KNOWLEDGE, ATTITUDE AND PRACTICES OF TYPE TWO DIABETES IN A RURAL COMMUNITY IN KARATINA- NYERI COUNTY

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE MASTER OF PUBLIC HEALTH DEGREE OF THE UNIVERSITY OF NAIROBI.

2015
UNIVERSITY OF NAIROBI

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DEDICATION

I dedicate this work to my loving mother-Julie Ruchugo
ACKNOWLEDGEMENTS

The success of this work was as a result of a collaborative effort of a number of people without whom it would never have been a success.

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I remain solely responsible for any shortcomings in this work.
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<tr>
<td>ADA</td>
<td>American Diabetes Association</td>
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<td>BMI</td>
<td>Body Mass Index</td>
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<td>DLF</td>
<td>Diabetes Leadership Forum</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>IDF</td>
<td>International Diabetes Federation</td>
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<tr>
<td>DF</td>
<td>Degrees of Freedom</td>
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<td>NCDs</td>
<td>Non Communicable Diseases</td>
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<td>NGOs</td>
<td>Non Governmental Organizations</td>
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<td>SSA</td>
<td>Sub Saharan Africa</td>
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<td>Human Immunodeficiency Virus</td>
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<td>KDHS</td>
<td>Kenya Demographic and Health Survey</td>
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<td>MoH</td>
<td>Ministry of Health</td>
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<tr>
<td>SD</td>
<td>Standard Deviation</td>
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<td>SE</td>
<td>Standard Error</td>
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DEFINITIONS OF OPERATIONAL TERMS

**Blood glucose** - the amount of glucose (sugar) present in the blood of a human or animal. Normally, in mammals the body maintains the fasting blood glucose level at a reference range between about 3.9 and 5.6 mm (mmol/l). The American Diabetes Association recommends a fasting plasma glucose level of 3.9-7.2 mmol/l and after meals less than 10 mmol/l.

**Blood glucose meter** - a small, portable machine used by people with diabetes to check their blood glucose levels. After pricking the skin with a lancet, one places a drop of blood on a test strip in the machine. The meter (or monitor) soon displays the blood glucose level as a number on the meter's digital display.

**Blood glucose monitoring** - checking blood glucose level on a regular basis in order to manage diabetes. A blood glucose meter (or blood glucose test strips that change color when touched by a blood sample) is needed for frequent blood glucose monitoring.

**Blood pressure** - the force of blood exerted on the inside walls of blood vessels. Blood pressure is expressed as a ratio (example: 120/80, read as "120 over 80"). The first number is the systolic pressure or the pressure when the heart pushes blood out into the arteries. The second number is the diastolic pressure or the pressure when the heart rests.

**Blood vessels** - tubes that carry blood to and from all parts of the body. The three main types of blood vessels are arteries, veins and capillaries.

**BMI** - body mass index - a measure of body fat that is the ratio of the weight of the body in kilograms to the square of its height in meters. A body mass index in adults of 25 to 29.9 is considered overweight, and 30 or more an indication of obesity.

**Chronic** - describes something that is long-lasting.

**Complications** - harmful effects of diabetes such as damage to the eyes, heart, blood vessels, nervous system, teeth and gums, feet and skin, or kidneys.
**Diabetes management** - dealing with short term events such as high and low blood sugar to controlling it over the long term such as by getting to grips with understanding the condition.

**Glucose** - a sugar that can be linked to form carbohydrates and that serves as a primary source of energy.

**Glycaemic control** - a medical term referring to the typical levels of blood sugar (glucose) in a person with diabetes mellitus.

**Hyperglycaemia** - excess of sugar in the blood.

**Hypertension** - abnormally high arterial blood pressure that is usually indicated by an adult systolic blood pressure of 140 mm hg or greater or a diastolic blood pressure of 90 mm hg or greater.

**Macro vascular** - pertaining to the macrovasculature, the portion of the vasculature of the body comprising the larger vessels, those with an internal diameter of more than 100 microns.

**Microvascular** - of, relating to, or constituting the part of the circulatory system made up of minute vessels (as venules or capillaries) that average less than 0.3 millimeters in diameter.

**Nephropathy** - an abnormal state of the kidney; especially one associated with or secondary to some other pathological process.

**Neuropathy** - an abnormal and usually degenerative state of the nervous system or nerves.

**Non-communicable diseases** (NCD) is a medical condition or disease that is by definition non-infectious and non-transmissible among people.

**Retinopathy** - any of various non-inflammatory disorders of the retina including some that cause blindness.

**Socioeconomic status** - socioeconomic status (ses) is the social standing of an individual or group in terms of their income, education and occupation. An individual’s income, education and occupational status are often closely interrelated.
ABSTRACT

Background: Diabetes is a chronic, debilitating disease that requires life-long treatment and greatly increases the risk of serious long-term complications especially where poor management is concerned. This disease requires competent self management, which can be developed from a thorough understanding of the disease process by an individual.

It is believed that awareness of the early symptoms of diabetes is generally low, especially in a rural community, and this result in people with diabetes (known or unknown) to keep going to the clinics because of a complication rather than for routine consultation or follow up. Untreated diabetes leads to a number of serious long-term complications, including blindness, kidney disease, and neural vascular damage leading to foot ulcers and requiring amputation, as well as predisposing to heart attack, stroke and early death.

The impact of diabetes is further increased by its interrelationships with infectious diseases – people with diabetes are more likely to contract TB, and the second-line antiretroviral therapy treatment of choice for HIV in Africa has been linked with an increase in pre-diabetes, which already affects nearly 27 million people.

The limited availability of data on knowledge, attitude and practices of diabetes management in a rural community is one of the challenges to community responsive planning and policy making.

Objectives: This study aimed at assessing awareness levels, attitude and practices of a rural community towards diabetes.

Methodology: This study adopted a cross-sectional design using structured questionnaires as the main data collection tool. This questionnaire was made up of four sections; section one, of the questionnaire covered the respondent's background information, section two examined awareness of diabetes disease, section three covered attitude and perceptions and lastly section four examined respondents practices in preventing and controlling diabetes. The study was conducted in Jambo Village in Karatina.
Analysis: A total number of 352 participants participated in the study in the months of May and June 2014. Data was analyzed using the statistical package for social sciences for Windows version 20.00 (SPSS). Descriptive statistics was applied to determine frequencies and the results are presented using tables.

Results: The mean age of study respondents was 38 years with the youngest respondents being 18 years and the oldest being 102 years. Almost half of the respondents had completed primary level of education, suggesting some level of literacy and agricultural activities was the bastion of this community. Majority of the respondents said they were not diabetic, and about a quarter said they have persons with diabetes in their households. Amongst those, that said they were diabetic, most were newly diagnosed (known diabetic for less than two years).

Also, majority of the respondents had limited knowledge of diabetes with almost half the number of respondents (43.7%) was unable to offer an elementary definition of the term diabetes, slightly more than half, (62.5%) thought that diabetes can be cured and an almost similar number (52.8%) did not know there is a genetic link. Further, 209 (59.4%) of the respondents did not know the cause(s) of diabetes, 195 (55.5%) did not know symptoms of diabetes and 324 (92.1%) did not know that if diabetes is not well managed it may eventually lead to some serious complications

Conclusion: Majority of the respondents had low to moderate awareness about diabetes despite citing it as one the key health issue in the community. However, this awareness has not led to any changes in the disease prevention because the respondents are not sufficiently equipped with the knowledge to comprehensively manage, prevent and control the disease

Recommendation: The government must take a lead in creating awareness about diabetes disease. In addition to developing the Kenya national diabetes educators’ manual, a community awareness program targeting rural and semi-urban communities should be developed using a multi-sectoral approach in order to address the knowledge gaps and influence behaviour towards diabetes prevention.
Also, given the low and uncertain incomes characteristic among rural dwellers, free screening for chronic diseases should be availed to the residents to support early detection as well as increase knowledge level on diabetes status. This can be done in a similar manner to the ante natal care program targeting all government facilities right from level 2 health facilities.