SNAIL CONSUMPTION AND SNAIL SHELL UTILIZATION: PERCEPTION OF UISHOPWEL AND MEAT SHOP CUSTOMERS

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ABSTRACT
The increasing demand for snails, driven by their high protein content and medical value, has led to heightened interest in both domestic and foreign markets. However, the shells of these snails often face neglect during processing, posing environmental challenges. To address this, a study was conducted at the University of Ibadan, UishopweL, and meat shops in Ibadan metropolis. Seventy-four structured questionnaires were administered to gather insights into factors influencing snail consumption, methods of processing snail shells, and their potential uses. The findings highlighted that 45.9% of respondents attributed snail consumption to allowances, while 12.2% considered family background, 32.4% mentioned environment, 13.5% focused on taste, 6.8% took health conditions into account, 8.1% noted a nonchalant attitude, 12.2% considered age, and 47.3% emphasized the availability of snail meat. Additionally, 86.5% recognized the snail shell as an excellent calcium source, with 81.1% acknowledging its use as a ceramic filter, 63.5% in paint, 74.3% in animal feeds, 66.2% in construction, 39.2% in paper industries, 74.3% for enhancing product hardness, and 78.4% for strengthening materials. Regarding snail shell processing, 10.9% burned shells for calcium extraction, 2.7% ground and crushed them, 78.4% discarded them, and 8.1% did not specify. The study concluded that respondents were generally aware of the various uses of snail shells, particularly their role as a natural source of calcium and their potential in animal feeds.
Keywords: Protein source, micro-livestock, UishopweL

INTRODUCTION

Snails have been one of the most nutritious meat without cholesterol unlike red meat and others (Murphy, 2001). Snails are bilaterally symmetrical invertebrates with soft segmented exoskeleton (Shell) in the form of calcareous shells. They belong to the phylum Mollusca. In West Africa, snails dwell mostly in humid forest areas from where these are gathered by villagers for consumption and other uses (Onuigbo, 2015). Snails have high protein content and are medically valuable (Wosi and Oseni, 2004) and so for this reason the demand for snails have increased over the years in both domestic and foreign demands.

Many researchers have reported on the nutritious contents of some species of snails' meat common to their environment. However, the shells of such snails are often given less attention as regards its usefulness, compositions and nutritional value. Snails' shells have often been disregarded from many quarters during processing and most of the shells have constituted nuisance to the environmental health of the society. Therefore, this study was conducted to determine factors affecting snail consumption and snail shell utilization awareness at UishopweL and meat shop.

MATERIALS AND METHODS

This study was carried out at UiShopweL and meat shop. University of Ibadan. A well-structured self-reporting questionnaire was administered to 74 respondents within the study area to elicit information on factors affecting rate of snail meat consumption, method of processing snail shell, and its uses. Data were analysed using descriptive analysis.

RESULTS AND DISCUSSION

Presented in Table 1 is the demographic distribution of the respondents that patronizes UishopweL. 66.2% respondents were from University of Ibadan while 20.3% were from the environs and 14.5% did not specify. 59.5% were male while 39.2% were female, 4.1% of the respondent age were < 20, 68.9% were 20-29 years, 14.9% were 30 – 39 years, 10.8% were within the range of 40- 49 years and 1.4% of the respondent did not specify. 39.2% of the respondent were married, 59.5% were single while 1.4% did not specify. The study revealed

that 4.1% of the respondent had secondary education, 94.6% had tertiary education while 1.4% did not specify. The results revealed that most people patronizing UishopweL were elites and this could be as a results of the location of the study area and also well educated workers at UishopweL compared to other outside the University environs.

Table 1: Demographic distribution of the respondents

Variables	Respondents	Percentage
Names of community		
University of Ibadan	49	66.2
Ajibode	1	1.4
Agbowo	3	4.1
Ishiagh	2	2.7
Osajin	1	1.4
Apete	1	1.4
Akanran	1	1.4
Apata	1	1.4
Not specify	15	20.3
Total	**74**	**100.0**
Gender		
Male	44	59.5
Female	29	39.2
Not specify	1	1.4
Total	74	100.0
Age (years)		
Below 20	3	4.1
20-29	51	68.9
30-39	11	14.9
40-49	8	10.8
Not specify	1	1.4
Total	74	100.0
Education		
Informal	0	0
Primary	0	0
Secondary	3	4.1
Tertiary	70	94.6
Not specify	1	1.4
Total	74	100.0

Field Survey Data, 2022

Presented in Table 2 are the factors affecting consumption of snail at UishopweL and meat shop. The result of this study revealed that snail consumption at UishopweL and meat shop is mainly affected by income (45.9%) and environment (32.4%) while lower respondents 6.8 and 5.4% claimed health status and religion, respectively. This result shows that the price of snail which is relatively higher compared to other sources of protein primarily determine it consumption. However, other factors like family taste and even time of cooking were considered by consumers while religious belief / taboos towards snail were not key to the reason why people decide to eat snail. This result corroborate earlier findings of Gamba *et al* (2013) who reported income, meat price, gender and age to influenced meat consumption, it observed that prices, income, taste and preferences are the key variables affecting protein consumption level.

Table 2: Factors affecting snail consumption at UishopweL and meat shop

Items	No effect (%)	Has effect (%)	Mild effect (%)	Major effect (%)	NS (%)
Allowance /Salary	41.9	45.9	9.5	2.7	0
Family background	73	12.2	14.9	0	0
Environment	36.5	32.4	16.2	6.8	8.1
Taste	56.8	13.5	16.2	13.5	0
Health condition	79.7	6.8	6.8	6.8	0
Nonchalant attitude	75.7	8.1	16.2	0	0
Age	79.7	12.2	8.1	0	0
Snail meat availability	25.7	47.3	6.8	20.3	0
Availability of time for cooking	73	13.5	6.8	6.8	0
Faith/Religion-based	79.7	5.4	0	14.9	0
Others	6.8	0	0	0	93.2

Field Survey Data, 2022

Revealed in Table 3 is the perception of respondents on how snail shell can be processed. Majority (78.4%) of the respondents discard the snail shell, while 10.9% bunt to collect ashes and 2.7% ground for further processes.. This result revealed that the majority did not know that snail shell can be processed to obtain calcium thereby causes the result of dumping to be high compare to others. Although lesser percentage of the respondents revealed their awareness of snail shell been processed in many forms. This result is consistent with the report of Kolawole *et al.* (2017) who reported that snail have enormous potential.

Table 3: How snail shell can be processed

Items	Frequency	Percentage %
Grinding and crushing	2	2.7
Dumping/discarded as waste	58	78.4
Burning to ashes to collect calcium	8	10.9
Not specify	6	8.1
Total	74	100.0

Field Survey Data, 2022

Presented in Table 4 are the respondents' perception on the uses of snail shells. Majority (98.7%) of the respondents collectively agreed that snail shell is a good source of calcium, while 1.4% are unaware. Preprondrance (97.3%) number of the respondents are aware that snail shell can be used as filters in the ceramic, paint, used in livestock feeds, and paper industry, while the entire respondents (100%) consent that snail shell increase hardiness of products. This result revealed that the respondent were aware that snail shell is useful for a lot of things but they are not aware of the way to processed it. This corroborate the findings of Jatto (2010) who reported that snail shell have numerous benefits which include manufacturing of jewels, buttons and collections for arts. The report also support the findings of Cobbinah *et al*., 2008 whose findings support snail shell to be a mineral that contain 98% of calcium carbonate.

Table 4: Possible Uses of snail shells

Items	Strongly agree %	Agree %	Not specified %
Source of calcium	86.5	12.2	1.4
Filters in the ceramic	81.1	16.2	2.7
Manufacture of paint	63.5	33.8	2.7
Animal/Livestock feeds	74.3	23	2.7
Used in construction company	66.2	32.4	1.4
Used in paper industries	39.2	58.1	2.7
Used to increase hardness of products	74.3	25.7	0

Conclusion

The study revealed that salary and availability of snail are the factors affecting snail meat consumption and also most respondents are aware of the usefulness of snail shell in different ways especially as a biological source of calcium and can be used in animal feeding.

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