ISSN No - 2582-788X RESEARCH ARTICLE

INTERNATIONAL JOURNAL OF
APPLIED CHEMICAL AND BIOLOGICAL SCIENCES

Study on the connection between Dietary lifestyle of People at Kasisi and Kabulonga, Zambia

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ABSTRACT

The study focused on the connection between dietary lifestyle, nutrition and diet status among different groups of people from rural (Kasisi) and urban (Kabulonga) areas of the Chongwe and Lusaka Districts of Zambia. A cross-sectional study design that covered in this research article and well-structured questionnaires were covered for data collection. Simple random technique was utilized in the selection of the respondents from the two areas of this research sample people, which was divided into respondents from each area. SPSS was used to analysis the data. The study showed that there is a connection between dietary lifestyle, diet and nutritional status among different groups of people.

Keywords: diet, dietary habits, nutrition, lifestyle

1. INTRODUCTION

In today's era people are more exposed to pollution and concerned about their health. The consumers want unique diet which not only fulfill their needs but also suit them perfectly. But they don't have same or unique consumption patterns and consumption behavior. To reach these different consumption behaviors and consumption patterns, the markets helps satisfy these demands through various product and services [1].

Our food and its consumption patterns helps in sustainable and healthy life style. The Nutrition transition as a consequence of affluence and urbanization has been measured as the main reason for the obesity epidemic. Many previous studies has acknowledged a noticeable change in the nutritional pattern globally [2]. Mainly dietary changes contain an upper energy concentration diet with a higher position for fat and extra sugars in foods. Higher saturated fat intake in body (generally from animals), minimized consumption of complex carbohydrates, marked increases in animal food consumption and minimized fruit and vegetable consumption and dietary fiber. These nutritional changes are compelled by lifestyle variations that reveal minimized physical exercise at work and at free time. Studies revealed that not satisfactory exercise is one of the major risk factors of obesity. The work-related action has reduced over modern decades in developed countries while relaxation time is taken by watching television and other inactive exercises has increased [3].

Several authors, organizations, commissions, economists and government agencies have expressed their views regarding the differences in shopping habits and dietary intake of people from villages and town areas [4]. The organization mentioned that the individual's behavioral decision can be made, depending on those satisfaction or dissatisfaction, positive or negative experience [5]. There are a variety of factors like societal, cultural, financial, individual and emotional which are influencing consumers to purchase.

According to WHO [6] total of 25.1 % incidence of obese in Zambia, about 17.1 % men and 33.1 % women are overweight. Furthermore, obesity prevalence was at 7.2 % with 2.9 % of men and 11.5 % of women being obese.

Diet is the food and beverages that a person eat every day to stay energetic, healthy and fit [7]. An individual should consume a mixture of nutritional food every day, in order to grow, live healthy and have enough energy. The reason for consuming a diversity of foods is because different foods contain different amounts and types of nutrients; therefore, we should aim to have a balanced diet (eating the right quantity of nutrients from a multiplicity of foods every day for our particular needs) [8].

According to U.S. Department of Agriculture and the Department of Health and Human Services [9] Nutrient-dense foods provide vitamins, minerals, and other substances that may have activist health effects, with moderately little calories. That is, they are lean or low in hard or solid fats, and reduce or rule out solid or hard fats, with additional sugars, and additional refined starches, as these additional calories but few important dietary fiber or nutrients.

It has been scientifically proven that there is a strong relationship between nutrition and health, therefore poor dietary habits can cause long-term health implication on consumers [10-11].

It is observed that consuming packed and marketed foods are unavoidable in this busy generation era, with the highest increase in national and international trade of foods [12-13]. The increased access to food commodities from different sources and with different ingredients has a potential risk for consumers to purchase foods with ingredients that have undesired impact to their health [14]. Lack of attentiveness to food labels, lack of education, unhealthy consciousness, products attributes, persuasion from media and lack of consumer guiding principle on the use of food labeling's. These factors linked with customers not reading and using food labeling information in purchasing food [15-16]. Many studies suggest the need for customers to acquire prior nutritional knowledge as well as accessibility of food on the market. Not only with products that have complex nutrition information table, but even with products there are familiar with and find it easy to interpret [17-18]. The aim of this study is to observe the availability of food commodities of the residential sites and determine food intakes, dietary habits and link with obesity among people.

2. METHOD AND MATERIAL

2.1. Study location:

The dietary habits was correlated among the people from three area mainly Kasisi (rural) and Kabulonga (urban) areas of Chongwe and Lusaka Districts, Zambia.

2.2. Research Design

The study targeted about 60 respondents and the survey was conducted with their consent and

permission. Cross-sectional and descriptive survey research methods were used. Data collection was done using structured questionnaires during the period of two months from June 2019 to November 2019

2.3. Sample Size and Sample Method

A sample size of 60 respondents was generated from a random sampling technique of the subjects' identification from two areas. This means that, a simple random sampling technique was used in the sampling design.

2.4. Data Analysis

For Data analysis the SPSS software package was used to analyses and enter the data.

3. RESULTS AND DATA ANALYSIS

A total numbers of 60 respondents from Kasisi (30) and Kabulonga (30) and relationship between the variables of consideration between the two residential areas.

3.1. Vegetables Frequency of Consumption:

The eating of vegetables translated to 76.7% and 66.7% in Kabulonga and Kasisi areas on daily basis respectively. The weekly consumption was 16.7% and 23.3% respectively monthly (3.3% and 3.3%) and non-consumption (Fig 1).

The consumption of meats (beef, pork and poultry, etc.) translated to 70% and 36.7% in Kabulonga and Kasisi on daily basis respectively. The rest show the weekly (23.7% and 50% respectively), monthly and non-consumption (table 1).

The drinking of milk and its products (milk, yoghurt, cheese, etc.) translated to 90% and 53.3% within Kabulonga and Kasisi on daily basis respectively. The rest show that after seven days the consummation was (10 % and 13.3% respectively), monthly (0% and 30%) and non-consumption (table 2).

The consumption of oils and fats translated to 90% and 70% in Kabulonga and Kasisi on daily basis respectively. The rest shows the weekly consumption of (10% and 13.3%), monthly (0% and 16.7%) and non-consumption respectively (table 3).

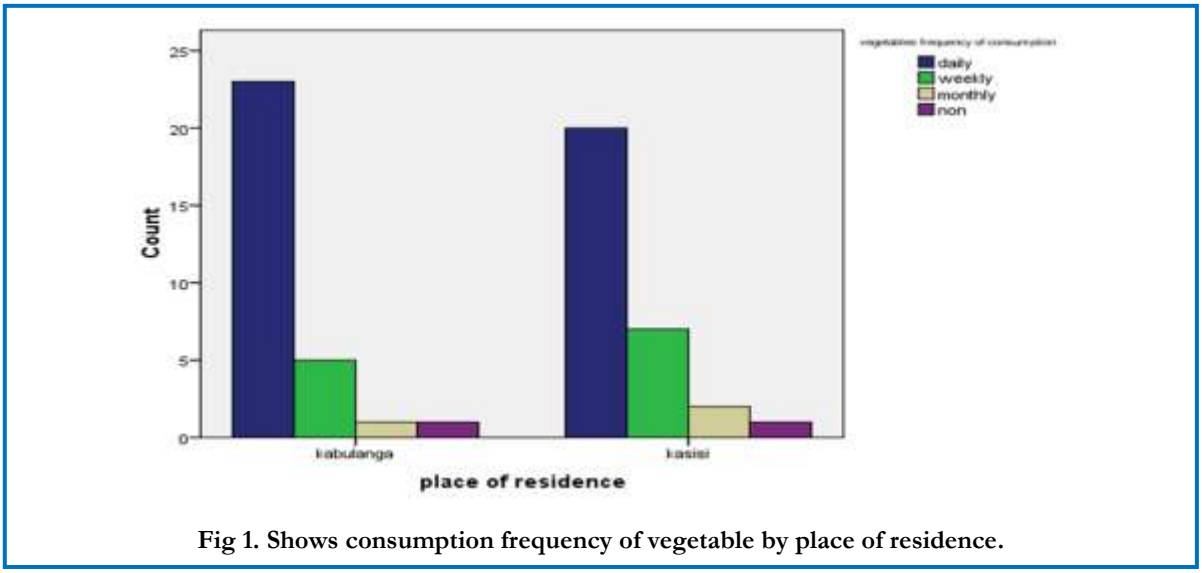

Fig 1. Shows consumption frequency of vegetable by place of residence.

Table 1. Oils and fats frequency of consumption Cross tabulation

Place of residence	Meats frequency of consumption					Total
		Daily	Weekly	Monthly	No-consumption	
Kabulonga	Count	27	3	0	30	27
	% within place of residence	90.0%	10.0%	.0%	100.0%	90.0%
Kasisi	Count	21	4	5	30	21
	% within place of residence	70.0%	13.3%	16.7%	100.0%	70.0%
Total	Count	48	7	5	60	48
	% within place of residence	80.0%	11.7%	8.3%	100.0%	80.0%

Table 2. Milk and milk products frequency of consumption Cross tabulation

Place of residence	Consumption frequency of milk and milk products					Total
		Daily	Weekly	Monthly	No-consumption	
Kabulonga	Count	27	3	0	0	30
	% within place of residence	90.0%	10.0%	.0%	.0%	100.0%
Kasisi	Count	16	4	9	1	30
	% within place of residence	53.3%	13.3%	30.0%	3.3%	100.0%
Total	Count	43	7	9	1	60
	% within place of residence	71.7%	11.7%	15.0%	1.7%	100.0%

Table 5. Condiments, spices and beverages frequency of consumption Cross tabulation

Place of residence	Consumption frequency of condiments, spices and beverages				Total
		Daily	Monthly	No-consumption	
Kabulonga	Count	28	1	1	30
	% within place of residence	93.3%	3.3%	3.3%	100.0%
Kasisi	Count	23	4	3	30
	% within place of residence	76.7%	13.3%	10.0%	100.0%
Total	Count	51	5	4	60
	% within place of residence	85.0%	8.3%	6.7%	100.0%

Table 6. Eggs frequency of consumption Cross tabulation

Place of residence	Consumption frequency of Eggs					Total
		Daily	Weekly	Monthly	No-consumption	
Kabulonga	Count	22	8	0	0	30
	% within place of residence	73.3%	26.7%	.0%	.0%	100.0%
Kasisi	Count	12	14	3	1	30
	% within place of residence	40.0%	46.7%	10.0%	3.3%	100.0%
Total	Count	34	22	3	1	60
	% within place of residence	56.7%	36.7%	5.0%	1.7%	100.0%

The consumption of condiments, spices and beverages translated to 93.3% and 76.7% within

Kabulonga and Kasisi on daily basis respectively. The rest shows the monthly consumption of (3.3% and 13.3%) and non-consumption of (3.3% and 107%) (table 4).

3.2. Eggs Frequency of Consumption

The eating of eggs translated to 73.3% and 40% within Kabulonga and Kasisi on daily basis respectively. The rest shows after seven days the consumption was (26.7% and 46.7%), monthly (0% and 10%) and non-consumption respectively (Table 5).

The consumption of legume and nuts/seeds were observed to be 66.7% and 43.3% in Kabulonga and Kasisi on a daily frequency of consumption respectively. The higher legumes/pulses in Kabulonga on daily basis indicate high demand of the commodity that is supplied by the rural household like Kasisi. The rest shows the after seven days consumption of (26.7% and 40.7%), monthly (6.7% and 16.7%) which indicated higher consumption in Kasisi as compared to Kabulonga.

About 27 people in Kabulonga translating to 77.1% places where food commodities are bought. About

Fig 7. Crosstab

			Consumption frequency of Meat				Total
			Daily	Weekly	Monthly	No -- consumption	
What is your age	<20 years	Count	0	1	0	0	1
		% within What is your age	.0%	100.0%	.0%	.0%	100.0%
		% within meats frequency of consumption	.0%	4.5%	.0%	.0%	1.7%
	20-35 years	Count	12	16	2	2	32
		% within What is your age	37.5%	50.0%	6.2%	6.2%	100.0%
		% within meats frequency of consumption	37.5%	72.7%	66.7%	66.7%	53.3%
	35-45 years	Count	16	5	1	1	23
		% within What is your age	69.6%	21.7%	4.3%	4.3%	100.0%
		% within meats frequency of consumption	50.0%	22.7%	33.3%	33.3%	38.3%
	> 45 years	Count	4	0	0	0	4
		% within What is your age	100.0%	.0%	.0%	.0%	100.0%
		% within meats frequency of consumption	12.5%	.0%	.0%	.0%	6.7%
Total		Count	32	22	3	3	60
		% within What is your age	53.3%	36.7%	5.0%	5.0%	100.0%
		% within meats frequency of consumption	100.0%	100.0%	100.0%	100.0%	100.0%

90% within place of residence) in Kabulonga do their shopping in malls (choppies, Shoprite, Pick n Pay etc.) as compared to those in Kasisi. 8 people in Kabulonga translating to 22.9% overall place where food commodities are bought and 26.7 % within place of residence) who does most of their in farmers markets. The results above show that the people in Kabulonga have variety in terms of the different food commodities they buy from these malls as compared to Kasisi.

About 24 people in the formal occupation consumed vegetables on everyday as compared to 19 people in the informal occupation. This translated to 55.8% of consumed within the daily frequency of eating of vegetable in the formal occupation and 44.2 % of daily consumption within the informal occupation. The weekly consumption frequency was the same and accounted for 50% each within the frequency of vegetable consumption and while the monthly was 33.3% consumption within the frequency of vegetable consumption for the formal occupation and 66.7% frequency of vegetable consumption.

Occupation also affected the taking of milk and its products of 58.1 % were by formal occupation and the informal occupations account for 41.9% of consumption within the group on the daily basis. The formal occupation accounted for 85.7% of the after seven days of taking milk and its products consumed within this group and the informal occupation accounted for 14.3% this group consumed. Furthermore, 11.1% was the monthly consumption frequency of the formal occupation within the milk and its products of 88.9% was accounted by the informal occupation.

In summary, occupation affects the consumption of many other food commodities Ages of a person is a significant personal factors influencing dietary behavior. People buy and eat different products at their dissimilar phases of the cycle. Those consumed less of the meat and accounted for 1.7% of the consumed meat within the meats frequency of consumption, those in the ages (20-35), consumed 53.3% of the meat within the meats frequency of consumption, those in the (35-45) ages consumed 38.3% meat within the meats frequency of consumption and those greater than 45 years consumed 6.7% of the meat within the meats frequency of consumption. The highest consumption was in the (20-35) age range, followed by (35-45) age cluster; last was those less than 20 years of age respectively (Table 6). Due to these lifestyle changes, Kasisi was shown to consume less of the white sugar. This meant that Kabulonga people eat more of the highly processed sugar as compared to those in Kasisi. This consumption of these processed sugars and other food merchandise is attributed to the more supermarkets (malls) situated in these areas.

These supermarkets, according to [16], sell foods which include dairy products, processed grains, processed foods, edible oils summarized at a broader level of classification. At a narrow level of classification, specific processed products examined include yoghurts, milk, cheese; fruit juices, bottled water; canned fruits, meat, beans, vegetables; processed meats (polony, bacon, beef, poultry, etc.); pasta products; processed grains (rice, wheat flour, maize flour, cornflakes); processed fish; processed fruits and vegetables (potato chips, food sauces); cooking oil, margarine butter etc. From the discussion above it seen that the high occurrence of obesity as shown by the BMI index classifications is attributed to high incomes and life styles changes that enables participants in Kabulonga eat more energy dense foods.

4. CONCLUSION

In conclusion, the results which were shown by the connection between body weight and place of residence and also as shown by food commodity consumption tables and bar charts showed that there a link or correlation between the dietary habits, food intakes and the prevalence of obesity in the two areas of Kasisi and Kabulonga respectively. Furthermore, the factors such environment (resulting from place of residence), occupation (which determined lifestyle, income levels, dietary habits, etc.) and age showed do have determined the food intakes between the two areas of Kasisi and Kabulonga respectively.

In addition, results showed that participants from Kabulonga consumed more of legumes, nuts/seeds, eggs, condiments, spices and beverages, oils and fats, milk and its products, meats etc. on the daily basis as compared to those in Kasisi who showed to consume more of these foods on after seven days and monthly basis on the frequency of consumption of the different food commodities. Furthermore, results showed that both Kabulonga and Kasisi had enough food commodities, however, participants in Kasisi showed to have less access to these food commodities.

5. CONFLICT OF INTEREST

The authors have declared that there is no conflict of interest.

6. SOURCE/S OF FUNDING

No source of funding.

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