

**SOCIO-ECONOMIC STATUS, KNOWLEDGE, AWARENESS AND
ATTITUDES OF THE SWAHILI COMMUNITY IN RELATION TO DIETARY
HABITS, OBESITY AND LIFESTYLE DISEASES**

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ABSTRACT

Chronic diseases of lifestyle are increasing in global prevalence and they threaten developing nations' ability to improve the health of their populations. Previously, lifestyle diseases were thought to be diseases of the affluent but poor populations are now equally affected. This is largely due to the environment in which the poor reside and socio-economic circumstances that influence their diets and physical activity patterns. This study aimed at determining the association between socio-economic status, knowledge, awareness, and attitudes and the prevalence of obesity, diagnosed diabetes and hypertension in the Swahili community of Old Town and Kisauni districts in Mombasa County, Kenya. A cross-sectional study design was administered. Cluster sampling was used to randomly pick the 207 households. Data was collected using a semi-structured researcher administered questionnaire. Knowledge, awareness and attitudes were addressed using questions on balanced diet, healthy eating, healthy body weight, obesity, diabetes, hypertension and diabetes and hypertension causes. Socio-economic status was addressed by questions on the educational levels, occupation and income. Focus Group Discussions and Key Informants Interviews were used to collect qualitative data. Data analysis was done using the Statistical Package for the Social Sciences version 11.5 computer software. Results indicate that about 36.8% of the individuals had at least primary education. Most (69.1%) of the women were housewives while the men had businesses and others were employed. They had average knowledge and were aware of healthy eating, obesity, diabetes and hypertension. Diagnosed diabetes in both Old Town and Kisauni districts was predicted by obesity, knowledge on obesity and knowledge on diabetes ($p= 0.000$). In Old town, the major predictors of hypertension were obesity, knowledge on obesity and physical inactivity ($p= 0.044$). There is, therefore, need to develop educational policies and programs to create awareness and knowledge among the members of the Swahili community. The community should be educated on lifestyle disease causes and prevention in order to reduce their risk of developing the diseases.

Key words: Socio-economic status, knowledge, awareness, attitudes, obesity, diagnosed diabetes, diagnosed hypertension



INTRODUCTION

Chronic diseases of lifestyle are increasing in global prevalence and they threaten developing nations' ability to improve the health of their populations. Half of the health burden is attributable to these diseases [1]. Previously, the lifestyle diseases were thought to be diseases of the affluent, but poor populations are now equally affected [2, 3]. This is indicated by the dramatic rise in prevalence of cardiovascular diseases (CVDs), type II diabetes, obesity and other lifestyle diseases in developing and newly developed nations, particularly in the Pacific and Indian Ocean region, and in Asia [4]. The Swahili community of Mombasa County in Kenya is faced with the lifestyle diseases epidemic [5]. This community consists of an ethnic-mixed group of people speaking closely related forms of Bantu language, living on islands and coastal areas of East Africa [6]. The patterns of lifestyle diseases prevalence vary between countries of the same region, and between communities in the same country. This is because environments have individual variations that affect how populations interact with determinants of overweight and obesity [7]. Overweight and obesity predisposes affected individuals to the chronic diseases of lifestyle [8].

The global rise in prevalence of lifestyle diseases is as a result of already high and increasing risk factor levels and population's lack of awareness or no knowledge about the causes and prevention measures. As knowledge of lifestyle diseases and health increases, the wealthy are able to reduce the frequency of suffering from these conditions while incidence of the diseases increases among poor and minority populations [9, 10].

Beliefs and attitudes about body image have also been found to increase the risk for developing lifestyle diseases like type II diabetes and hypertension [11]. It has been reported that although a large percentage of African women are overweight and obese, few perceived themselves like so [12, 13]. An increased level of body fat is associated with beauty, prosperity, health and prestige, despite its negative impact on health and being a risk factor for lifestyle diseases. Thinness, in contrast, is perceived to be a sign of ill health or poverty and is something to be feared and avoided [14]. This belief of thinness associated with personal problems and sickness, seems to be a barrier to maintaining normal body weight in some individuals [15].

Swahili people have a wide range of socio-economic activities, religious and cultural values [6]. The World Health Organization (WHO) and European Union emphasize the importance of looking at social, cultural, political, physical and structural (environmental) influences for effective prevention and management of overweight and obesity (major risk factors for lifestyle diseases) [10, 16]. It is, therefore, important that people's knowledge, awareness, attitudes and social-economic status are investigated since these factors directly or indirectly contribute to the above influences.

The aim of this study was to assess the socio-economic status, knowledge, awareness and attitudes of the Swahili community and relate these factors to the prevalence of overweight, obesity and lifestyle diseases. The knowledge, awareness and attitudes were with respect to dietary habits, obesity and lifestyle diseases.



METHODS

Setting

The study was conducted in Mombasa County of Coast Province, Kenya's oldest and second largest city. It is situated in the South-Eastern part of Coast Province.

Study population and sampling

The study population consisted of men and women from the Swahili community aged 30 to 70 years old, in Mombasa County. This age group selection was justified by a study by Roglic *et al.* who reported that individuals between the ages of 30 and 64 years of age are at risk of mortality attributed to lifestyle diseases [17]. The sampling frame consisted of the men and women residing in Old Town and Kisauni districts, as the two study clusters. Both of these two districts were purposively selected for the study. The unit of analysis was the individual households, represented by the selected members of the households, who were administered with and responded to the survey questionnaire. A man and woman were randomly picked from each of the selected households. Simple random sampling was used where the members of the household picked papers from a hat and one man and one woman were selected. A sample size of 207 households was used. Using household lists of Old Town and Kisauni districts obtained from the local government offices, proportionate sampling was used to get the specific number of households (n=207) from each of the two study sites/clusters (n= 99 and 108 for Kisauni and Old Town districts, respectively). This summed up to 414 (both men and women from each household) participants (198 from Kisauni district and 216 from Old Town).

Research design

The research design assumed both quantitative and qualitative approaches and was a one-time cross-sectional study. The quantitative data was collected using semi-structured researcher administered questionnaire while qualitative data was obtained from Focus Group Discussions (FGDs), observation checklist and Key Informant Interviews (KIIs). The qualitative information/ data complemented that from the structured questionnaire. The study also assumed a comparative approach to determine any significant differences that existed between the Old Town and Kisauni districts' respondents. Old Town has a high population of typical Swahili people, therefore, the community here possessed more Swahili culture and characteristics hence had slightly different dietary habits and practices compared to Kisauni district community which had slightly deviated from the typical Swahili culture due to adopting other ethnic groups' cultures.

Semi-structured researcher administered questionnaire

Socio-economic, knowledge, awareness, attitudes, diabetes, hypertension and demographic data were collected through a household survey using a semi-structured researcher administered questionnaire. Knowledge and awareness were addressed using questions on balanced diet, healthy eating, healthy body weight, obesity, diabetes, hypertension and diabetes and hypertension causes. One point was awarded for each correct answer and awareness responses were Yes or No. After scores were awarded, a likert scale was developed to categorize the levels of knowledge as good (7-9 points), average (4-6 points) and poor (0-3 points) [18]. A likert scale was also developed to classify the attitudes and awareness of the Swahili community as positive or negative and



aware (Yes) or not aware (No), respectively [19]. Awareness was counter checked with knowledge questions. All correctly answered knowledge questions were associated with awareness. Questions asked during the FDGs in order to address attitudes and awareness included the following: What do you think and feel about eating fruits and vegetables every day? What do you think and feel about boiling and steaming food instead of frying? What do you think and feel about being fat? What do you think and feel about engaging in physical activity? What do you think and feel about diabetes/high blood sugar? What do you think and feel about hypertension/high blood pressure? Diabetes mellitus and hypertension were not clinically diagnosed. However, interviewed individuals were asked to report having been diagnosed of these conditions at a health facility and also presented their clinic cards.

Validation of this questionnaire was done to ensure that the content and the format of the questions were consistent with the study variables. In this case face validation, content and construct of the questionnaire were assessed by experts from the department of Human Nutrition in Egerton University. Comments from the experts were incorporated into the instruments before being used in the field. Pre-testing of the questionnaire was done in ten (10) households in Ganjoni district, where people have similar background and practices with those sampled for the study. During the pre-testing and actual data collection, questions in the questionnaire were translated in the Swahili language for respondents who did not understand English.

Focus Group Discussions (FGDs)

Ten (10) volunteers from each of the study site were selected and invited to a Focus Group Discussion, to respond to a few structured questions that further sought to elicit information on knowledge, awareness and attitudes in relation to obesity and lifestyle diseases as well as their causes. A Focus Group Discussion guide was used. The guide highlighted the topics of discussion as: causes of obesity, diabetes and hypertension, healthy eating and healthy body weight. This guide was also validated as the questionnaire and pretesting done among 20 individuals in two different areas in Ganjoni district. All discussions were recorded using a tape recorder and transcribed.

Observation checklist

Throughout the research period, observation (ocular) research technique of data collection was used to complement the information sought by the questionnaire.

Key Informant Interviews (KIIs)

In order to investigate community knowledge, awareness and attitudes towards dietary habits, obesity and lifestyle diseases, the study used in-depth interviews with one key informant from each of the two study sites. These informants, specifically village elders, were identified by the community members based on their positions in the community and interaction with the community members.

Anthropometric assessment

Weight of the respondents was measured to the nearest 0.1 kilograms using the SECA scale (761 dual platform scale E class III). The respondents were weighed barefooted while standing upright. The respondents' heights were measured by use of a SECA



stadiometre (model 216) to the nearest 1.0mm. Body Mass Index (BMI) was then calculated as a ratio between weight in kilograms and height of the respondent in meters squared (kg/m^2) and compared with internationally recommended cut-off points for status [20]. A person with a BMI of 30 or more is generally considered obese. A person with a BMI equal to or more than 25 is considered overweight.

Ethical considerations

An introductory letter was obtained from Egerton University Graduate School before carrying out the study. This facilitated the acquisition of ethical approval from the University's Ethical Review Board. A research permit from the National Council of Science and Technology authorizing the carrying out of the research among Swahili people in Mombasa County was also acquired. The researcher also sought for permission from the administration offices to be allowed to carry out the study in the County. Individuals' informed consent was obtained before interviewing them and this was after explaining to them the purpose of the study and how the results from the study will be used. They were also assured of strict confidentiality of all the information collected in the study. This was done by ensuring that their names were not included in the questionnaires.

Statistical Analyses

Following the coding and computer entry of the data, both descriptive and inferential analyses of data was undertaken using the Statistical Package for the Social Sciences version 11.5 computer software. Appropriate descriptive analysis was used to generate frequency distributions, tables and other illustrations, and inferential analyses to indicate relationships between various variables, including bivariate and multivariate analysis which involved cross-tabulations, linear regressions and logistic regressions to measure the strength of relationships between the variables. The Difference in Proportions test was used to test for differences between the Old Town and Kisauni districts findings while Chi-square test at 95% confidence intervals (C.I) and a $p\text{-value} < 0.05$ showed association between the various variables. Descriptive analysis was undertaken for the Focus Group Discussion.

RESULTS

The findings presented are of this cross-sectional study conducted to relate the prevalence of obesity, diagnosed hypertension, diagnosed diabetes and socio-economic status (SES) and knowledge, awareness and attitudes (KAA) of this community towards diet, physical activity and these conditions.

Characteristics of the sample

The mean age of the interviewed household members in Kisauni district was 44 ± 7.8 years whereas in Old Town it was 45 ± 7.1 years.

Socio-economic status

Socio-economic status was defined in this study as the status of the members of the household based on the educational levels, occupation and income. Table 1 shows the



education levels of the interviewed household members. There was statistically significant difference between the educational levels of men and women from both the study areas using chi-square test ($p < 0.05$; 95% C.I). A statistically significant difference was also noted ($p = 0.001$) between the two districts.

Occupation of Kisauni and Old town residents was classified in three groups: unemployed or housewives, formal employment and business. This was based on the responses from the household members. Table 2 shows the occupations of the interviewed household members. There was no statistically significant difference in occupation between the two districts ($p = 0.024$).

Income status of the interviewed household members

Monthly income of the interviewed household members is shown in Table 3. There was statistically significant difference between the income of men and women from both the study areas using chi-square test ($p < 0.05$; 95% C.I). There was no statistically significant difference in occupation between the two districts ($p = 0.038$).

Knowledge, awareness and attitudes

As shown in table 4, majority (63.8%) of the Swahili community in both Kisauni and Old Town districts had average knowledge on healthy eating, healthy body weight, obesity, diabetes, hypertension and diabetes and hypertension causes. Few individuals (6.8%) in this community had good knowledge and the rest (29.5%) had poor knowledge. There was no statistically significant difference between the knowledge levels of the interviewed household members in Kisauni and Old Town districts using the difference in proportion test at a 95% Confidence Interval.

Responses of interviewed household members to awareness questions in the questionnaire are shown in Table 5. The responses to the awareness questions asked during the FDGs were, "Eating fruits and vegetables every day is healthy but can only be afforded by the rich people." "Boiled and steamed food is not as palatable as fried food." "*Chakula cha Kiswahili kina mafuta na nazi nyingi. Ndio asili yetu. Twajua mafuta mengi yanadhuru lakini nacho chakula cha kuchemsha hakina ladha.*" They said. This is translated as, 'Swahili foods are high in fat and coconut milk. That is the culture. It is known that a lot of fat is not good for health but boiled foods are not palatable.' "Being overweight or fat shows that you are rich and have no problems in life but you are at risk of being diagnosed with hypertension. Lean people on the other hand are thought of as poor and not beautiful." "*Mwanamke aliyanawiri ni mrembo,*" they said. This is translated as "A fat (overweight) woman is beautiful." "Physical activity is good but not common in the Swahili community; we use vehicles to travel even very short distances" (*Kwa waswahili hakuna mazoezi mtu akitaka kwenda pahali, kidogo mpaka tuktuk ama matatu*). "Diabetes and hypertension are very bad diseases associated with consuming too much fat in the diet.

Prevalence of overweight and obesity

Table 6 and Figure 1 show the results of the BMI calculations, therefore, indicating the prevalence of overweight and obesity in the two study regions. There was a high prevalence of overweight and obesity among the interviewed household members in both



Kisauni and Old Town districts. The mean BMI in both study areas was above 25. About 48.5% and 35.9% of the interviewed household members in Kisauni district were overweight and obese, respectively, compared to 37.5% and 52.3%, respectively, in Old Town district. The difference in proportion test at 95% Confidence Interval indicated statistically significant difference between overweight and obesity levels in Kisauni and Old Town districts.

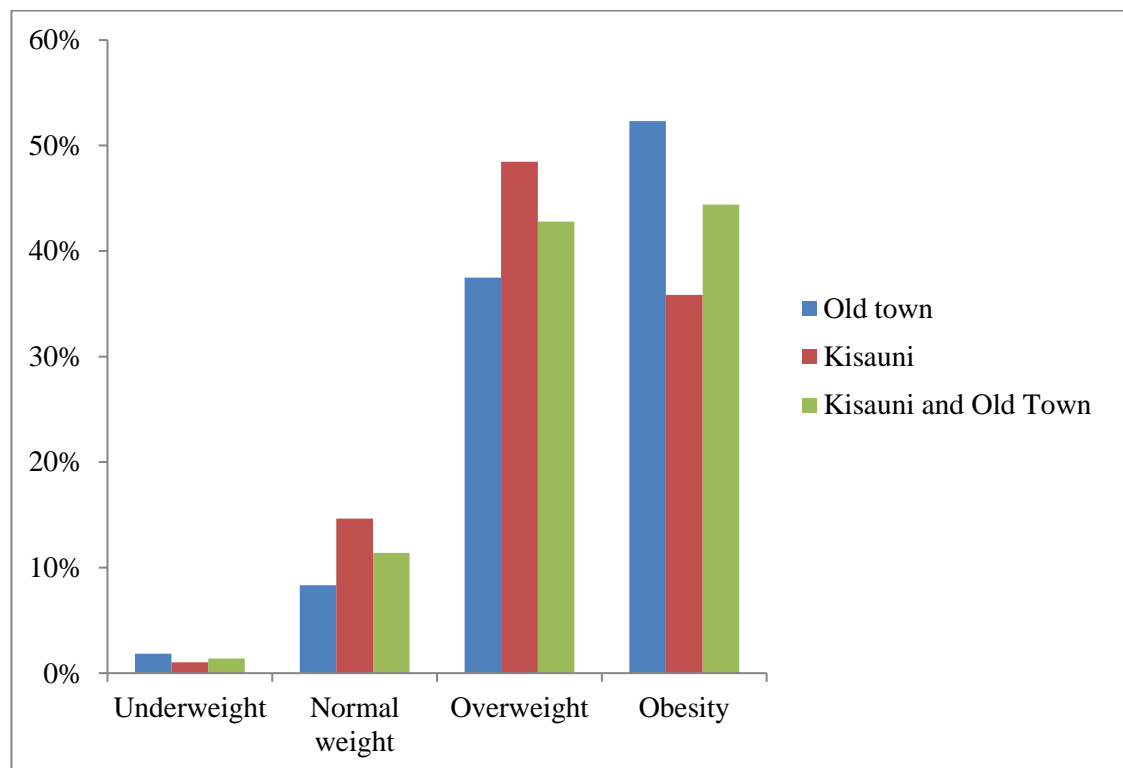


Figure 1: Prevalence of overweight and obesity (defined by BMI) in Kisauni district and Old Town

Prevalence of diagnosed diabetes mellitus and hypertension

Table 7 and Figure 2 show the prevalence of diagnosed diabetes mellitus and hypertension in Kisauni and Old Town districts. About 11.1% and 39.9% of the interviewed household members in Kisauni district had diagnosed diabetes and hypertension, respectively, compared to 14.8% and 44.0%, respectively, in Old Town district.

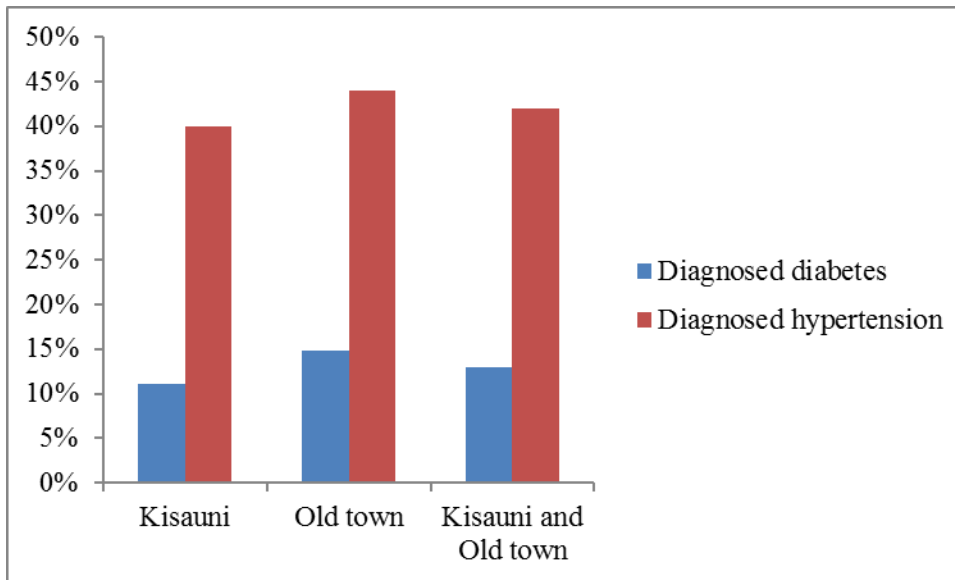


Figure 2: Prevalence of diagnosed mellitus and hypertension in Old Town and Kisauni districts

Association among the various variables of study

Socio-economic status of all the members as defined by their educational levels and occupation was significantly associated with their knowledge ($p < 0.05$, 95% C.I.). Knowledge of the interviewed household members in Old Town on the other hand were significantly associated with their weight status and diagnosed hypertension ($p < 0.05$, 95% C.I.).

Nominal regressions were performed to indicate the predictors of diabetes and hypertension. Diagnosed diabetes among interviewed household members in both Old Town and Kisauni districts was predicted by obesity and poor knowledge on obesity, healthy eating and diabetes ($p = 0.001$). Diagnosed hypertension among household members in both districts was on the other hand predicted by obesity and poor knowledge on obesity, healthy eating and hypertension ($p = 0.003$).

DISCUSSION

The lower formal education levels in Old Town district could be attributed to the fact that besides formal education, children from this community go for Islamic religious classes called *madrassa*, where they are taught to read and write in Arabic language [6]. It was observed during the interviews in Old town that girls and boys of primary school going age attended these classes hence may explain the minimal formal education among members of this community. The Swahili community from Kisauni district had slightly deviated from the typical Swahili culture hence they emphasized formal education among their people and minimal *madrassa* classes. The few that went for *madrassa* classes did so during weekends as reported by the Key Informant from Kisauni district. The low income among the women on the other hand can be explained by the Swahili community culture and religion that dictates that the women are expected to stay at home while the men are

the sole breadwinners of the family. During the Key Informant Interview in Old Town, it was reported that, “*Pahala pa mwanamke ni nyumbani, waume ndio wanaotoka kuwatafutia.*” This is translated as, “A woman’s place is in the house. It is the men who go out to seek for employment and provide for the family.” In this case only few women had businesses that involved preparing and selling Swahili snacks outside their houses, at the road side and streets. This was observed in Old Town.

The individuals with less formal education and those that were housewives and unemployed had lower knowledge scores. This could be attributed to their low educational levels which made them less knowledgeable. This community’s average knowledge on lifestyle disease causes and prevention measures indicated their risk of developing these diseases since the burden of lifestyle diseases occurs as a result of people’s minimal or lack of knowledge about the diseases. There were more people with hypertension than with diabetes. In the study on prevalence of overweight and self-reported chronic diseases among residents in Malaysia [21], it was reported that 8.5% and 16.4% males and females, respectively had diabetes whereas 4.8% and 10.4% males and females, respectively had hypertension. The diabetes cases were higher than the hypertension cases. The contrast between the results from Malaysia and the ones of the current study is attributed to the different study areas and communities. Minimal to average knowledge level in the aspects of healthy eating, healthy body weight, obesity, diabetes and hypertension, was the major predictor of the lifestyle diseases studied. In the study on knowledge and perceptions of diabetes in a semi-urban Omani population [22], it was reported that lack of knowledge is a major risk factor for diabetes mellitus among members of this community. It was further demonstrated that significant numbers of Omanis lacked the knowledge and perceptions required to prevent and cope with increasing prevalence of diabetes in Oman [22].

CONCLUSION

Lack of knowledge on obesity, its causes, lifestyle diseases and their causes, was a major predictor of lifestyle diseases. A population’s lack of awareness and little or no knowledge about the causes and prevention measures is a major risk factor for development of lifestyle diseases. There is, therefore, need to develop educational policies and programs to create awareness and knowledge on lifestyle diseases among the members of the Swahili community. Such interventions require financial investments which are small when compared with the resources needed for the treatment and management of these diseases as well as the losses due to morbidity and mortality.



Table 1: Education levels of the interviewed household members

Study Area	Educational background	P value *	Females (%)	Males (%)	P value *	Total (%)
Kisauni	No formal education	0.001*	3	2	0.000*	2.5
	Some primary		21.2	0		10.6
	Primary completed		53.6	2		27.8
	Some secondary		5.1	74.7		39.9
	Secondary completed		12.1	14.1		13.1
	More than secondary		5.1	7.1		6.1
Old Town	No formal education	0.001*	3.7	3.7	0.000*	3.7
	Some primary		58.4	0.9		29.7
	Primary completed		18.5	73.2		45.9
	Some secondary		7.4	11.1		9.3
	Secondary completed		6.5	10.2		8.3
	More than secondary		5.6	0.9		3.2
Total (Kisauni & Old Town)	No education		3.4	2.9		3.1
	Some primary		39.8	0.5		20.2
	Primary completed		36.1	37.6		36.8
	Some secondary		6.3	42.2		24.6
	Secondary completed		9.2	12.3		10.7
	More than secondary		5.3	4.0		4.6

*P value of chi squared test comparing educational levels of females and males in Kisauni and Old Town districts and between the two districts

Table 2: Occupations of the interviewed household members

Study Area	Occupation	P value *	Females (%)	Males (%)	P value *	Total
Kisauni	Housewife/ Unemployment	0.024*	68.4	2	0.010*	35.2
	Formal employment		5.3	27.3		16.3
	Business		26.3	70.7		48.5
Old town	Housewife/ Unemployment	0.000*	69.6	3.7	0.000*	36.7
	Formal employment		5.0	28.7		16.8
	Business		25.4	67.6		46.5
Total (Kisauni and Old town)	Housewife/ Unemployment		69.1	2.9		36.0
	Formal employment		5.2	28.0		16.5
	Business		25.9	69.1		47.5

*P value of chi squared test comparing occupational background of females and males in Kisauni and Old Town districts and between the two districts

Table 3: Income of the interviewed household members

Study Area	Income (per month in KES)	P value*	Females (%)	Males (%)	P value*	Total (Females and Males)
Kisauni	0-5000	0.038	46.4	2	0.001*	24.2
	5001-10000		43.3	0		21.5
	10001-20000		6.1	0		3.1
	20001-30000		3.2	9.1		6.2
	30001 and above		1	88.9		45
Old town	0-5000	0.000*	43.7	3.7	0.000*	23.6
	5001-10000		46.5	0		23.3
	10001-20000		6.8	0		3.4
	20001-30000		2.2	10.2		6.2
	30001 and above		0.8	86.1		43.5
Total (Kisauni and Old town)	0-5000		45.2	2.9		23.9
	5001-10000		44.2	0		22.4
	10001-20000		6.5	0		3.3
	20001-30000		2.8	9.7		6.2
	30001 and above		0.9	87.4		44.3

*P value of chi squared test comparing income of females and males in Kisauni and Old Town districts and between the two districts
KES-Kenya shillings

Table 4: Knowledge levels of the Interviewed Household members

Knowledge level	Kisauni district	Old town	P value*	Total (Kisauni and Old Town)
Good (7-9 points)	5.6%	7.9%	0.001	6.8%
Average(4-6 points)	63.6%	63.9%	0.000	63.8%
Poor (0-3 points)	30.8%	28.2%	0.001	29.5%

* P value of chi squared test comparing knowledge levels of females and males in Kisauni and Old Town districts and between the two districts



Table 5: Responses of interviewed household members to awareness questions

Questions	Awareness (Kisauni)	Awareness (Old Town)	Awareness (Kisauni & Old Town)
Do you know a balanced diet?	Yes= 40% No= 60%	Yes= 30% No= 70%	Yes= 43% No= 57%
Are you aware of healthy eating?	Yes= 54% No= 46%	Yes= 35% No= 65%	Yes= 45% No= 55%
Are aware which is the healthy body weight?	Yes= 36% No= 64%	Yes= 46% No= 54%	Yes= 43% No= 57%
Have you heard of obesity?	Yes= 49% No= 51%	Yes= 59% No= 41%	Yes= 49% No= 51%
Are you aware of the causes of obesity?	Yes= 59% No= 41%	Yes= 55% No= 45%	Yes= 57% No= 43%
Have you heard of Diabetes/ High Blood Sugar?	Yes= 34% No= 66%	Yes= 24% No= 76%	Yes= 34% No= 66%
Have you heard of Hypertension/High Blood Pressure?	Yes= 20% No= 80%	Yes= 30% No= 70%	Yes= 32% No= 68%
Are you aware of the causes of Diabetes/ High Blood Sugar?	Yes= 30% No= 70%	Yes= 40% No= 60%	Yes= 41% No= 59%
Are you aware of the causes of Hypertension/ High Blood Pressure?	Yes= 40% No= 60%	Yes= 34% No= 66%	Yes= 44% No= 56%

Table 6: BMI classifications in Kisauni and Old Town districts

Study Area		N	Female (%)	Male (%)	Total (%)
Kisauni	Total no. of individuals	198			100%
	Underweight	2	2.0	0.0	1.1
	Normal weight	29	17.2	12.1	14.7
	Overweight	96	46.5	50.5	48.5
	Obese	71	34.3	37.4	35.9
	BMI: mean (SD)		28.69 (3.58)	28.68 (5.20)	28.7 (4.45)
Old Town	Total no. of individuals	216			100%
	Underweight	4	3.7	0.0	1.9
	Normal weight	18	11.1	5.6	8.3
	Overweight	81	36.1	38.9	37.5
	Obese	113	49.1	55.6	52.3
	BMI: mean (SD)		30.18 (3.55)	29.73 (5.79)	29.95 (4.80)
Total (Kisauni and Old Town)	Total no. of individuals	414			100%
	Underweight	6	2.9	0.0	1.4
	Normal weight	47	14.0	8.7	11.4
	Overweight	177	41.1	44.4	42.8
	Obese	184	42.0	46.9	44.4
	BMI: mean (SD)		29.23 (5.53)	29.47 (3.63)	29.35 (4.67)

BMI- Body mass index
SD-Standard deviation

Table 7: Prevalence of overweight and obesity in Kisauni and Old Town districts

Study Area		Female (%)	Male (%)	Total (%)
Kisauni	Diagnosed diabetes	11.1	10.1	11.1
	Diagnosed hypertension	33.3	42.4	39.9
Old Town	Diagnosed diabetes	14.8	15.7	14.8
	Diagnosed hypertension	40.7	50.9	44.0
Total (Kisauni and Old Town)	Diagnosed diabetes	13.0	13.0	13.0
	Diagnosed hypertension	37.2	46.9	42.0

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