
Effect of Health Education on Knowledge and Attitudes of Students in Adekunle Ajasin University toward Street Food Consumption

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Abstract

This study investigated the effect of health education on the knowledge and attitudes of students in Adekunle Ajasin University toward street food consumption. For this investigation, a quasi-experimental design which adopts the use of an experimental group and a control group was used. All Adekunle Ajasin University undergraduates made up the study's population. 50 respondents were selected through multi-stage sampling techniques. There were two instruments utilized. A well-structured questionnaire titled "Students' Knowledge and Attitude toward Street Food Consumption (SKASFC)" and lecture note was used as treatment. Data collected were analyzed with Mean, Standard Deviation and t-test at 0.05 significant level. The study revealed that the health education has significant effect on knowledge ($t_{cal} = 18.661$ $p < 0.00$) and attitude ($t_{cal} = 20.911$ $p < 0.00$) of students in the study area toward street food consumption. Therefore, health education seminars should be organized by the school management for students in order to improve knowledge, attitude and practice towards street food safety.

Keywords: Street Food, Health Education, Knowledge, Attitude, University student

Introduction

On college campuses, off-campus, and in other countries across the world, street food (SF) refers to a wide variety of Ready-To-Eat (RTE) foods that are quickly produced and served by vendors in public spaces like streets and other comparable locations (Ma et al, 2019, Hossen, 2020). Street food's accessibility, affordability, and relative nutritional density are the main reasons for its popularity. Thus, those are consumed by people of all ages and backgrounds (Lues et al, 2006). Due to their hectic schedules and heavy academic loads, students voluntarily rely on street food because they are too busy to make it in their dorms (Temeche et al., 2016). However, over 2.5 billion people worldwide consume street food on a regular basis due to its affordability and accessibility (Sezgin & Sanlier, 2016, Mohammed & Shehasen, 2020). In many big cities as well as smaller towns and villages, street food is accessible to both residents and tourists (Mamun et al, 2020a).

Young adults, students, and college students have recently increased their consumption of street food (Mamun et al, 2020b). Street food is popular among consumers, especially students, due to its accessibility, taste, variety, and cost (Mamun et al, 2020a). Due to urbanization and population growth, the street food industry is flourishing in developing nations (Mamun et al, 2020b). Food safety impacts both

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producers and consumers worldwide and is a crucial component of daily living (De Boeck et al. 2019). In most low- to middle-income countries, including Nigeria, it has become one of the most challenging societal issues to address (Onyeaka et al. 2021). Millions of people are afflicted annually by the illnesses associated with eating tainted food, particularly in developing nations (WHO 2021a; b).

Teenagers and other susceptible populations, such as the elderly and expectant mothers, are disproportionately affected by these diseases (GAIN 2020; WHO 2021a; b). According to estimates from the World Health Organization, consuming contaminated food causes 600 million illnesses and 420,000 deaths year, or almost one in ten people (WHO 2021a; b; Havelaar et al. 2015; GAIN 2020). Eating tainted food is a major issue in Africa. One in ten people get foodborne illnesses every year, according to the WHO (2015). Southeast Asia and sub-Saharan Africa have the highest rates of foodborne illness, with 91 million cases and 137,000 fatalities from foodborne illnesses per year (WHO 2017). Every year, foodborne bacteria in Nigeria result in over 200,000 food poisoning deaths (Ezirigwe 2018; WHO 2021a, b).

However, a study on food safety knowledge carried out in Nigeria found that merchants lack information regarding tropical food safety measures and infections (Iwu et al. 2017; Madaki and Bavorova 2019). Madaki and Bavorova (2021) discovered that food sellers' food safety practices in educational institutions were influenced by their knowledge, attitudes, and social and economic control. This is in line with studies by Adhikari & Sharma (2021), Wara & Binata (2021), which discovered that the majority of consumers had enough knowledge about food-borne illnesses and attitudes on food safety. Furthermore, Mamun et al. (2020) found that students specifically favor street food because of its accessibility, diversity, affordability, and flavor. According to Wara and Binata (2021), a lot of customers choose to eat street cuisine since it is easily accessible. According to the study by Gupta et al. (2018), consumers' perceptions of street food are positively impacted by perceived benefits such as value and convenience. Despite this, students' understanding of street food and its risks is only moderate, according to research by Shridevi et al. (2022).

Similarly, a study by Jember et al. (2021) found that Ethiopian college students have very poor general food safety knowledge, attitudes, and practices. In a similar vein, Pepple (2017) found that both permitted and unapproved food vendors in Abuja, Nigeria, were ignorant about food safety, contamination, poisoning, control techniques, and hygiene standards. There are significant gaps in basic infrastructure and proper teaching or sensitization on the importance of food safety in many Nigerian rural and suburban communities (Egbule et al. 2020; Anyogu et al. 2021). Since students typically consume street food, which can lead to health issues, they are more vulnerable to food hazards than other age groups (Aluh, et al 2021). Accordingly, the student phase offers a fantastic chance to gain skills and knowledge related to food safety as well as an awareness of the problems that food safety is currently experiencing (Cheng et al., 2017).

Therefore, in order to create an educational intervention that would change unhealthy eating habits, raise awareness of nutrition and food safety, and reduce the risk of foodborne illnesses, it is essential to know students' attitudes and knowledge regarding food safety. Additionally, food safety health education can benefit society as a whole (Jinfeng et al., 2016). In terms of students' dietary habits, educational initiatives may

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be crucial in lowering street consumption. Youth and society are instilled with outstanding health and healthy lifestyles through health education (Yol, 2014). Prior research has demonstrated the impact of educational interventions on students' attitudes and understanding regarding the eating of street food. According to research by Shabanian et al. (2018) and Vakili et al. (2008), education interventions significantly improved people's knowledge, attitudes, and dietary habits around the eating of street food. Additionally, a study by Mary et al. (2024) discovered that attitudes, knowledge, and practices regarding the health concerns connected with junk food significantly improved after a comprehensive training program was adopted.

Generally, the rate at which people especially students patronize street food vendor shows that they may have no knowledge and poor attitude toward food safety and the danger in taking unsafe food mostly street or road side food, Observations show that foodborne infections such as cholera, typhoid, diarrhea, food poisoning, and food risks affect most college students. These diseases affect society financially and socially in addition to posing a threat to everyone's health. Students who eat food from street sellers are more likely to get food illness because it is easily accessible, ready to eat, and quick. Students at universities require accurate information regarding the negative health effects of eating street food. In consideration of the noted issues, the researchers wish to study the effect of health education intervention on knowledge and attitudes of students in Adekunle Ajasin University Akungba Akoko (AAUA) toward street food consumption.

Aim of the study

To investigate the effect of health education on knowledge and attitudes of students in Adekunle Ajasin University Akungba Akoko toward street food consumption.

Research Questions

The following research questions were put forth to guide the investigation in accordance with the goals of the study:

- i. What is the knowledge of students in Adekunle Ajasin University Akungba Akoko toward street food consumption?
- ii. What is the attitude of students in Adekunle Ajasin University Akungba Akoko toward street food consumption?

Research Hypotheses

The following research hypotheses served as a guide for this study.

- i. Health education will have no significant effect on knowledge of students in Adekunle Ajasin University Akungba Akoko toward street food consumption
- ii. Health education will have no significant effect on attitude of students in Adekunle Ajasin University Akungba Akoko toward street food consumption

Method

For this investigation, a quasi-experimental design was used. One experimental and one control group are part of the design. It is a design that allows for some intentional control and modification of the learning environment. All undergraduate students at AAUA, Ondo State, made up the study's population. 50 responders made up the study's sample. The study included multistage sampling approaches to choose the participants.

1st stage: The researcher used purposive sampling techniques to select 2 faculties from the existing 8 faculties.

2nd stage: The researcher chose one department from each of the two faculties using a straightforward random sample method using a fish bowl without replenishment.

3rd stage: The researcher used disproportionate sampling techniques to selection 25 respondents from the 2 departments. The selected 50 students were the sample for the study.

There were two instruments utilized. In order to gather data for this study, the researcher created a well-structured questionnaire called "Students' Knowledge and Attitude toward Street Food Consumption (SKASFC)," which is closed-ended which consist of part A and B. Part A asked respondents about their demographics, while Section B asked them to rate their knowledge and attitude toward the topic using a five-point Likert scale: SA stands for "strongly agree," A for "agree," U for "undecided," D for "disagree," and SD for "strongly disagree." The values of the responses would be SA=5, A=4, U=3, D=2, and SD=1 when the assertions were affirmative. These values were reversed when the statement is negatively stated. The lecture note served as the second tool for treatment.

The instrument was sent to a nutritionist and health education specialist for appropriate observation, feedback, and suggestions. After modifications were made, the final version was created for approval. When the same results are obtained when the study is conducted again under the same circumstances, reliability is guaranteed. Two weeks following the lecture, the instrument was put through a test-retest procedure utilizing identical sets of questions on respondents who were similar but not in the research area in order to ensure its reliability. The data was tested using Pearson Product Moment Correlation. For the investigation, the correlation of 0.78 was deemed sufficient.

To achieve the aim of the study, a pretest was given to the participants of the groups and were collected separately according to their group by the researcher and then move the participants in group A (experimental group) in a separate place for treatment (educating them on street food and its effect on health) for 8 weeks, while group B (control group) were taught on stress management, after this posttest was re-administered among the two groups and retrieved back for data analysis. While descriptive statistics such as frequency count, simple percentage, mean, and standard deviation were used to evaluate the data and ascertain the demographics of the respondents and research questions, t-test was utilized to investigate the hypotheses. The alpha threshold was set at 0.05.

Results

Research Question 1: What is the knowledge of students in Adekunle Ajasin University Akungba Akoko toward street food consumption?

Table 1.

Data on the frequency distribution of the knowledge of students in AAUA toward street food consumption for both experimental group and control group

Variable	N	Minimum	Maximum	Mean	SD
Pre-test Knowledge	50	15.00	47.00	30.6600	8.06254

Table 1 revealed the result of the knowledge of students in AAUA toward street food consumption for both experimental group and control group before the intervention as pre-test, where 15.00 was the minimum score, while 47.00 was the maximum score, the constant mean of the instrument (questionnaire) was ($3 \times 10 = 30$) and the score mean

shows 30.6600, constant mean (30), the result shows a slightly above the constant mean. Therefore, the students in AAUA have good knowledge toward street food consumption.

Table 2.

Data showing mean score of the knowledge of students in AAUA toward street food consumption, for post-test experimental group and control group.

Post-Test		Mean	N	SD	Std. Error Mean
Knowledge	Experimental	43.68	25	3.77	.75
	Control	24.68	25	4.24	.85

Table 2 revealed 43.68 as the mean score of the post-test knowledge of the experimental group after the intervention (i.e lecture on Street food consumption), while 24.68 as the mean score of post-test knowledge of the control group after the intervention (lecture on Stress management) which is different from the main topic of the work. Therefore, the health education has effect on knowledge of students in AAUA toward street food consumption.

Research Question 2: What is the attitude of students in Adekunle Ajasin University Akungba Akoko toward street food consumption?

Table 3.

Data on the frequency distribution of the attitude of AAUA toward street food consumption for both experimental group and control group

Variable	N	Minimum	Maximum	Mean	SD
Pre-test Attitude	50	18.00	41.00	28.62	6.28

Table 3 revealed the result of the attitude of students in Adekunle Ajasin University Akungba-Akoko toward street food consumption for both experimental group and control group before the intervention as pre-test, where 18.00 was the minimum score, while 41.00 was the maximum score, the constant mean of the instrument (questionnaire) was $(3 \times 10 = 30)$ and the score mean shows 28.6200, constant mean (30), the result shows above average mean. Therefore, the students in Adekunle Ajasin University Akungba-Akoko have negative attitude toward street food consumption.

Table 4.

Data showing mean score of the attitude of students in AAUA toward street food consumption, for post-test experimental group and control group.

Post-Test		Mean	N	SD	Std. Error Mean
Attitude	Experimental	44.64	25	3.40	.68
	Control	24.96	25	4.81	.96

Table 4 revealed 44.64 as mean score of the post-test attitude of the experimental group after the intervention (i.e lecture on Street food consumption), while 24.96 as mean score of the post-test attitude of the control group after the intervention (lecture on Stress management) which is different from the main topic of the project work. Therefore, the health education has effect on attitude of students in AAUA toward street food consumption.

Research Hypothesis 1: Health education will have no significant effect on knowledge of students in Adekunle Ajasin University Akungba Akoko toward street food consumption

Table 5:

Data showing mean difference score of the students in AAUA toward street food consumption, for post-test experimental group and control group.

Post-Test		Mean	N	SD	t.cal	df	p.value
Knowledge	Experimental	43.68	25	3.78	18.661	48	.000
	Control	24.68	25	4.24			

Table 5 revealed the effect of health education on knowledge of students in AAUA toward street food consumption. The analysis revealed 19.00 as the mean difference of post-test of student's knowledge on street food consumption experimental and control, which is significant (.000). Hence, the result shows that the treatment (lecture on Street food consumption) respectively has significant effects on the knowledge of students in AAUA toward street food consumption. Therefore, the null hypotheses which state that health education will have no significant effect on knowledge of students in AAUA toward street food consumption, was rejected.

Research Hypothesis 2: Health education will have no significant effect on attitude of students in Adekunle Ajasin University Akungba Akoko toward street food consumption

Table 6.

Data showing mean difference score of the students in AAUA toward street food consumption, for post-test experimental group and control group.

Post-Test		Mean	N	SD	t.cal	df	p.value
Attitude	Experimental	44.64	25	3.40	20.911	48	.000
	Control	24.96	25	4.81			

Table 6: revealed the effect of health education on attitude of students in AAUA toward street food consumption. The analysis revealed 19.68 mean difference of post-test of student's Attitude on street food consumption experimental and control, which is significant (.000), hence, the result shows that the treatment (lecture on Street food consumption) has significant effects on the attitude of students in AAUA toward street food consumption. Therefore, the null hypotheses which state that health education will have no significant effect on attitude of students in AAUA toward street food consumption, was rejected.

Discussion of findings

The study revealed that Adekunle Ajasin University students in Akungba Akoko are well-informed about eating street cuisine. This was consistent with research by Adhikari & Sharma (2021), Yan et al. (2019), and Wara & Binata (2021), which found that most people who consume street food are aware of food-borne diseases and have appropriate attitudes on food safety. Additionally, the study did not support the findings of Shridevi et al. (2022), which indicate that students' understanding of street food and its risks is limited to moderate. The survey also showed that street food eating is seen negatively by AAUA students. The study confirmed the findings of Jember et al. (2021), which showed that Ethiopian college students had extremely poor levels of general knowledge, practices, and attitudes regarding food safety.

Additionally, the study demonstrates that students' attitudes and understanding regarding the intake of street food at Adekunle Ajasin University Akungba Akoko are

significantly impacted by health education. The study supported the findings of Shabanian et al. (2018) and Vakili et al. (2008), which demonstrated that education interventions significantly improved people's knowledge, attitudes, and nutritional behaviours regarding the intake of street food. Concurred with the findings of Mary et al. (2024), which showed that following the introduction of a systematic training program, there was a notable improvement in attitudes, knowledge, and practices about the health risks of junk food.

Conclusion

This study found that students' knowledge and attitudes about eating street food at Adekunle Ajasin University Akungba Akoko are significantly impacted by health education. Consequently, the study has demonstrated that, despite the negative health effects, street food consumption among college students is becoming more and more popular. This makes them more vulnerable to the already high prevalence of non-communicable diseases, particularly in developing nations.

Recommendations

In line with the findings of the study, the following were recommended:

1. Health education seminars should be organized by the school management for students in order to improve knowledge, attitude and practice towards street food safety.
2. In order to prevent and control the potential risks and spread of disease, there is a need for increased vigilance and control of the food vendor's practices through the enforcement of regulations, proper hygienic practices, and food safety control measures by local authorities that are empowered to carry out their functions without constraints.
3. The development of coordinated, efficient, integrated, and preventive strategies that prioritize vendor registration, formal training on hygienic practices, initial and periodic medical certification, and routine personal and environmental hygiene checks should be a priority for the school management and local authority responsible for food vendors, both mobile and stationary, in the interest of public health.

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