Title: NUTRITIONAL AWARENESS AND DIETARY CHOICES OF ADULTS WITH TYPE 2 DIABETES AT HO TEACHING HOSPITAL

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**Background of the study**

Type II diabetes, characterized by chronic metabolic issues leading to hyperglycemia, poses a significant global health challenge. Inadequate management is associated with approximately 5 million annual deaths, and it is anticipated to surpass heart disease as the seventh leading cause of death globally by 2030. Ghana, along with other African nations, grapples with a "double disease burden," addressing both chronic and acute communicable diseases simultaneously. Diabetes mellitus (DM), a group of metabolic diseases, is marked by elevated blood glucose levels, potentially resulting in complications affecting various organs.

Globally, an estimated 422 million individuals are affected by diabetes, with projections indicating a surge to 642 million by 2040. Within Ghana, the prevalence of diabetes is evident, with 440,000 reported cases in 2013, emphasizing the urgency of effective prevention and management strategies. The multifaceted nature of diabetes, influenced by lifestyle factors and

predisposing conditions, underscores the importance of comprehensive approaches, including dietary management, in mitigating the impact of this pervasive health issue.

**Objectives of the study**

The study aimed at assessing diabetes-specific nutrition knowledge and dietary habits among adults with type 2 diabetes at Ho Teaching Hospital. By understanding this relationship, the research sought to enhance dietary interventions for improved health outcomes.

**Methods**

A descriptive cross-sectional design was conducted by the adaptation of a mixed method using the positivist and interpretive approaches. This was done through the administering of questionnaires to type two (2) diabetes patients on admission, whilst an interview guide was used to interview type two diabetes patients who visited the hospital. The population of interest were adult T2DM patients aged between 20 to 65 years attending Ho teaching hospital. This study was conducted among 100 already diagnosed T2DM patients attending HTH diabetic clinic. A purposive sampling technique was used in this study.

**Results**

The study's findings revealed a notable prevalence of Type 2 Diabetes Mellitus (T2DM) among educated older women attending HTH. Despite encountering language barriers, a significant proportion (39.4%), including recently diagnosed young adults, exhibited satisfactory nutrition knowledge. However, the assessment of adherence to prescribed diet plans yielded varied results, complicating the overall evaluation of improvement. Overweight and obesity were prevalent, accompanied by a mean fasting blood sugar (FBS) level of 11.1 mmol/L, confirming T2DM status. The study underscored the crucial role of effective nutrition, as demonstrated by

a strong foundation in Dietary Reference Nutrient Knowledge (DRNK), in T2DM management. Notably, irregular meal patterns and a preference for high-fiber foods were observed. Despite a reported 70% engagement in regular exercise, uncertainties persisted regarding its effectiveness in combating obesity. Older participants exhibited lower levels of physical activity, suggesting potential challenges in promoting exercise within this demographic.

Figure 1. revealed that about 77 (70.6%) participants exercise regularly and about 32 (29.4%) participants do not exercise at all
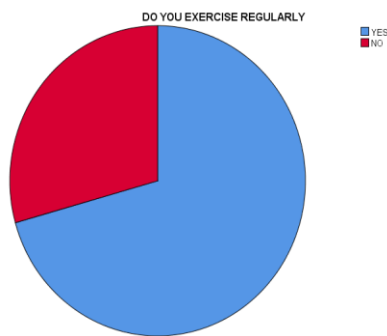


**Figure 1: Do you exercise regularly**

**Anthropometric measurements**

The participants had an average weight of 78.5kg and height of 1.65m, resulting in a mean Body Mass Index (BMI) of 28.8kg/m². This BMI places them at risk of being overweight among Type 2 Diabetes Mellitus (T2DM) patients at HTH. Additionally, the average waist and hip circumference were 99.1 cm and 116.6 cm, with a mean waist-to-hip ratio of 2.4. The participants' mean fasting blood sugar test yielded a value of 11.1 mmol/L.

**Table 1. Anthropometric Measurements and Fasting Blood Sugar Values**

| Variables | Mean | S.D | Maximum | Minimum |
|---|---|---|---|---|
| Weight (kg) | 78.5 | 9.2 | 49.50 | 99.0 |
| Height (m) | 1.65 | 1.17 | 1.97 | 1.21 |

| | | | | |
|---|---|---|---|---|
| BMI (kg/m²) | 28.8 | 5.19 | 40.74 | 18.91 |
| Waist circumference (cm) | 99.1 | 16.2 | 128.0 | 8.70 |
| Hip circumference (cm) | 116.6 | 18.0 | 149.0 | 26.0 |
| W-H Ratio | 2.4 | 12.24 | 105.0 | 0.58 |
| FBS (mmol/L) | 11.1 | 3.7 | 24.20 | 5.30 |

**Conclusions**

The study revealed many participants, mostly females with T2DM, hypertension and obesity, previously consumed high amounts of low-fibre foods and unhealthy snacks due to irregular meal patterns. Proportions of high-fibre foods were inadequate, and healthy snacks like fruits were neglected in spite of participants' dietary requirements knowledge. Overweight and obesity, elevated FBS, and moderate-intensity physical activity were common. Improved dietitian feedback systems are needed for better adherence to recommended diet plans. Strengthening follow-ups could enhance dietary interventions and T2DM outcomes.