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Fast food consumption habits among young people in south western Nigeria

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Abstract

Objective: The study assessed the profile and factors associated with fast food consumption among young people in tertiary educational institutions in Ibadan, Nigeria.

Materials and Methods: This was a cross-sectional study carried out among 300 eligible undergraduates in four campuses in Ibadan, Nigeria. Socio-demographic characteristics and information on fast food consumption and other relevant data were collected using a self-administered questionnaire. Statistically significant p-value was set at <0.05. SPSS version 23 was used for data analysis.

Results: The mean ± standard deviation (SD) age was 21.6 ± 3.7 years and females constituted 66% of the participants. Nine out of ten participants had never married, majority were fulltime students and holiday jobs were noted in less than a third. About three out of five participants consumed fast food, which was usually flour-based. The commonest pattern of fast food consumption was lunch, with the commonest frequencies of once a day and thrice a week. The strongest reasons for consumption include being considered nutritious, being readily available, claiming it provides value for money, and being accessible.

Conclusion: Fast food consumption was high in this study and this potentially has serious implications on the cardiovascular health of the participants. There is need for concerted efforts by the relevant stakeholders in stemming this tide by encouraging health education for healthy eating among young persons.

Keywords: Factors, fast food, young people, Ibadan, unhealthy diet

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Habitudes de consommation de restauration rapide chez les jeunes du sud-ouest du Nigéria

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Résumé

Objectif de l'étude : L'étude a évalué le profil et les facteurs associés à la consommation de restauration rapide chez les jeunes des établissements d'enseignement supérieur à Ibadan, au Nigeria.

Matériels et méthode de l'étude : Il s'agissait d'une étude transversale menée auprès de 300 étudiants de premier cycle éligibles dans quatre campus à Ibadan, au Nigeria. Les caractéristiques socio-démographiques et les informations sur la consommation de restauration rapide et d'autres données pertinentes ont été recueillies à l'aide d'un questionnaire auto-administré. La valeur p statistiquement significative a été fixée à <0,05. SPSS version 23 a été utilisé pour l'analyse des données.

Résultat de l'étude ; L'âge moyen ± écart type (ET) était de 21,6 ± 3,7 ans et les femmes constituaient 66 % des participants. Neuf participants sur dix ne s'étaient jamais mariés, la majorité étaient des étudiants à temps plein et des emplois de vacances ont été notés dans moins d'un tiers. Environ trois participants sur cinq consommaient de la restauration rapide, généralement à base de farine. Le modèle le plus courant de consommation de restauration rapide était le déjeuner, avec les fréquences les plus courantes d'une fois par jour et trois fois par semaine. Les principales raisons de la consommation incluent le fait d'être considéré comme nutritif, d'être facilement disponible, d'affirmer qu'il offre un bon rapport qualité-prix et d'être accessible.

Conclusion: La consommation courante de restauration rapide était élevée dans cette étude, ce qui a potentiellement de graves conséquences sur la santé cardiovasculaire des participants. Il est nécessaire que les acteurs concernés déploient des efforts concertés pour endiguer cette marée en encourageant l'éducation à la santé pour une alimentation saine chez les jeunes.

Mots clés : facteurs, restauration rapide, jeunes, Ibadan, mauvaise alimentation

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INTRODUCTION

Fast food has gained popularity globally with all ages and races patronizing the industry (1-5). It is simply defined as any quickly prepared and served food which can be eaten at the point of purchase or packaged and taken away (6). There is increasing appetite for fast food and that has led to more providers springing up to meet these needs. Such high demands have not only been noted in developed countries such as the United States and South Korea but also in developing countries, Nigeria inclusive (7, 8).

Few available studies are mostly single institutional setting study in Nigeria and have reported fast food consumption across all age groups including young people (9,10). A prevalence as high as 60-100% of fast food consumption have been reported among young people in Nigeria (10,11). A study in Ogbomosho in Oyo State in South Western Nigeria, documented a 90% prevalence of fast food intake among young people and 72% of them were students (11). Imbalance in the nutritional content of fast food has been reported as such consumptions have been found to be dense in calorie but deficient in micronutrients (9,10). This increases the risk of malnutrition and non-communicable diseases with the later reported among young people who consume high amounts of fast foods (12). Young people despite having a good knowledge of the health risks of fast foods still highly patronize the industry (12).

Understanding the profile, pattern and drivers of fast food consumption among young persons in various setting would aid policy formulation in stemming the tide of the burgeoning obesity epidemic and high burden of other cardiovascular risk factors and diseases.

This study was aimed at determining the profile and factors associated with fast food consumption among young people on tertiary educational campuses in Ibadan, Nigeria.

MATERIALS AND METHODS

Description of study

Study Design

It was a cross-sectional study that was carried out in four selected tertiary institutions in Ibadan between May to Nov 2021. A study protocol has been published (13).

Study Population and area

A total of 300 young people attending four selected institutions in Ibadan were included for this study. There are 21 tertiary institutions owned by the federal government, Oyo State government, private organizations, or individuals in Ibadan, the state capital of Oyo State, Nigeria. The following educational institutions were included: College of Nursing and Midwifery, Federal School of Statistics, Oyo State College of Health Science and Technology, and The Polytechnic. Students enrolled in diploma, undergraduate, or postgraduate programs at any of these four campuses who were between the ages of 16 and 35 were included. Those who opted out were excluded.

Study Instrument

A self-administered questionnaire was used to obtain information from the participants and was administered by two trained research assistants.

Socio-demographic characteristics captured in the questionnaire were gender, age, marital status, current academic status, level of study, employment status, involvement in holiday jobs and monthly income. Questions on fast food were: intake of fast food; regular fast food intake, type of fast food eaten, average intake in a day and week, respectively, average amount spent on fast food and reasons for fast food consumption. The participants were asked to rate their reasons for fast food intake on Likert scale style (1–5). Ten reasons were assessed: “nutritiousness”, “participant can't cook”, “leisure/socializing”, “due to advertisement”, “availability”, “no reason”, “provision of value for money”, “hygiene/freedom from contamination”, “accessibility” and “aesthetics” (Cronbach's alpha test=0.825) Weight was measured with a standard scale and recorded to the nearest 0.1 kg, while height was measured by a standard standiometer and recorded to the nearest 0.1 centimetre. Body Mass Index(BMI) was calculated using the weight of the patient to the square of height. In order to measure the waist circumference, a non-stretchable measuring tape is placed in a horizontal plane around the abdomen at the level of the iliac crest. Before reading the tape measure, effort was made such that the tape is snug, but does not compress the skin, and is parallel to the floor.

The Reece figure rating scale (RFRS), a psychometric measurement with two sets of 9 silhouettes ranging from thin to extremely obese, was used to assess the participant's perception of their weight. Each participant was asked to self-select the silhouette that best indicates his or her current body size and the silhouette that reflects his or her ideal body size.

The RFRS score picked for the figure that best fit

the current size of the participant was subtracted from the score picked for the ideal size assessed by the participant and was used to assess participant's weight perception. It was considered a negative perception if the value of the ideal was higher than what was scored for the current best fit.

Data management and analysis

Data were entered and analyzed using the Statistical Package for the Social Sciences version 23 and stored in a secure location to ensure confidentiality. Continuous quantitative variables were expressed as mean and standard deviation, while categorical variables were reported as proportions and frequencies. The continuous variables were subjected to the normality test using the Shapiro–Wilk test. Continuous variables were compared using the Student t-test while categorical variables were compared using chi square/Fisher exact test. The Likert like scale was analysed as mean and standard deviation and expressed as chart.

Unconditional multivariate logistic regression model was used to determine the adjusted and associated factors for fast food consumption and frequency of fast food consumption. Adjustment were made for selected factors identified from literature review and empirical evidence based on significant associations found in our initial bivariate analyses. The odds ratio (OR) and 95% confidence intervals (CIs) in our models were estimated.

For all tests, p-value of <0.05 were considered to be significant.

Ethical Considerations

Ethical clearance was obtained from the Ethics Review Committee, Oyo State, Ministry of Health in accordance with the National Code of Health Research Ethics Committee (NHREC) (AD 13/479/1776B) before the commencement of the study. Also institutional approval was gotten from each of the participating schools before commencement of study. Finally, informed written consent was obtained from the participants. Confidentiality of participants and their information was ensured by omitting their names in the questionnaire and by pass-wording the computer with their data, granting access only to the investigators. It was ensured old participants were not recruited again by obtaining a verbal report of prior non-participation in the study. They were notified that their involvement in the study was voluntary and they could withdraw at any stage of the study without any consequence.

RESULTS

Table 1 shows the baseline characteristics of participants. There were more females, and nine out of ten participants had never married. The majority were full time students, four out of five participants earned ≥ 20,000 naira, and holiday jobs in less than a third of participants.

Four out of every five participants consumed fast food, which was usually flour-based (Table 2). The commonest pattern of consumption was lunch, breakfast, and dinner in descending order, with the commonest frequencies were once a day and thrice a week (Table 2).

The strongest reasons for consumption include being considered nutritious, being readily available, claiming it provides value for money, and being accessible (Figure 1).

The bivariate analysis of the fast food consumption results is shown in table 3. No factor was significant at a p value less than 0.05 although at 0.100 having holiday job was significant and was included in the multivariate model analysis with gender, monthly income classification (≤20,000 vs >20,000 naira), body mass index(BMI), married (Yes vs No), year of study (≤ 2 years vs > 2 years), partaking in holiday job (yes vs no).

The bivariate analysis of the frequency of fast food consumption results are shown in table 4. Age classification (≤22 years > 22 years) and year of study (≤ 2 years' vs > 2 years), partaking in holiday job (yes vs no) were significant at a p value less than 0.05.

No independent predictor was identified at p value of <0.05(Table 5). However, years of study and doing holiday job were independent predictors of weekly frequency of fast food consumption (Table 6).

DISCUSSION

Fast food consumption is very common in this study with flour-based and lunch being the commonest timings for such meal consumption. Previous reports in Nigeria have also identified that high proportion of undergraduates consume fast food.(7, 14) High burden of fast food consumption appears to be a global phenomenon with many reports globally suggesting such.(1-5) This is not unconnected to increasing possibility of young person to be attracted to fast food in addition to displacement from usual family system, lack of time, availability of fast food and

availability of expendable income (5,15). Fast food industry are also supported with heavy advertisement and significant investment on aesthetic appeal which are likely to draw many young customers and consumers (11,16). In some cities, fast food outlets have been noted to cluster around schools and targeting young customers are one of the marketing tactics (17). This high consumption has serious health consequences. This observation should inform policies to control neighborhood availability of fast food restaurants as a means to reduce or prevent obesity (17,18).

There was high burden of fast food consumption similar to finding from a single tertiary centre also in Ibadan Nigeria where 80.5% of the respondents consume fast foods weekly (14). The weekly frequency pattern in our study may not suggest mere cultural faddism rather than it is possible meeting a feeding need, considering three out of five participants tend to take such during lunch time. Timing for lunch is the time they are likely to be away from where they can get home-made meals or self-prepared meals and such period form the peak of their daily academic activities (3). Clear timing of intake found in this study was not available in another study in a nearby city in South Western Nigeria although another study in South Eastern Nigeria found more of breakfast (9, 10).

Most consumed types of fast food in this study are flour-based similar to previous reports (14). This has the potential of providing more energy density with risk of obesity (9). This pattern of consumption is interesting considering the innovative way the fast food industry in Nigeria have made attempt at blending their menus with African cuisines like jollof rice, pounded yam, among others (16). The implication of this finding is most of the participants are patronizing the less nutritious, energy dense, low fibre, high dietary cholesterol and more refined sugar with unhealthy consequences especially risks for non–communicable diseases including diabetes mellitus and cardiovascular diseases (19,20). Unfortunately, many of our participants erroneously considered fast food to be nutritious. This is an identifiable public health interventional gap that needs to be addressed with appropriate health educational policy by the relevant stakeholders.

They also commonly considered it to provide them value for money, accessible food item and readily available. We believe these are drivers of the behaviors for the high consumption pattern. These factors have previously been identified among college students (4). Having holiday job was an independent predictor found in this study which is not unconnected to possible availability of disposable income, suggest some level of independence and increased likelihood to spend more time away from home or hostel (21). Similarly, the earlier years of the study was found to predict frequent fast food consumption. This is not surprising given that the early years of school are associated with difficulty adjusting to the school environment.

While this study provides a multi-centre report of fast food consumption in Ibadan the study is limited by the quantitative data collection of the study. A qualitative approach would provide additional and unique insights into specific contexts or social situations of fast food consumption among young persons in this environment.

CONCLUSION

Fast food consumption is common among students in this study and this has serious implications on the cardiovascular health of the participants. There is need for concerted efforts by the relevant stakeholders in stemming this tide by encouraging health education for healthy eating among young persons.

Conflict of Interest: The authors have no conflict of interest to declare.

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Table 1: Baseline characteristics of participants

Variables	
Age mean ± SD years	21.6 ± 3.7
Gender (n=300) n (%)	
Male	102 (34.0)
Female	198 (66.0)
Level or year of study (n=300) n (%)	
First year	166 (55.3)
Second year	114 (38.0)
Third year	15 (5.0)
Fourth year	5 (1.7)
Course of study (n=300) n (%)	
Accounting	25 (8.3)
Basic Nursing	21 (7.0)
Business administration management	25 (8.3)
Community midwifery	22 (7.3)
Community Nursing	15 (5.0)
Computer science	25 (8.3)
Electrical engineering	25 (8.3)
Environmental health technology	26 (8.7)
Health information management	23 (7.7)
Mass communication	25 (8.3)
Medical laboratory technician	1 (0.3)
Microbiology	25 (8.3)
Midwifery	17 (5.7)
Pharmacy technician	25 (8.3)
Marital status (n=298) n (%)	
Never married	279 (93.6)
Currently married	19 (6.4)
Current academic status (n=297) n (%)	
Student (full-time)	293 (98.7)
Part time student	4 (1.3)
Monthly income (n=151) n (%)	
0-10,000 naira	90 (59.6)
11,000-20,000 naira	37 (24.5)
21,000-30,000 naira	9 (6.0)
31,000 and above	15 (9.9)
Holiday job (n=254) n (%)	
Yes	74 (29.1)
No	180 (70.9)
Weight mean ± SD kg	57.2 ± 11.3
Height mean ± SD m	1.7 ± 0.1
BMI mean ± SD kg/m^2	20.9 ± 3.8
Waist circumference mean ± SD cm	75.1 ± 8.4
Hip circumference mean ± SD cm	88.6 ± 9.1

Table 2: Profile related to fast food consumption among participants

Consumption of fast food (n=300) n (%)	
Yes	258 (86.0)
No	42 (14.0)
Usual fast food meal n=260) n (%)	
Breakfast	62 (23.8)
Lunch	89 (34.2)
Dinner	15 (5.8)
All	51 (19.6)
Can't say	43 (16.5)
Frequency of fast food in a day(n=253) n (%)	
1	114 (45.1)
2	82 (32.4)
3	38 (15.0)
4	11 (4.3)
>5	43 (17.0)
Frequency of fast food in a week(n=251) n (%)	
1	29 (11.6)
2	40 (15.9)
3	53 (21.1)
4	41 (16.3)
5	38 (15.1)
6	18 (7.2)
7	20 (8.0)
>8	12 (4.8)
Usual fast-food items consumed (n=258) n (%)	
Flour-based	160 (62.0)
Meat-based	29 (11.2)
Dairy products	31 (12.0)
Fruit juices/malted sweetened drinks	38 (14.7)
Average amount you spend on fast-food per outing(n=260) n (%) 260	
<500 naira	141 (54.2)
501-1000 naira	62 (23.8)
1001-1500 naira	30 (11.5)
1501-2000 naira	18 (6.9)
>2000 naira	9 (3.5)

Table 3: Table comparing fast food consumption among participants

Variables	Do you eat in fast food			P-value
	All	Yes	No	
Gender (n=300) n (%)				0.631
Male	102 (34.0)	86 (33.5)	16 (37.2)	
Female	198 (66.0)	171 (66.5)	27 (62.8)	
Age (n=291) n (%)				0.630
≤ 22 years	201 (69.1)	174 (69.6)	27 (65.9)	
> 22 years	90 (30.9)	76 (30.4)	14 (34.1)	
Year of study (n=300) n (%)				0.749
≤ 2 years	280 (93.3)	239 (93.0)	41 (95.3)	
> 2 years	20 (6.7)	18 (7.0)	2 (4.7)	
Married (n=300) n (%)				
Yes	19 (6.3)	14 (5.4)	5 (11.6)	0.166
No	281 (93.7)	243 (94.6)	38 (88.4)	
Current academic status (n=297) n (%)				0.467
Student (full-time)	293 (98.7)	251 (98.8)	42 (97.7)	
Part-time student	4 (1.3)	3 (1.2)	1 (2.3)	
Do you co holiday job (n=254) n (%)				0.050
Yes	74 (29.1)	68 (35.1)	6 (15.8)	
No	180 (70.9)	148 (68.5)	32 (84.2)	
Monthly income in naira (n=151) n (%)				
≤ 20,000	127 (84.1)	108 (83.7)	19 (86.4)	1.000
> 20,000	24 (15.9)	21(16.3)	3(13.6)	
Weight mean ± SD kg	57.2 ± 11.3	57.3 ± 11.6	56.8 ± 9.0	0.791
Height mean ± SD m	1.7 ± 0.1	1.7 ± 0.1	1.7 ± 0.1	0.875
BMI mean ± SD kg/m^2	20.9 ± 3.8	20.9 ± 3.9	20.7 ± 3.2	0.761
Waist circumference mean ± SD cm	75.1 ± 8.4	75.1 ± 8.4	75.3 ± 8.3	0.899
Hip circumference mean ± SD cm	88.6 ± 9.1	88.5 ± 9.4	89.4 ± 7.2	0.625

Table 4: Table comparing frequency of fast food consumption among participants

Variables	Frequency of Fast Food per Week			P-value
	All	= 3/week	< 3/week	
Gender (n=251) n (%)				0.537
Male	85 (33.9)	39 (32.0)	46 (35.7)	
Female	166 (66.1)	83 (68.0)	83 (64.3)	
Age (n=244) n (%)				**0.011**
≤ 22 years	171 (70.1)	75 (62.5)	96 (77.4)	
> 22 years	73 (29.9)	45 (37.5)	28 (22.6)	
Year of study (n=251) n (%)				**0.001**
≤ 2 years	235 (93.6)	108 (88.5)	127 (98.4)	
> 2 years	16 (6.4)	14 (11.5)	2 (1.6)	
Married (n=251) n (%)				0.227
Yes	14 (5.6)	9 (7.4)	5 (3.9)	
No	237 (94.4)	113 (92.6)	124 (96.1)	
Monthly income (n=297) n (%)				0.800
≤ 20,000	107 (42.6)	53 (43.4)	54 (41.9)	
> 20,000	144 (57.4)	69 (56.6)	75 (58.1)	
Current academic status (n=248) n (%)				1.000
Student (Full-time)	246 (99.2)	119 (99.2)	127 (99.2)	
Part time student	2 (0.8)	1 (0.8)	1 (0.8)	
Do you co holiday job (n=212) n (%)				0.061
Yes	65 (30.7)	25 (24.5)	40 (36.4)	
No	147 (69.3)	77 (75.5)	70 (63.6)	
Weight mean ± SD(n=300) kg	57.2± 11.3	57.4 ± 12.2	57.0 ± 11.2	0.824
Height mean ± SD(n=300) metre	1.7 ± 0.7	1.6 ± 0.1	1.7 ± 0.1	0.221
Waist circumference mean ± SD(n=300) cm	75.1 ±8.4	75.5 ± 9.4	74.8 ± 7.5	0.563
Hip circumference mean ± SD (n=300)cm	88.6±9.1	89.3 ± 8.6	87.5 ± 10.1	0.139
BMI mean ± SD (n=300) kg/m^2	20.9±3.8	21.1 ± 4.2	20.7 ± 3.8	0.391

Table 5: Factors associated with fast food consumption

Variables	B	S.E.	Wald	Exp(B)	95% C.I. for EXP(B)		P-valu
					Lower	Upper	
Gender(male)	-.100	.515	0.038	0.904	0.330	2.480	0.845
Income(≤20,000naira)	.441	.729	.366	1.554	0.373	6.482	0.545
Married(Yes)	1.724	.985	3.063	5.606	0.813	38.642	0.080
Year of Study(≤ 2 years)	.244	1.127	0.047	1.276	0.140	11.614	0.829
Holiday job(Yes)	1.405	.612	5.279	4.076	1.229	13.517	**0.022**
Body mass index	-.060	.076	0.625	0.941	0.810	1.093	0.429
Constant	-2.134	2.168	0.969	0.118			0.325

Table 6: Factors associated with weekly fast food consumption

Variables	B	S.E.	Wald	Exp(B)	95% C.I.for EXP(B)		p-value
					Lower	Upper	
Age	-.048	.052	.857	.953	.861	1.055	0.355
Year of Study(≤ 2 years)	1.904	.811	5.507	6.710	1.368	32.898	**0.019**
Monthly income (≤20,000naira)	-.281	.304	.853	.755	.416	1.370	0.356
Married (Yes)	-.112	.805	.019	.894	.185	4.329	0.889
gender(male)	-.056	.306	.034	.945	.519	1.723	0.854
Body mass index	-.049	.039	1.543	.952	.882	1.029	0.214
Holiday job(Yes)	.758	.341	4.928	2.133	1.093	4.165	**0.026**
Constant	.247	1.491	.027	1.280			0.868

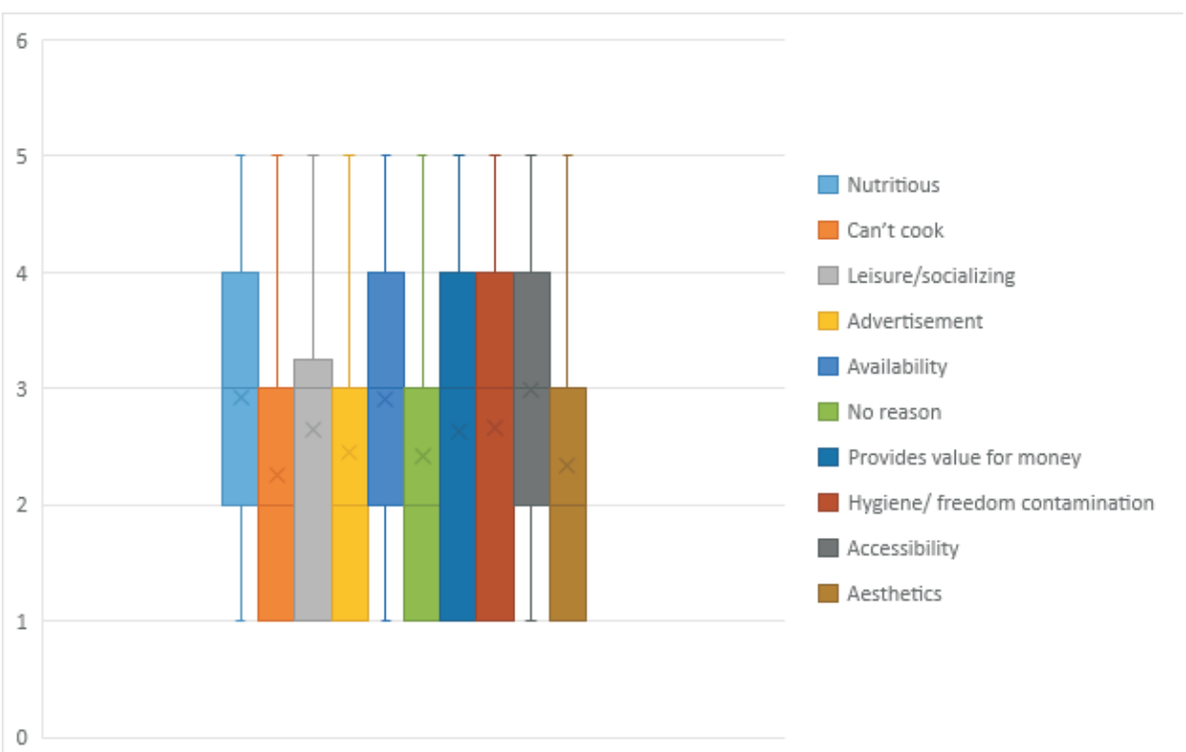

Figure 1: Response on Likert scale to reasons for fast food consumption