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PSYCHO-SOCIO DETERMINANTS OF UNDERGRADUATES' DIETARY HABITS AT BABCOCK UNIVERSITY

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ABSTRACT: *This research work was carried out among undergraduates in a higher institution in Ogun State, Nigeria. It assessed the psychosocial determinants of undergraduates' dietary habits in a private university in Ogun State, Nigeria. The study is descriptive in nature and involved 380 participants. Data were collected with the use of pre-tested questionnaire and analysed using simple percentage and chi-square statistical tools. The result revealed no statistically significant association between participants' age and dietary practice (χ = 8.111; p=0.425). Also, it was revealed that a statistically significant association was found between participants' gender (χ = 10.135, p =.038), participants' self-esteem (χ = 29.237, p =.004) and dietary practice. It was concluded that failure to consume an adequate diet at adolescence time can result in delayed sexual maturation and can arrest or slow linear growth. Nutrition is also important during this time to help prevent adult diet-related chronic diseases, such as cardiovascular disease, cancer, and osteoporosis. It was recommended that the University meal option should be done in a way that you can use a single meal ticket to either eat breakfast, lunch or supper and location for taking meal should be increased so as to strengthen breakfast and lunch programmes.*

KEYWORDS: Psychosocial Determinant, Undergraduates, Dietary Habits, Private University

INTRODUCTION

Food is essential for the existence of all living things. Our bodies need food for energy production, to survive and to remain strong. For good health you need a balanced diet; this means that you do not just eat one food item, but you eat a range of foods so that you can get everything your body needs. The health of individual will be improved and healthier if they are given a healthy, balanced diet rich in protein, energy and vitamins (Ayodele & Oke, 2017).

However, hunger and lack of food resources have been a matter of concern traditionally but, in the last decades, attention has been given to the negative consequences of food surplus. Over a short period of time dietary habits have changed considerably due to economical development, with unhealthy food becoming more accessible and also cheaper than healthy food (e.g. noodles: it is readily available, not expensive and its preparation is very fast). This has led to a great increase in consumption of this type of food, and in turn, a lot of undesirable health consequences causing a strong and growing concern for health governments and medical specialists (Brannon & Feist, 2007). A population of special concern is adolescents and their nutrition and health related behaviour.

Nutritional knowledge has been indicated as a factor which influences food choice. However, some researchers question whether an increase in nutritional knowledge necessarily eventuates

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in improved food choices (Tepper *et al.*, 1997), while other researchers have found that nutritional knowledge alone is insufficient to motivate healthy eating (Gracey *et al.,* 1996). Individuals' reasons for buying and eating particular foods have been described as a "complex bio-psychosocial process that is relative to person, place and time" (Walsh & Nelson 2010). Most researchers believe that dietary habits and food preferences develop in childhood, are established by age 15, and become habitual in due course (Birch, 1999). Meal skipping particularly breakfast, consumption of fast foods along with soft drinks and poor consumption of fruit and vegetables were identified as one of the main unhealthy eating behaviour among adolescent urban school girls in Benin City, Nigeria (Onyiruika*et al*., 2013).

Studies have shown that healthy behaviour in adolescence often follows the person into adulthood (Pentz, 2009). Despite the necessity of healthy eating at adolescence, research has shown that as an individual enters adolescence, his/her dietary habits often get unhealthier (Rasmussen *et al*., 2006). Research has also linked unhealthy eating habit to lower self- esteem, negative self-image and higher rates of psychosocial difficulties experienced by adolescent (Mellin, 2002).

Differences between different groups of adolescents have greatly been shown by several studies to be associated with the dietary habits. This includes age (Rasmussen *et al*., 2006), gender (Hoelscher, 2010) and socioeconomic position (Shen, 2010). These identified factors are individual characteristics that mostly are unchangeable, but aspects regarding behaviour and lifestyle and their relationships dietary habits in adolescence have been examined as well. An important behavioural factor is physical activity, with its strong correlation with healthy eating (Taliaferro *et al.*, 2010; Donovan, 2010). Further, psychological factors like body image and self-esteem and their associations with eating have been investigated (Daee *et al*., 2002). Self-esteem is associated with weight concerns, which in turn might lead to a higher intake of healthy food and restrained intake of fatty food (Nowak 1998).

The developmental transition (physical, psychological and social) during adolescence provides a context for development and perpetuation of eating behaviours that are substantially different from those in other phases of life. During adolescence , nutritional problems originating earlier in life can potentially be corrected in addition to addressing new ones .Thus it is regarded as a timely period to shape and consolidate healthy eating and lifestyle behaviors , thereby preventing or postponing the onset of nutrition related chronic diseases in adulthood .(Nutrition of Adolescent, 2003) Young people have to start now to make the right food choices for lifelong health.(Jennifer *et al.,* 1999)

Dietary habits among adolescents represent an important public health issue because of the long-term effects on health and health behaviour. (Maria Henningsen, *et al*., 2010). The types of diets during this period may affect day-to-day wellbeing, growth, dental health, physical development and academic achievement.

Furthermore, in a study conducted among adolescent urban school girls, it shows that skipping meals have a higher prevalence of both overweight and obesity. From all the aforementioned researches, it is clear that there is still a dearth in research of this nature in Nigeria. In the light of this, this study seeks to examine the psychosocial determinants of undergraduates' dietary habits in a private university in Ogun State, Nigeria.

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Research Hypotheses

Three hypotheses were raised to guide this study. These are:

1. There is no significant association between undergraduates' age and dietary practices.
2. There is no significant association between undergraduates' gender and dietary practices.
3. There is no significant association between undergraduates' self-esteem and dietary practices.

METHODOLOGY

Research Design: This research study adopted a descriptive cross-sectional survey method of data collection (quantitative design) to assess the factors affecting dietary practices among adolescents in Babcock University Ilishan-Remo. The descriptive research design describes what already exists and may use questionnaires, surveys, interviews or observations to collect data. This survey examines the relationship between two or more variables.

Description of the Study Area

This study was carried out at Babcock University, situated in Ilishan Remo, Ogun State, southwestern zone of Nigeria. Babcock University is a seventh-day Adventist institution of higher learning established June 17th 1999. This was specifically conducted among undergraduate of the University that are served food from the school's cafeteria. The feeding pattern includes meal option which can be two- meals (in any combination of choice of the student), and three-meals. The meal pattern of BU's cafeteria and stipulated meal time is illustrated in the table below:

Table 1: BU Meal Pattern and Time

DAY	BREAKFAST 6.30 - 10.00am	LUNCH 12.00 - 3.00pm	DINNER 5.00 - 9.00pm
SUNDAY	Beans/akara/moi-moi/pap/custard,oat	Eba/semo/amala with egusi,ewedu,okro,vegetable, and tofu	Rice / rice and beans / spaghetti, tofu, and fruits
MONDAY	Wheat bread and cereals	Rice stew, jollof rice/ fried rice and tofu	Rice/ yam/ potato and fruits
TUESDAY	Beans/akara/moi-moi/pap/custard,oat	Eba/semo/amala with egusi,ewedu,okro,vegetable, and tofu	Rice / rice and beans / spaghetti, tofu and fruits
WEDNESDAY	Wheat bread and cereals	Beans with stew,garri	Wheat bread/ spaghetti/ Eba/semo/amala with egusi,ewedu,okro,vegetable, egg and fruits
THURSDAY	Beans/akara/moi-moi/pap/custard,oat	Eba/semo/amala with egusi,ewedu,okro,vegetable, and tofu	Jollof rice/ fried rice, tofu and fruits
FRIDAY	Wheat bread and cereals	Beans with stew,garri, bread	Yam, moi-moi
SATURDAY	Wheat bread and cereals and egg	Rice, cup cake and fruit juice	Fried yam, spaghetti, tofu, and apple

SOURCE: Researchers field Survey, 2016

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Study Population: The target population for this study are undergraduates at Babcock University irrespective of their age, tribe, and gender. Inclusion criteria for this study include being a registered and matriculated undergraduate student of Babcock University within the ages of an adolescent (13-21).

Sample and Sampling Technique: Babcock University consists of sixteen halls of residents with a distribution of 9 Halls residence for females and 7 Halls of Residence for males. In order to assess the factors affecting dietary practices among undergraduates of Babcock University, 400 respondents randomly selected participated in the study.

Instrumentation: A self-developed questionnaire tagged "Factors Affecting Dietary Practices among Undergraduates (FADPU) Questionnaire". The questionnaire was divided into four sections. Section A which explored the socio-demographic variables, section B which examined the dietary practices of the respondents, section C, which examined respondent's nutritional attitudes in relation to their environment, health status and self esteem, section D, which obtained information the respondent's knowledge on nutrition. A reliability test was carried out and the value was 0.76, using a test-re-test method among some undergraduate students in Babcock University Iperu Campus.

Data Collection Procedure: The 44 item questionnaire was administered by the researcher and the 15 research assistants in each of the halls within a period of 4 days. The researcher debriefed the assistants on how the questionnaire should be administered. Respondents found in their rooms during the day of visit were approached, and informed consent was sought from each respondent. After completion, the questionnaires were retrieved from the respondents and returned to the researcher.

Method of Data Analysis: A descriptive statistics was used to summarize the data collected using frequency, percentages, and mean. Tables and charts were also used to present summarized data and answers collected described using the tabular and graphical presentation. The computed data was analyzed using the SPSS version 21.

Ethical Consideration: Before the commencement of this research study, ethical approval was obtained from the Babcock University Health Research Ethical Committee (BUHREC) to regulate the procedures that will be carried out. Also, informed consent was gotten from the respondents for the conduction of the research work. The purpose of the study was clearly stated at the top of the questionnaires. It was also stated that they should answer with sincerity of heart because any information collected from the questionnaires would be handled with utmost respect and confidentiality.

RESULTS

A total of 400 questionnaires were administered but only 380 were valid for analysis which is 95% of the sample size. It should be noted that not all the categories of responses are up to 380 (100 percent) due to none responses (NA) of some respondents.

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Table 1: Respondents' Demographic characteristics

Variables	Categories	Responses	
		Frequency (n=380)	Percentage (%)
Gender	Male	114	30.0
	Female	266	70.0
Age	13-15	16	4.2
	16-18	121	31.8
	19-21	240	63.2
Class level	100	40	10.5
	200	86	22.6
	300	65	17.1
	400	151	39.7
	500	33	8.7
	NA	5	1.3
Religion	Christianity	307	80.8
	Islam	59	15.5
	Others	9	2.4
Parents level of Education	Uneducated	14	3.7
	Primary	6	1.6
	Secondary	23	6.1
	Tertiary	332	87.4
	NA	5	1.3
Ethnicity	Yoruba	223	58.7
	Hausa	20	5.3
	Igbo	87	22.9
	Others	47	12.4

Source: Field work, 2016

Tables 1 revealed that majority (63.2 percent) of respondents are between the age category of 19 -21 years of age. This is followed by 31.8 percent of respondents between the ages of 16 to 18 years and 4.2 percent of respondents who falls within the age category of 13 to 15 years. Furthermore, about 81 percent of the respondents are Christians while about 15 percent and 2 percent of the respondents are Muslims and practice traditional religion respectively. As shown also in table 3, the educational background of respondents parents vary with most (87.4 percent) of the respondents parents having tertiary educational background, 6.1 percent respondents possess secondary level of education, while 1.6 percent of the respondents received primary education. Though few, 3.7 received no formal education. Most (77.4 percent) of the respondents are living with both parents while about 9 percent and 8 percent of the respondents live with their mothers only and family member respectively. Only about 4.7 percent live with their fathers only. Less than half (46.3 percent) of the respondents are civil servants and closely follow by those who are into business (35.3 percent) or entrepreneurship while 3.7 percent are farmers.

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Table 2(a): A cross tabulation on age and dietary practices on frequency of eating fresh (balance/natural meal) food.

		Dietary practices on frequency of eating fresh food.					Total
		more than once a day	once a day	3-6 days	at most 2 days or occasionally	Never	
Age	**13-15**	3 2.7%	4 4.9%	2 5.6%	9 6.6%	1 10.0%	19 5.1%
	16-18	34 30.6%	31 37.8%	8 22.2%	47 34.6%	1 10.0%	121 32.3%
	19 and above	74 66.7%	47 57.3%	26 72.2%	80 58.8%	8 80.0%	235 62.7%
	Total	111 100.0%	82 100.0%	36 100.0%	136 100.0%	10 100.0%	375 100.0%

The data in Table 2(a) revealed that there is no statistical significant relationship between age and dietary practices ($P < 0.05$) among the participants in terms of eating fresh (balance/natural meal) food. Eating of fresh (balance/natural meal) food as shown on the table was occasionally done across all the ages. To confirm this further, a chi-square analysis was done as shown in Table 2(b) below.

Table 2(b). Pearson chi-square test for association between age and dietary practices

	Descriptive statistics			**Symmetric measure Nominal by Nominal**		
	N	Df	Pearson Chi-square	Phi	Cramer's V	Sig.
Age *Dietary	375	8	8.111	0.147	0.104	0.425

P>0.05

The Pearson Chi-Square (χ) test of 8.111 (p=0.425) revealed no statistically significant association between participants' age and dietary practice. Testing the strength of association using Phi and Cramer's V, both revealed that strength of association between the variables is very weak. The null hypothesis which states that there is no significant association between age and adolescents dietary practices was sustained. This research study contradicts work of Harnack, Stang and Story (1999) which identified age as an important predictor of dietary practices.

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Table 3(a): A cross tabulation on gender and dietary practices on frequency of eating fresh (balance meal) food.

		Dietary practices on frequency of eating fresh food.					Total
		more than once a day	once a day	3-6 days	At most 2 days or occasionally	Never	
Gender of respondents	**Male**	31 27.9%	20 24.4%	18 50.0%	40 29.4%	5 50.0%	114 30.4%
	Female	80 72.1%	62 75.6%	18 50.0%	96 70.6%	5 50.0%	261 69.6%
	Total	111 100.0%	82 100.0%	36 100.0%	136 100.0%	10 100.0%	375 100.0%

The data in Table 3(a) revealed that eating of fresh (balance/natural meal) food as shown on the table varies with gender. The female respondents (77 percent) tend to eat fresh and balance meal at least once a day compare to their male counterpart.

Table 3(b). Pearson chi-square test for association between gender and dietary practices

	Descriptive statistics			**Symmetric measure Nominal by Nominal**		
	N	Df	Pearson Chi-square	Phi	Cramer's V	Sig.
Gender*Dietary	375	4	10.135	0.164	0.164	0.038

$P<0.05$

The Pearson Chi-Square (χ) test of 10.135 (p=0.038) revealed a statistically significant association between participants' gender and dietary practice. Testing the strength of association using Phi and Cramer's V, both revealed that strength of association between the variables is weak. However, the null hypothesis which states that there is no significant association between gender and adolescents dietary practices was rejected.

The implication of this finding is that the female adolescent tend to eat more than once a day fresh and balance meal compare to their male counterpart. This is confirmed by Nilsen *et al*., (2009) and Bere, Brug & Klepp (2007), who both found that girls were eating healthier than the boys in their Norwegian samples of adolescents. This is similar to the research study of Gilliland, Li and Rockett (2003) who revealed that boys tend to have higher intakes of energy, fat and protein, while girls are more likely to meet the recommended number of serving of fruits and vegetables. The same has been found both in the U.S. (Ranjit *et al*., 2010) and in European countries (Vereecken *et al*., 2005). It is also found that boys eat significantly more fast food than girls (French *et al.*, 2001). Statistics has also revealed that boys eat less fruits and vegetable than girls and consume more soft drinks (World Health Organization, 2004).

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Table 4(a): A cross tabulation on self esteem factor and dietary practices on frequency of eating fresh (balance meal) food.

		Dietary practices on frequency of eating fresh food.					Total
		more than once a day	once a day	3-6 days	At most 2 days or occasionally	never	
Self esteem as influence by peers of respondents	Strongly agreed	6 5.5%	5 6.1%	2 5.9%	4 3.0%	2 20.0%	19 5.2%
	Agreed	6 5.5%	9 11.0%	10 29.4%	10 7.5%	2 20.0%	37 10.1%
	Disagreed	26 23.9%	25 30.5%	10 29.4%	38 28.6%	1 10.0%	100 27.2%
	Strongly disagreed	71 65.1%	43 52.4%	12 35.3%	81 60.9%	5 50.0%	212 57.6%
	Total	109 100.0%	82 100.0%	34 100.0%	133 100.0%	10 100.0 %	368 100.0 %

The data in Table 4(a) revealed that eating of fresh (balance/natural meal) food as shown on the table varies with self-esteem. This results show that the participants' self-esteem across the dietary practices was poor. Most (57.6%) of the respondents were negative in their self esteem responses concerning the dietary practices. This revealed low self esteem among the participants of this study.

Table 4(b): Pearson chi-square test for association between self esteem and dietary practices

	Descriptive statistics		**Symmetric measure Nominal by Nominal**			
	N	Df	Pearson Chi-square	Phi	Cramer's	Sig.
Self esteem *Dietary	368	12	29.237	0.282	0.163	0.004

P<0.05

The Pearson Chi-Square (χ) test of 29.237 (p=0.004) revealed a statistically significant association between participants' self-esteem and dietary practice. Testing the strength of association using Phi and Cramer's V, both revealed that strength of association between the variables is weak, yet, the null hypothesis which states that there is no significant association between self-esteem and adolescents dietary practices cannot be retained.

This corroborates the findings of Kansi, Wichstrøm & Bergman (2003), Daee *et al*., (2002), French *et al*., (2001) who identified low self-esteem as an important risk factor for developing eating disorders. Impact of self esteem is evident in the research work of Neumark-Sztainer, Story, Hannan, Perry & Irving, (2002) where many adolescent girls are trying to lose weight

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or trying to keep from gaining weight, regardless of whether they are overweight or not Dieting is often associated with restrained eating.

Implication for public health

One major reason for focusing on adolescents and their dietary practices is that this period of life is a unique opportunity to break a range of vicious cycles of structural problems that are passed from one generation to the next. At least in certain population groups, another long-term benefit of improved nutrition in adolescence, particularly in girls, is the reduced risk of osteoporosis in older age. Failure to consume an adequate diet at this time can result in delayed sexual maturation and can arrest or slow linear growth. Nutrition is also important during this time to help prevent adult diet-related chronic diseases, such as cardiovascular disease, cancer, and osteoporosis. Therefore, policy that encourages the state government to incorporate adolescent nutritional needs and dietary practices assessment in health centres should be uphold strongly.

The adolescent period offers immense opportunities to develop those who will steer the affairs of the world in the next few years. Multi-disciplinary efforts must be put in place to harness and maximize the potentials in the adolescent. Failure to do this will result in a generation of maladjusted adults who will replicate themselves. Therefore, aadequate sensitisation will help to correct poor dietary practices among adolescents.

CONCLUSION

The study assessed the psychosocial factors (age, gender, self-esteem) influencing adolescent's dietary practices. The study revealed that across each of the age category the respondents have poor dietary practice. The study also revealed that there is no statistically significant association between age and dietary practice of adolescent. However, there is significant association between gender, self esteem and adolescents' dietary practices. Two third of the respondents skip meals (especially breakfast) due to their weight and majority of the respondents do not eat whatever their friends tell them to eat while some starve themselves due to comments from their friends.

RECOMMENDATION

The following recommendations are suggested so as to curtail the health problems associated to dietary practices among adolescent:

1. There should be nutrition education in the schools starting from primary to tertiary level.
2. Parents should insist on good feeding habits for their adolescents. This includes not only eating well but eating right. Family has a crucial role in shaping the adolescents behaviour. They have to ensure a safe, secure, and supportive environment for the adolescents.
3. Family members in the community should be informed and educated about this problem. A positive and encouraging attitude has to be developed among the family members and parents. School teachers should be trained on adolescent health.

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4. The University meal option should be done in a way that you can use a single meal ticket to either eat breakfast, lunch or supper and location for taking meal should be increased so as to strengthen breakfast and lunch programmes.

5. Strengthening youth friendly centers to discourage poor dietary habits. The willingness of adolescents to try out new behaviours creates a unique opportunity for nutrition education and health promotion. Adolescence is an especially important time in the life cycle for nutrition education since dietary habits adopted during this period are likely to persist into

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