

Nutritional Health Problems Among Unity Boarding Secondary School Students in Anambra State Nigeria

Nnaemezie Nkiru Onyinyechukwu¹ Rita Nchedo Igwemadu² & Ifediora Uchenna Loveth³

^{1,2,3}Department of Health Promotion and Public Health Education, faculty of Education; Nnamdi Azikiwe University, Awka Anambra State Nigeria

ARTICLE INFORMATION	ABSTRACT
Article history: Published: August 2026 Keywords: Nutrition Health problems Students	Boarding Secondary School keeps children away from home for a period of the three month where by the children feeds completely in the school and not by the parents this may likely expose students to some nutritional health problem which if not identified on time may cause diverse health problems for such child, this is the reason why this study was designed to determine the nutritional health problems among unity boarding secondary school students in Anambra State. Four research questions guided the study. The design for the study was a descriptive survey research design; the population consisted of 3100 unity boarding secondary schools in Anambra state; also 238 unity boarding school students was used as the sample size proportionate stratified sampling technique was used to select the sample size. The instrument for data collection was a researcher developed instrument titled Nutritional Health Problem Questionnaire (NHPQ). The instrument was validated by three expert; the reliability co-efficient was gotten using Kuder Richardson (kr-20) formula the values was 0.67. The data was analyzed using SPSS version 25; descriptive statistics of frequency and percentage was used to answer question. The result of the finding showed that out of the twenty nutritional health problems sixteen was indicated by the unity secondary school students. Conclusion and recommendations were made based on the findings that there is need for constant medical check-up to prevent some of these health problems.

1. Introduction

Globally, adolescent malnutrition remains a major public health concern despite improvements in food production and healthcare. According to the Global Nutrition Report (2018), millions of adolescents continue to suffer from under-nutrition, overweight, obesity, and micronutrient deficiencies. In many developing countries, including Nigeria, the coexistence of under-nutrition and over-nutrition has created a double burden of malnutrition that poses serious challenges to adolescent health and development. UNICEF (2026) reports that Nigeria has one of the highest burdens of child malnutrition globally, with millions of children and adolescents experiencing stunting, wasting, anaemia, and other forms of nutritional deficiencies.

Nutrition is fundamental to human growth, development, and overall well-being. Adequate nutrition supplies the body with essential nutrients required for normal body functioning, healthy physical growth, cognitive development, and disease prevention. During adolescence, proper nutrition becomes particularly important because of the rapid physical, psychological, and physiological changes that occur during this stage of life. A balanced diet containing adequate carbohydrates, proteins, fats, vitamins, minerals, and water supports optimal health and enables adolescents to achieve their full educational and developmental potential (World Health Organization [WHO], 2025).

However, nutritional health problems occur when the body receives inadequate, excessive, or imbalanced nutrients needed for normal functioning. These problems include under-nutrition, overweight, obesity, micronutrient deficiencies, anaemia, stunting, wasting, and other diet-related conditions that may impair growth, learning ability, immunity, and productivity (Carpenter, 2025). Abubakar, Shahril, & Mat, (2024) opined that poor nutritional status during adolescence has been associated with poor academic performance, reduced concentration, increased susceptibility to infections, delayed physical development, and a higher risk of chronic diseases later in adulthood. Consequently, ensuring good nutrition during adolescence is essential for improving both immediate and long-term health outcomes. Thus ensuring reducing nutritional health problem.

1.1 Purpose of the Study

The purpose of this study was to determine the nutritional health problems among Unity Boarding Secondary School Students in Anambra State. Specifically, the study determined;

- Nutritional health problems among Unity Boarding Secondary School Students in Anambra State.
- Nutritional health problems among Unity Boarding Secondary School Students in Anambra State based on their age.
- Nutritional health problems among Unity Boarding Secondary School Students in Anambra State based on their gender.
- Nutritional health problems among Unity Boarding Secondary School Students in Anambra State based on their class level.

1.2 Research Questions

The following research questions guided the study;

- What are the nutritional health problems among Unity Boarding Secondary School Students in Anambra State?
- What are the nutritional health problems among Unity Boarding Secondary School Students in Anambra State based on their age?
- What are the nutritional health problems among Unity Boarding Secondary School Students in Anambra State based on their gender.
- What are the nutritional health problems among Unity Boarding Secondary School Students in Anambra State based on their class level?

2. Methods

The research design adopted is a descriptive survey design. The area of the study was Anambra State. Anambra State is a Nigerian state, located in the South Eastern Region of the country. The population for this study comprises 3100 unity boarding secondary school students in Anambra state. The sample size for this study was 238 unity boarding secondary school students, which represents approximately five percent (5%) of the total population. The instrument for data collection was a researcher developed instrument titled Nutritional Health Problem Questionnaire (NHPQ). Kuder Richardson (kr-20) formula was used to analyze the data collected and the reliability co-efficient was 0.67. The data collected was analyzed using SPSS (Statistical Package for the Social Sciences) version 20. Descriptive statistics of frequency, percentage was used to answer research questions 1-4; chi-square statistics was used to test hypotheses 1-3 at a 0.05 level of significance.

3. Results and Discussions

3.1 Research Question One: What are the nutritional health problems among unity boarding secondary school students in Anambra state?

Table 1: Frequency and Percentage Responses on Nutritional Health Problems by Students in Unity Boarding Secondary School in Anambra , N= 238

S/N	Nutritional Health Problems	Yes		No	
		N	%	N	%
1.	Ulcer	234	98	4	2
2.	Diarrhea	238	100	0	0
3.	Constipation	238	100	0	0
4.	Wasting (Being underweight for height)	238	100	0	0
5.	Stunting (Being short for age)	238	100	0	0
6.	Obesity	47	19.7	191	80.2
7.	Diabetes	54	23	184	77
8.	Heart Problem	234	98	4	2
9.	Anaemia	206	87	32	13
10.	Eye related problems	235	99	3	1
11.	Goiter (iodine deficiency)	18	8	220	92
12.	Bones health issues (Vitamin D Deficiency)	235	99	3	1
13.	Anorexia	147	62	91	38
14.	Bulimia	28	12	210	88
15.	Skin problem	234	98	4	2
16.	Headache	237	99	1	0
17.	Fever	238	100	0	0
18.	Tooth ache	238	100	0	0
19.	Menstrual abnormalities	235	99	3	1
20.	Body weakness	238	100	0	0

Table 1 shows frequency and percentage responses on nutritional health problems by students in unity boarding secondary schools in Anambra.

3.2 Research Question Two: What are the nutritional health problems among unity boarding secondary school students in Anambra state based on their age?

Table 2: Frequency and Percentage Responses on Nutritional Health Problems by Students in Unity Boarding Secondary School in Anambra Based on Age Range, N= 238

S/N	Nutritional Health Problems	9-14 years (n=100)				15-20 years (n=138)			
		Yes		No		Yes		No	
		N	%	N	%	N	%	N	%
1.	Ulcer	97	97	3	3	137	99	1	1
2.	Diarrhea	100	100	0	0	138	100	0	0
3.	Constipation	100	100	0	0	138	100	0	0
4.	Wasting (Being underweight for height)	100	100	0	0	138	100	0	0
5.	Stunting (Being short for age)	100	100	0	0	138	100	0	0
6.	Obesity	15	32	0	0	32	68	0	0
7.	Diabetes	8	8	92	92	46	33	92	67
8.	Heart Problem	100	100	0	0	134	97	4	2.9
9.	Anaemia	88	88	12	12	118	85	20	15
10.	Eye related problems	99	99	1	1	136	99	2	1

RESEARCH ARTICLE

11.	Goiter (iodine deficiency)	3	3	97	97	15	11	123	89
12.	Bones health issues (Vitamin D Deficiency)	99	99	1	1	136	99	2	1
13.	Anorexia	35	35	65	65	112	81	26	19
14.	Bulimia	1	1	99	99	27	20	111	80
15.	Skin problem	98	98	2	2	136	99	2	1
16.	Headache	99	99	1	1	138	100	0	0
17.	Fever	100	100	0	0	138	100	0	0
18.	Tooth ache	100	100	0	0	138	100	0	0
19.	Menstrual abnormalities	98	98	2	2	137	99	1	1
20.	Body weakness	100	100	0	0	138	100	0	0

Table 2 presents students' identification of nutritional health problems based on students' age.

3.3 Research Question Three: What are the nutritional health problems among unity boarding secondary school students in Anambra state based on their gender?

Table 3: Frequency and Percentage Responses on Nutritional Health Problems by Students in Unity Boarding Secondary School in Anambra Based on Gender, N= 238

S/N	Nutritional Health Problems	Male(n=88)				Female(n=150)			
		Yes		No		Yes		No	
		N	%	N	%	N	%	N	%
1.	Ulcer	84	95	4	5	150	100	0	0
2.	Diarrhea	88	100	0	0	150	100	0	0
3.	Constipation	88	100	0	0	150	100	0	0
4.	Wasting (Being underweight for height)	56	63.6	32	36.4	102	68	48	32
5.	Stunting (Being short for age)	88	100	0	0	150	100	0	0
6.	Obesity	32	36.4	0	0	48	32	102	68
7.	Diabetes	13	15	75	85	41	27	109	73
8.	Heart Problem	87	99	1	1	147	98	3	2
9.	Anaemia	75	85	13	15	131	87	19	13
10.	Eye related problems	87	99	1	1	148	99	2	1
11.	Goiter (iodine deficiency)	7	8	81	92	11	7	139	93
12.	Bones health issues (Vitamin D Deficiency)	87	99	1	1.1	148	99	2	1
13.	Anorexia	54	61	34	39	93	62	57	38
14.	Bulimia	11	13	77	87	17	11	133	89
15.	Skin problem	85	97	3	3	149	99	1	1
16.	Headache	88	100	0	0	149	99	1	1
17.	Fever	88	100	0	0	150	100	0	0
18.	Tooth ache	88	100	0	0	150	100	0	0
19.	Menstrual abnormalities	85	97	3	3	150	100	0	0
20.	Body weakness	88	100	0	0	150	100	0	0

Table 3 shows the nutritional health problems as identified by male and female students in unity boarding secondary schools in Anambra state.

3.4 Research Question Four: What are the nutritional health problems among unity boarding secondary school students in Anambra state based on their class level?

Table 4: Frequency and Percentage Responses on Nutritional Health Problems by Students in Unity Boarding Secondary School in Anambra Based on Class Level, N= 238

S/N	Nutritional Health Problems	Junior				Senior			
		Yes		No		Yes		No	
		N	%	N	%	N	%	N	%
1.	Ulcer	97	97	3	3	137	99	1	1
2.	Diarrhea	100	100	0	0	138	100	0	0
3.	Constipation	100	100	0	0	138	100	0	0
4.	Wasting (Being underweight for height)	100	100	0	0	138	100	0	0
5.	Stunting (Being short for age)	100	100	0	0	138	100	0	0
6.	Obesity	99	99	1	1	137	99	1	1
7.	Diabetes	8	8	92	92	46	33	92	67
8.	Heart Problem	100	100	0	0	134	97	4	3
9.	Anaemia	88	88	12	12	118	85	20	15

10.	Eye related problems	99	99	1	1	136	99	2	1
11.	Goiter (iodine deficiency)	3	3	97	97	15	11	123	89
12.	Bones health issues (Vitamin D Deficiency)	99	99	1	1	136	99	2	1
13.	Anorexia	35	35	65	65	112	81	26	19
14.	Bulimia	1	1	99	99	27	20	111	80
15.	Skin problem	98	98	2	2	136	99	2	1
16.	Headache	99	99	1	1	138	100	0	0
17.	Fever	100	100	0	0	138	100	0	0
18.	Tooth ache	100	100	0	0	138	100	0	0
19.	Menstrual abnormalities	98	98	2	2	137	99	1	1
20.	Body weakness	100	100	0	0	138	100	0	0

Table 4 shows the nutritional health problems as identified by the students according to their class level.

4. Discussion of the Findings

The result in table 1 showed that out of the twenty listed common nutritional health problems of unity secondary school students, sixteen of them were commonly experienced and seen among the students. Most especially, ulcer, diarrhea, constipation, wasting, stiltedness, headache, fever, toothache and body weakness. Looking at all the nutritional health problems listed above, the result might be so because from the researchers experience as a unity secondary school teacher, there students being an in-school students who do not travel back to their home until after the end of an academic session they eat and spend all their time in school; most time their eating pattern and type of food is mostly affected by the large number of students. This large number would make them not to feed well and not have adequate quantity and quality of food to keep them healthy. Also some of the students would do not like the test of the cooked food would not eat at all and thereby relying on beverages leading them to illness like ulcer and diarrhea and many other nutritional health problems. The findings of this study were supported by the study conducted by Ayogu et al (2018) that the student was under weight, stunting and thin.

The findings in table 2 revealed that out of the twenty listed nutritional health problems, sixteen occurred more in 9 - 14 years old students. These includes; ulcer, diarrhea, constipation, wasting stunting, obesity, heart related problems, anaemia, eye related problem, bone health issues, skin problem, headache, fever, toothache, menstrual abnormalities and body weakness. But students 15 - 20 years old had lesser complain of these common nutritional health problems. The results of the study is so because most of the students used in the study is between the age of 9 - 14 years making the result of the study to concentrate within their age bracket. The study was supported by the study conducted by Nicholaus et al (2020), that there is co-existence of under-nutrition and over-nutrition among adolescents in boarding schools.

The findings on the tables 3 showed that, out of the twenty nutritional health problems listed, seventeen out of them were both experienced by both male and female unity secondary school students. Although, the female student had more nutritional health problem; male unity students also had experienced some of them too. The result could be so because male are naturally strong than the female and also the male student can cope more in an environment that is not there home. The study was supported by the study of Nnaememzie et al (2020), that female boarding house students experience lots of nutritional health problems more than the boys. The result in able 4 showed that out of the twenty nutritional health problem the unity secondary school student indicated 16 of them. This include ulcer, diarrhea, constipation, wasting stunting, obesity, heart problem, anaemia, eye related problems, bone health issues, skin problem, headache, fever, toothache, menstrual abnormalities and body weakness. Although, the junior unity secondary school students had more nutritional health problem than the senior unity secondary school student. The result is so because the junior unity secondary school are still young and are mostly oppressed by their senior especially during meal times. This is an action mostly seen in boarding schools.

5. Conclusion

The following conclusion were based on the findings; unity boarding secondary school students indicated the occurrence of majority of the nutritional health problems listed in the study about 16 out of 20 of them. Also, the students within the ages of 9 - 14 years, had more nutritional health problem; the female students had more nutritional health problems than the male students and the junior unity secondary school students had more nutritional health problems than the senior secondary school students, But the increase in nutritional health problems could be because of lack of practice of those preventive measures either by the unity students themselves or by the school management who provide them with their daily meals and provide the environment which the students live in.

6. Recommendations

The following recommendations were made based on the findings;

- There is need for constant medical checkups to discover or for early detection of these nutritional health problems among students.
- There is need to discover these nutritional health problem based on gender to determine the ones seen among male and female students to enable interventions.
- School management should try as much as possible to ensure that the younger students find well and not bullied by the senior students.

References

- [1] Abubakar, H. A., Shahril, M. R., & Mat, S. (2024). Nutritional status and dietary intake among Nigerian adolescents: A systematic review. *BMC Public Health*, 24(1), 1764. <https://doi.org/10.1186/s12889-024-19219-w>

- [2] Ayogu, R. N. B., Afiayeni, I. C., Madukwe, E. U., et al. (2018). Prevalence and predictors of under-nutrition among school children in a rural South-eastern Nigerian community: A cross-sectional study. *BMC Public Health*, 18, 587. <https://doi.org/10.1186/s12889-018-5479-5>
- [3] Carpenter, K. J. (2025). A short history of nutritional science: Part 1 (1785–1885). *The Journal of Nutrition*, 133(3), 638–645. <https://doi.org/10.1093/jn/133.3.638>
- [4] Global Nutrition Report (2018). *The burden of malnutrition*. <https://globalnutritionreport.org/reports/global-nutrition-report-2018/burden-malnutrition/>
- [5] Nicholaus, C., et al. (2020). Nutritional status among adolescents in Tanzania. *Journal of Nutrition and Metabolism*. <https://doi.org/10.1155/2020/3592813>
- [6] Nnaemezie, N. O., Ezekwe, C. F., Nwankwo, S. N., et al. (2020). Nutritional health problems of boarding students in Nigeria. *Texila Journal of Public Health*.
- [7] UNICEF. (2026). Nutrition in Nigeria. Retrieved from <https://www.unicef.org/nigeria/nutrition>
- [8] WHO. (2025). Malnutrition in children. Retrieved from <https://www.who.int>