed
Spoilage of planned breakfast meal.	3.33	1.08	Strongly Agreed
Having early morning lectures before 8 a.m.	3.28	0.98	Strongly Agreed
Expensive private cafeterias service	3.22	0.90	Strongly Agreed
Impromptu early morning lectures	3.15	0.80	Strongly Agreed
Unavailability of wished meals in food vendors' offers	2.95	0.90	Strongly Agreed
Observance of religious practices (e. g. fasting).	2.68	1.10	Agreed
Lack of cooking fuel (e. g. electricity, gas, kerosene)	2.65	1.06	Agreed
Exhibition of acquired family food habit	2.64	1.10	Agreed
Not within easy reach of cafeteria	2.54	0.97	Agreed
Insufficient pocket money.	2.53	1.01	Agreed
Delay in accessing my pocket money	2.55	1.85	Agreed
Not planning breakfast meals in advance	2.66	1.11	Agreed
Grand Mean of Accepted Reasons	2.89	1.04	Agreed
Sickness.	2.47	1.09	Disagreed
Having late night meal	2.41	1.01	Disagreed
Lack of appetite.	2.40	1.03	Disagreed
Laziness to cook	2.34	1.01	Disagreed
Laziness to wash up utensils.	2.33	1.12	Disagreed
Desire to lose weight	2.33	1.10	Disagreed
Forfeiting my breakfast meals for others	2.06	1.06	Disagreed
Food vendors not being available for my breakfast meal	1.67	0.89	Strongly Disagreed
Grand Mean of Not Accepted Reasons	2.25	1.04	Disagreed

Table 3 shows the mean and standard deviation responses of undergraduate students on strategies for improving their breakfast meal consumption practices in University of Nigeria, Nsukka. All the 14 items have mean ratings above 2.50 meaning that they are all strategies which when adopted can improve undergraduate students' breakfast meal consumption practices. What it translates to is that the students

should; have food budget (\bar{x} = 3.16), which should be followed judiciously (\bar{x} = 3.21), return to university with food stuff from their homes (\bar{x} = 3.06), and plan meal ahead (\bar{x} = 3.31), develop self-menu that contains different classes of food (\bar{x} = 3.10), and eat adequate diet (\bar{x} = 3.20). Again, the table shows that relevant authorities should ensure that; the university's academic time plan is devoid of very early morning lectures

that starts before 8 a.m. ($\bar{x} = 3.26$), supply of electricity in students' hostels is regular ($\bar{x} = 3.25$), subsidized quality meals are provided in university's refectories ($\bar{x} = 4.00$) and that Nigerian dishes are also served in such refectories at meal times ($\bar{x} = 3.02$), cafeterias are located within easy reach of students ($\bar{x} = 3.76$), each hostel is provided with

cafeteria ($\bar{x} = 3.02$). Finally that parents should provide their wards with adequate pocket money ($\bar{x} = 3.04$), while students should be oriented towards engaging in part-time jobs in financially supporting themselves ($\bar{x} = 3.89$). The grand mean and standard deviation of all the accepted strategies is 3.14 and 0.89 respectively.

Table 3: Mean and standard deviation responses on strategies for improving breakfast meal consumption practices of the respondents

Ways of improving students' breakfast meal consumption practices include that;	Mean	Standard Deviation	Remarks
students should be Oriented towards engagement in part-time jobs in financially complimenting their supports	3.89	0.88	Strongly Agreed
Students should have personal planned food for feeding.	3.16	0.95	Agreed
Students should adhere to their planned food budget	3.21	0.93	Agreed
Students should return to the university with food stuff from home.	3.06	0.93	Agreed
Students should avoid eating monotonous breakfast meals	3.31	0.82	Agreed
Students should develop self-menu that contains all the classes of food.	3.10	0.87	Agreed
Students should be given orientation on ways and means of achieving adequate nutrition in university	3.20	0.64	Agreed
University academic time should be devoid of morning lectures earlier than 8a.m	3.26	.091	Agreed
Relevant authorities should ensure constant electricity supply in students' hostels.	3.25	0.98	Agreed
The university in collaboration with relevant authorities should provide refectories with subsidized quality foods	4.00	0.00	Strongly Agreed
Cafeterias should be located within easy reach of students	3.76	.821	Strongly Agreed
Each hostel should have cafeteria service facility	3.02	0.79	Agreed
Parents should provide adequate money for feeding.	3.54	0.60	Agreed
University refectories where they exist should serve Nigerian main dishes to interested students at meal times	3.02	0.79	Agreed
Grand mean	3.14	0.89	Agreed

Discussion

This study focused on breakfast meal skipping practices and reasons including strategies for reducing the practices among undergraduate students of University of Nigeria, Nsukka. Results indicated that all the respondents skipped breakfast meal at least once a week, with more than half of them skipping breakfast meals daily. The findings are consistent with previous works of Sakamaki et al. (2005) and Feye, et al. (2021) who respectively found 24% to 87% and 41% prevalence of skipping breakfast meals among different populations they studied. Collaborating further, Timlin & Pereira (2010) and Adolphus, et al. (2019) noted progressive increase in skipping of breakfast meals from late childhood to early adulthood which they equally attributed to busy time schedules. Breakfast meal skippers according to Badrasawi, et al. (2021) are more likely to eat high fat and cholesterol snacks than breakfast consumers. Hence, Ugwu & Ngwoke (2011) posited that most young people have poor eating habits which could ripple later in life to poor health (Afolabi, et al., 2013; Ukegbu, et al., 2015). The need to ensure students' healthy eating lifestyle by dealing with obstacles that cause them to skip breakfast meals cannot be over emphasized

Reasons for skipping breakfast meals by the students were as results of; time constraints, spoilt meal, early morning and impromptu morning lectures that held before 8 a.m., inaccessibility to breakfast meals of choice, and expensive private sector cafeteria meal service, observance of religious practices, insufficient and delayed access to pocket money, lack of cooking fuels, established

family food habits, and poor food planning and budgeting. Consistent with these findings were the works of Badrasawi et al. (2021), Feye et al. (2021) and Mohiuddin (2019). The authors noted that lack of time and cooking skills and unavailability of desired meals as well as religious practices were reasons for skipping breakfast. Lack of money (i.e. poverty) was not found as one of the reasons, in this study. The reason could be due to better economies in the developed countries where their studies were carried out relative to Nigeria's still developing economy that has most of her populace living in poverty according to Kazeem (2018). The practice of early morning lectures before 8 a.m. and expensive private cafeteria meal service in the university as found by the study could be attributed to poor management of federal universities in Nigeria as reported by Faboyede, et al. (2017). Accordingly, Ibeanu et al. (2012) had earlier stated that students of University of Nigeria, Nsukka are subjected to stressful academic programmes in addition to the university authority not having and managing any cafeteria services for proper feeding of the students. The implication is that the university does not shoulder the responsibility of providing nutritionally healthy meals to the students. This could result in most of the students wasting the time they should use for their studies in cooking their foods which could be the case in other Nigerian Federal Universities. This is because Aderoju, et al. (2017) noted that most students of University of Ibadan cook their own foods. Thus, explaining finding that students face the problem of lack of cooking fuels as one of their reasons for

skipping breakfast meals found in this study. Nevertheless, the study also found that skipping breakfast meals by the students were not caused by sickness, eating late night meals, lack of appetite, laziness to cook and wash up utensils, the desire to lose weight, and forfeiture of the meal. These findings appear to contradict the findings of studies carried out in developed countries as observed by Feye et al. (2021) and Mohiuddin (2019).

Strategies to be adopted in improving breakfast meal consumption practices of undergraduate students in this study indicated that the students should; return to university with food stuff from their homes, have a food budget and judiciously adhere to it including having a food plan. Supporting the findings, Aderoju et al. (2017) noted that most students from poor homes did not return to universities with food stuffs from their homes despite their meager pocket money not decking the N450 (US\$2.89) daily cost of meals in cafeterias at University of Ibadan. The authors advocated for affordable good quality food services in university cafeterias in promoting students' welfare needed for their effective learning and research works. Findings of the study equally indicated that relevant authorities should ensure that; the university's academic plan is devoid of any early morning lectures that start before 8a.m., electricity supply is regular in students' hostels, refectories with subsidized balanced meals are provided to students as well as cafeterias being located within their easy reach and where possible in every hostel which again agreed with the position of Aderoju, et al. (2017). In addition, parents should provide

enough pocket money to their children in the university with all stakeholders' re-orientation of the students towards engagement in paid part-time jobs in financially supporting themselves instead of totally depending on their parents for financial support as noted by the authors. In all, the findings indicated that all hands should be on deck, with the recommendation of Faboyede et al. (2017) collaborating in promotion of undergraduate students' welfare, of which breakfast meal provisioning is a major sub-set. Doing so, would to a large extent guarantee production of healthy and more knowledgeable university graduates who invariably will contribute to national growth and development.

Conclusion

The study focused on breakfast meal skipping practices among undergraduate students of University of Nigeria Nsukka and found that the majority of them skipped their breakfast meals on daily basis. Reasons for skipping the meal ranges from lack of time, spoilage of preserved foods, early morning lectures, lack of cooking fuels to observance of religious rites. Strategies for improving students' breakfast meal consumption practice included different roles to be played by all the stakeholders such as the university, parents and the students themselves. The roles cut across adequate facility, material provisions and managerial functions by the university and parents. Students-related strategies include the need to engage in paid part-time jobs to support themselves financially, and also be intentional about taking breakfast meals.

Recommendations - The study made the following recommendations:

1. Undergraduate students should avail themselves training on time management, food planning and budgeting including engagement in paid part time jobs in financially supporting themselves.
2. Parents of undergraduate student should ensure that adequate food stuff and pocket money are provided to their children
3. Undergraduate students should be re-oriented towards engagement in decent part time jobs in supporting themselves financially
4. The university authority should provide refectories where subsidized balanced meals should be served and ensure that cost effective cafeteria services are within easy reach of students.
5. Regular electricity should be made available in each student hostel
6. The university authority should include time and food management in the students' orientation
7. General study courses for the students should highlight part-time job opportunities for students.
8. Further research on undergraduate students' socio- demographic variables and skipping meals in relation to academic performance is required.

References

Aderoju, A. H., Yusuf, S. A., Ogunyemi, O. I., Yusuf, W. A. (2017). Income polarization among undergraduate students of University of Ibadan. *Mathematics Letters*, 3 (2), 20-28. <https://doi.org/11648/j.ml.20170302.11>

Adolphus, K., Lawton, C. L., & Dye, L. (2019). The effects of breakfast on behavior and academic performance in

children and adolescents. *Frontiers in Human Neuroscience*. 7 (425), <https://doi.org/10.3389/fnhum.2013.00425>

Adolphus, K., Lawton, C. L., & Dye, L. (2013). Associations between habitual school-day breakfast consumption frequency and academic performance in British adolescents.

Frontiers in Public Health, 7 (283). <https://doi.org/10.3389/fpubh.2019.00283>

Afolabi, W., Towobola, S. K., Oguntona. C. R., & Olayiwola, I. O. (2013). Pattern of fast food consumption and contribution to nutrient intakes of Nigerian University students. *International Journal of Educational Research*, 1(5), 1-10. <https://www.ijern.com/images/May-2013/03.pdf>

Anyakoha, E. U. (2015). *Home management for schools and colleges*. Africana FirstPublishers Plc.

Badrasawi, M., Anabtawi, O. & Al-Zain, Y. (2021). Breakfast characteristics, perception, and reasons of skipping among 8th and 9th-grade students at governmental schools, Jenin Governance, West Bank. *BMC Nutrition* 7 (42)<https://doi.org/10.1186/s40795-021-00451-1>

Danquah, A. O., Odjoji, Y., Graham-Acquaah, S., & Steiner-Asiedu, M. (2010). A pilot study of the dietary and physical activity behaviours of international students: Implications for health promotion. *African Journal of Food Science*, 4 (3), 86-92. <http://www.academicjournals.org/ajfs>

Eldisoky, S. T. (2003). Interactive relation between dietary habits and spread of malnutrition diseases. *Annals of Agricultural Science*, 48 (2), 663-75.

[https://scholar.google.com/scholar_lookup?journal=Ann.+Agric.+Sci.+\(Cairo\)&title..](https://scholar.google.com/scholar_lookup?journal=Ann.+Agric.+Sci.+(Cairo)&title..)

Faboyede, S. O., Faboyede, A. O. and. Fakile, S. A. (2017). Funding of university

- education in Nigeria: Challenges and prospects. *European Journal of Social Sciences Studies*, 2 (8), 222-238. www.oapub.org/soc, <https://doi.org/10.528/zenodo.1012393>
- Feye, D., Gobena, T., Brewis, A., & Roba, K., T. (2021). Adolescent breakfast skipping is associated with poorer academic performance: A school-based study, *Haramaya University College of Health and Medical Science*. <https://orcid.org/0000-0001-6227-9594>
- Kazeem, Y. (2018). Nigeria has become the poverty capital of the world. *Quarze Africa* <https://qz.com/africa/1313380/nigerias-has-the-highest-rate-of-extreme-poverty-globally/>
- Ibeanu, V. N., Onyechi, U. A. and Onuoha, N. (2012) Prevalence of underweight, overweight and obesity among undergraduate students in University of Nigeria, Nsukka Campus. *Journal of Home Economics and Educational Research*, 17, 230-241
- Mohiuddin, A.K. (2019) Skipping breakfast everyday keeps well-being away. *Global Journal of Pharmacy and Pharmaceutical Science*, 7 (1). <https://juniperpublishers.com/gjpps/pdf/GJPPS.MS.ID.555701.pdf>
- Murphy, J. M. (2017). Breakfast and learning: An updated review. *Current Nutrition & Food Science*, 3 (1), 3-36. <http://www.benthamscience.com/cnf/sample/cnf3-1/D0002NF.pdf>.
- Nicklas, T. A., O'Neil, C., & Myers, L. (2004). The importance of breakfast consumption to nutrition of children, adolescents, and young adults. *Nutrition Today*, 39 (1). 30-39. <https://doi.org/doi:10.1097/00017285-200401000-00009>
- Nzeagwu, O. C. and Akagu, J. C. (2011). Food habits and nutritional status of Nigerian undergraduate. [http://www.globalsciencebooks.info/Online/GSBOOnline/images/2011/FOOD_5\(SI1\)/FOOD_5\(SI1\)89-95o.pdf](http://www.globalsciencebooks.info/Online/GSBOOnline/images/2011/FOOD_5(SI1)/FOOD_5(SI1)89-95o.pdf)
- Olukanni, D. O., Aderonmu, P. A., & Akinwumi, I. I. (2014). Re-integrating vocational technical skill acquisition into the educational curriculum: capacity building for future professionals. *Proceeding of the 7th International Conference of Education, Research and Innovation*, Seville, Spain, 17th-19th. https://www.researchgate.net/publication/281065529_re-integrating_vocational_technical_skill_acquisition_into_the_educational_curriculum_capacity_building_for_future_professional
- Rampersaud G, Pereira M, Girard B, Adams J, Metz J, et al. (2005). Breakfast habits, nutritional status, body weight and academic performance in children and adolescents. *Journal of American Dietetic Association*, 105 (105), 743-760. <https://pubmed.ncbi.nlm.nih.gov/15883552/>
- Sakamaki R, Toyama K, Amamoto R, Liu CJ, Shinfuku N (2005). Nutritional knowledge, food habits and health attitude of Chinese university students—a cross sectional study. *Nutrition Journal*, 4 (1).
- Timlin, M. T., and Pereira, M. A. (2010). Breakfast frequency and quality in the etiology of adult obesity and chronic diseases. *Nutrition Review*. 65 (6), 268-81. <https://doi.org/10.1301/nr.2007.jun.268-281>.
- Ugwu D. S. and Ngwoke, U. M (2011). Assessment of soybean products acceptability and consumption in Orumba South local government area of Anambra State Nigeria *International Research Journal of Agricultural Science and Soil Science*, 1(8), 314-325. <http://www.interestjournal.org/IRJAS>
- Ukegbu, P. O., Uwaegbute A. C., and Usonka, V. A. (2015). Contribution of snacks to energy and nutrient intake of undergraduates in a Nigerian university. *Malaysian Journal of Nutrition* 21(1): 15-23.



https://www.researchgate.net/publication/282320654_Contribution_of_snacks_to_energy_and_nutrient_intake_of_undergraduates_in_a_nigerian_university

