



FACULTY OF SCIENCE AND EDUCATION

DEPARTMENT OF BIOLOGY

FINAL YEAR PROJECT REPORT

**PREVALENCE AND MANEGEMENT OF OBESITY AMONGST STAFF AND
STUDENTS OF BUSITEMA UNIVERSITY, NAGONGERA CAMPUS IN TORORO
DISTRICT, UGANDA**

BY

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**THIS FINAL YEAR PROJECT REPORT IS SUBMITTED TO THE DEPARTMENT
OF BIOLOGY IN PARTIAL FULLFILLMENT OF THE REQUIREMENT FOR THE
AWARD OF THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION**

NOVEMBER, 2023

DECLARATION

I **KIMASWA ISAAC PHILIMON** declare that this research report is my original work. It has not been submitted to any other University or higher institution for any award and where it is indebted to work for others.

KIMASWA ISAAC PHILIMON

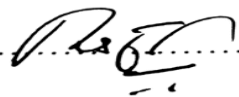
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APPROVAL

I hereby certify that this work entitled Prevalence and Management of obesity amongst staff and students of Busitema University, Nagongera Campus in Tororo district, Uganda has been submitted with my approval for examination as University supervision.

MR. KIFUKO RICHARD

Signature:

..........

Date:

.....2/12/2023.....

SUPERVISOR

DEDICATION

To my beloved parents Mr. Bukoma Robert and Mrs. Miliar Bukoma for their financial support towards my education. May God reward them abundantly.

ACKNOWLEDGEMENTS

I thank the lord almighty for keeping, protecting and giving me good health during the course of my study.

I would like to appreciate the work of my supervisor Mr.: Kifuko Richard who diligently guided me during my research. May the Almighty reward him abundantly?

Special thanks go to my father, mother and all my siblings especially Mr.Weboya Samson and his wife Martha Weboya, for their love and support in form of school fees for my education. I would like to acknowledge my friends, Ozitiru Josephine, Wasakina Julius Malongo, Musasizi Ezera, Bagaga Sam and Naiga Caroline for their support throughout my research.

I also wish to thank my teachers for their advice, knowledge and guidance towards my education. May God bless them.

LIST OF ACRONYMS AND ABBREVIATIONS

1. BMI: Body Mass Index

ABSTRACT

Introduction: Obesity is a growing global health concern with significant implications for individuals and communities. The aim of this study was to investigate the prevalence and management of obesity among staff and students of Busitema University, Nagongera Campus in Tororo District, Uganda

Materials and methods: The study employed a mixed-methods approach, combining both quantitative and qualitative methods. A questionnaire was developed to gather information on demographics, lifestyle factors, dietary habits, physical activity levels, and existing management strategies for obesity. Anthropometric measurements such as weight, height, waist circumference, and body mass index (BMI) were taken from the participants. For measurement of body mass index (BMI), digital weighing scale and stadiometer were used. Interviews were conducted with a subset of participants to obtain qualitative data on their experiences, perceptions, and challenges related to obesity and its management. Data was analyzed using descriptive and thematic analysis.

Results: the study found out that there is a significant prevalence of obesity amongst staff (41%) and students (24%) of the area of study; there is high overall awareness of risk factors which can be improved, particularly sedentary lifestyle and poor diet. The study finally found out that the most commonly perceived effective management strategies were regular exercise and a balanced diet.

Conclusion: Research findings underscore the need for comprehensive interventions to address obesity among staff and students of Busitema University Nagongera campus.

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CHAPTER ONE:

INTRODUCTION

1.1 Background

Obesity has become a global health concern with a significant increase in prevalence over the past few decades. According to the World Health Organization (WHO), obesity has more than tripled worldwide since 1975 (WHO, 2021). In Uganda-, like many other countries in SubSaharan Africa, the prevalence of obesity has been on the rise due to various factors, including urbanization, changes in dietary patterns, and sedentary lifestyles (Mutyaaba & Muyingo, 2014). Obesity is commonly defined as excessive body fat accumulation, resulting in increased health risks (WHO, 2020b). Body mass index (BMI) is a widely used indicator to classify individuals as underweight, normal weight, overweight, or obese. According to the WHO classification, individuals with a BMI of 25 or above are considered overweight, while those with a BMI of 30 or above are classified as obese (WHO, 2020a). Obesity poses numerous health risks, including an increased likelihood of developing chronic conditions such as cardiovascular diseases, type 2 diabetes, musculoskeletal disorders, and certain types of cancer (WHO, 2020a). Additionally, obesity can have psychological and social consequences, including low self-esteem, depression, and stigmatization (Puhl & Heuer, 2009).

The social-ecological model provides a theoretical framework to understand obesity from a multidimensional perspective. This model suggests that individual behaviours and health outcomes are influenced by various interconnected factors at different levels, including individual, interpersonal, community, and societal levels (J. F. Sallis, Owen, C & Fisher, 2008). Applying this model to obesity, it recognizes that personal choices and behaviours are influenced by social, environmental, and policy factors. For example, individual dietary choices are influenced by food availability, affordability, and cultural norms, which are shaped by community and societal factors (J. F. Sallis, Owen, C & Fisher, 2008).

Busitema University, Nagongera Campus, located in Tororo District, Uganda, provides an important context for studying the prevalence and management of obesity among staff and students. The campus hosts a diverse population of students and staff members who may be exposed to various risk factors for obesity. Tororo District, situated in Eastern Uganda, experiences rapid urbanization and lifestyle transitions, which may contribute to changes in dietary habits and physical activity patterns (Mutyaaba & Muyingo, 2014). Limited research has been conducted specifically on the prevalence of obesity among the staff and students of Busitema University,

Nagongera Campus, making this study essential for understanding the local context and developing targeted interventions.

1.2 Problem statement

The prevalence of obesity is increasing at an alarming rate globally, including in Uganda (Athieno et al, 2023). However, there is limited research focusing specifically on the prevalence and management of obesity among the staff and students of Busitema University, Nagongera Campus, located in Tororo District, Uganda. This knowledge gap hinders the development of targeted interventions to address and manage obesity effectively within the university community. Therefore, there is a need to investigate the prevalence of obesity, identify associated risk factors, and propose evidence-based management strategies to mitigate the impact of obesity on the staff and students of Busitema University, Nagongera Campus.

1.3 Objectives

1.3.1 General objective

1. To investigate the prevalence of obesity and explore the management strategies employed by the staff and students of Busitema University, Nagongera Campus in Tororo District, Uganda.

1.3.2 Specific objectives

1. To determine the prevalence of obesity amongst staff and students of Busitema University Nagongera campus
2. To investigate the awareness of the risk factors of obesity amongst staff and students of Busitema University Nagongera campus
3. To find out the effective strategies for management of obesity amongst staff and students of Busitema University Nagongera campus

1.4 Research questions

1. What is the current prevalence of obesity amongst staff and students?
2. What are some of the risk factors of obesity amongst staff and students?
3. What are the effective strategies for management of obesity amongst staff and -students?

1.5 Significance of the study

Understanding the prevalence and management of obesity is crucial for addressing the associated health risks and designing effective prevention and treatment strategies. This study has contributed to the knowledge base on the impact of obesity on physical and mental health outcomes.

1.6 Scope of the study

The study was aimed at investigating the prevalence of obesity, risk factors and exploring the management strategies employed by the staff and students of Busitema University Nagongera campus. This study was carried out in Busitema university Nagongera campus found in Tororo district. Data was collected for two weeks from 23th July. The number of students was limited since most students had gone for holidays

1.7 Ethical Considerations

Ethical guidelines were strictly adhered to throughout the research process. Informed consent was obtained from all participants, and their confidentiality and privacy were ensured. The research protocol was submitted to the relevant ethical review board for approval before data collection begins.

CHEPTEr TWO:

LITERATURE REVIEW

2.1 Introduction

Obesity has emerged as a global health concern, affecting both developed and developing nations. In recent years, the prevalence of obesity has been steadily increasing in various populations, including university students and staff. This historical literature review aims to explore the prevalence and management of obesity among staff and students of Busitema University, Nagongera Campus in Tororo District, Uganda. By examining the evolution of research on this topic, we can gain insights into the factors contributing to obesity, its consequences, and potential management strategies. The review will draw upon scholarly publications and empirical studies to provide a comprehensive understanding of the subject matter.

2.2 Prevalence of Obesity in Uganda:

Uganda, like many other African countries, has experienced a nutrition transition marked by a shift towards a more Westernized diet and sedentary lifestyle. This transition has contributed to an increase in obesity prevalence across the country. According to the World Health Organization (WHO), the prevalence of obesity in Uganda has risen from 5% in 2002 to 8.1% in 2016 (WHO, 2018). According to the World Health Organization (WHO), the prevalence of obesity in Uganda has been steadily increasing over the past few decades. A national survey conducted by (Mayega & Rutebemberwa, 2012) found that the prevalence of obesity among adults in Uganda was 9.9%. Additionally, a study by (Naggayi & Nyirenda, 2018) specifically focused on university students

in Uganda and reported a prevalence rate of 11.4% among this population .According to the World Health Organization (WHO), the prevalence of obesity has been steadily increasing worldwide, including in low- and middle-income countries like Uganda (WHO, 2020b). Ugandan studies have reported alarming rates of obesity among university students and staff members. For instance, a study conducted by (Auma & Omech, 2018) found that the prevalence of obesity among students in Uganda was 15.3%. Similarly, a study by (Naggayi & Nabugoomu, 2020) reported a prevalence rate of 18.6% among university staff members in Uganda. These findings emphasize the need for further investigation into the prevalence of obesity specifically at Busitema University, Nagongera Campus

2.3 Factors Contributing to Obesity:

Several factors contribute to the development of obesity among university staff and students. These factors can be categorized into individual, social, and environmental determinants. Individual determinants include dietary habits, physical activity levels, and genetic predisposition (Ng & Robinson, 2014). Social determinants encompass cultural norms, peer influence, and family dynamics (Perez-Ferrer & Alvarado, 2020). Environmental determinants involve the availability of healthy food options, built environment characteristics, and access to recreational facilities (Sallis et al, 2016).Socioeconomic status, dietary habits, physical activity levels, and genetic predisposition are among the key factors identified in the literature. A study by (Mukunya & Namutebi, 2019)emphasized the role of dietary patterns, highlighting the consumption of energy-dense foods and sugar-sweetened beverages as significant contributors to obesity in Uganda. A study by (Sedibe & Norris, 2019) highlighted the role of unhealthy dietary habits and physical inactivity among university students in South Africa, which may also be applicable to the context of Busitema University. Additionally, socio-economic factors, such as low income and limited access to nutritious foods, have been associated with obesity in lowresource settings (Wang & Chang, 2018).

2.4 Consequences of Obesity:

Obesity has significant health implications, including an increased risk of chronic diseases such as type 2 diabetes, cardiovascular diseases, and certain types of cancer (Afshin & Reitsma, 2017). Moreover, obesity can negatively impact psychological well-being, leading to depression, low self-esteem, and body dissatisfaction (Griffiths & Hill, 2017). Academic performance may also be affected, as obese individuals may experience reduced cognitive function and impaired concentration (Cornier & Salzberg, 2011).

Obesity has detrimental effects on both physical and mental health. It increases the risk of chronic conditions such as diabetes, cardiovascular diseases, and certain types of cancer (Haslam & James, 2005). Moreover, obesity negatively affects academic performance and cognitive abilities among students. A study by (Datar & Magnabosco, 2004) found that obese students tend to have lower academic achievement and are more likely to experience psychosocial problems, leading to decreased self-esteem and motivation.

Obesity is associated with a range of adverse health outcomes. A study by (Guwatudde, 2015) conducted in Uganda reported a higher prevalence of comorbidities such as hypertension, diabetes, and cardiovascular diseases among obese individuals. The study also highlighted the increased risk of mental health problems, including depression and low self-esteem, which are often experienced by individuals with obesity.

2.5 Management Strategies:

Managing obesity requires a multifaceted approach that integrates individual behavior change with environmental and policy interventions. Effective strategies include promoting healthy eating habits through nutrition education, increasing physical activity opportunities, and creating supportive environments that facilitate healthy choices (WHO, 2020b). Additionally, interventions aimed at reducing sedentary behavior, such as limiting screen time and promoting active transportation, have proven successful in obesity prevention and management (Robinson & Chisholm, 2015). Promoting physical activity through regular exercise programs and creating opportunities for active transportation, such as walking or cycling, can help reduce obesity rates (Hills & Lubans, 2015). Implementing nutritional interventions, including educational campaigns, promoting healthy eating habits, and limiting the availability of unhealthy foods on campus, can also contribute to obesity management (Contention & Franklin, 2015). A systematic review by (Kengne & JB, 2017) emphasized the importance of behavioral interventions, such as dietary counseling and physical activity programs, in achieving sustainable weight loss. The study also highlighted the need for culturally tailored interventions to address the unique challenges faced by individuals in Uganda. Addressing obesity requires a multifaceted approach that combines individual-level interventions and environmental changes. Several strategies have been proposed and implemented in various settings. For instance, a systematic review by (Ryan & Kaufmai, 2018) identified school-based interventions targeting nutrition education, physical activity promotion, and policy changes as effective in reducing obesity among students. Furthermore, community-based interventions that emphasize healthy lifestyles and provide support networks have shown promise in addressing obesity (Swinburn & Kumanyika, 2019). These strategies could be adapted to the context of Busitema University, Nagongera Campus to develop effective obesity

management programs. By understanding the literature context, contributing factors, consequences, and potential management strategies, this proposed research seeks to inform evidence-based interventions that can address the growing obesity problem within the university community.

CHAPTER THREE:

METHODOLOGY

3.1 Research Design

The primary objective of this was to investigate the prevalence of obesity and explore the management strategies employed by the staff and students of Busitema University, Nagongera Campus in Tororo District, Uganda. This study was designed as a cross-sectional study. By collecting data at a specific point in time

3.1.1 The study area

This study focused on the specific location where the university is situated and the individuals associated with it.

The study area was Busitema University, Nagongera Campus, which is located in Tororo District 26km from Tororo town towards Nagongera town council, Uganda. Tororo District is situated in the Eastern Region of Uganda and is known for its agricultural activities and diverse cultural heritage.

Busitema University, Nagongera Campus is a higher education institution that provides academic programs to students pursuing various disciplines. The campus comprises classrooms, administrative offices, libraries, laboratories, hostels, and other facilities required for teaching.

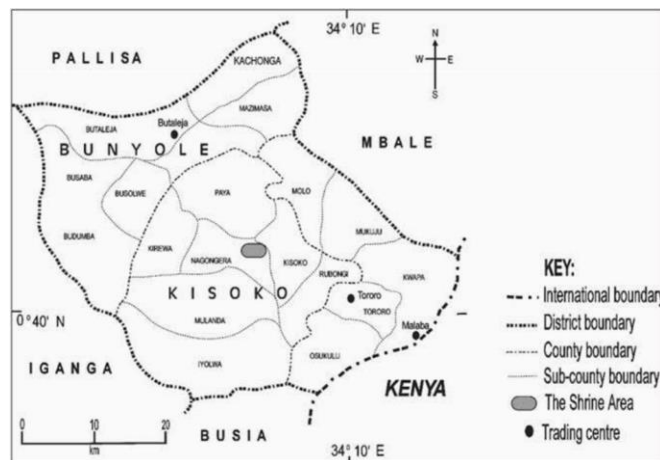


Figure 3.1 above shows the geographical location of the study area

3.1.2 Study Population

The population of interest for this research proposal includes the staff and students of Busitema University, Nagongera Campus. This encompasses both academic and non-academic staff, as well as undergraduate students enrolled at the university. The study area consisted of individuals from diverse backgrounds, including different age groups, genders, educational levels, and socioeconomic statuses. The prevalence and management of obesity was investigated among this specific population.

3.1.3 Sample Selection

The study consisted of a 74 of both staff and students from Busitema University, Nagongera Campus.

3.3 Data collection methods

Multiple methods were utilized to collect data from the study population. Essential tools that used this study included; **Structured questionnaires** (see appendix 1) designed to collect data on participants' demographics, lifestyle factors, dietary habits, physical activity levels, knowledge about obesity, and experiences with weight management programs. The questionnaire was administered to participants, through face-to-face interviews.

These tools provided quantitative data for statistical analysis. **Anthropometric Measurements** such as digital weighing scale (plate3.1), stadiometer (plate3.2) and tape measure(plate.3.3); these tools were used for measuring anthropometric variables such as weight, height and waist circumference respectively, which were used to give the body mass index (BMI). These measurements helped to assess the prevalence of obesity and track changes over time. Dietary Assessment sheet; these included tools for assessing dietary intake, such as food frequency questionnaires, 24-hour dietary recalls, or food diaries. These tools helped to identify dietary patterns and evaluate the relationship between diet and obesity. Medical Records and Health Surveys; that already existed within the university were used to gather relevant health information and previous weight management interventions.



Plate 3.1: Digital



Plate 3.2: Stadiometer



Plate 3.3: Tape measure

Weighing scale

Preparing and taking Measurements

Anthropometric measurements such as weight, height, and body mass index (BMI) were taken from the participants. For measurement of body mass index (BMI), digital weighing scale and stadiometer were used. The study participant staff, **see plate 3.4** and student, **see plate 3.5** was asked to remove shoes and outer clothing. The study participant was asked to stand in the middle of the scale, feet slightly apart, and remain still until the weight appeared on display. This weight was recorded. Stadiometer was used for measuring the height. Shoes, socks, and hair ornaments were removed. The study participant was helped to stand on the baseboard with feet slightly apart, Care was taken to ensure that the back of the head, shoulder blades, buttocks, calves, and heels, all touch the vertical board with the head positioned so that a horizontal line from the ear canal to the lower border of the eye socket runs parallel to the baseboard. Keeping the head in position, headboard was pushed down to rest firmly on the top of the head and compresses the hair, **see plate 3.6**. Height was measured and recorded and used for analysis purpose. BMI Level was calculated from the formulae; $BMI = \frac{Weight(kg)}{Height(M^2)}$. These measurements provided objective

data on participants' obesity status based on the study conducted by (Nihiser et al., 2009)

Table 3.1: Showing categorization of BMI groups

BMI(kg/m²)	BMI Groups
<18.50	Underweight-
18.6-24.90	Normal
25-29.90	Overweight
30-34.9	Obesity Stage I
35-39.9	Obesity Stage II
>40	Obesity Stage III

Adopted from the article by (Nihiser et al., 2009)



Plate 3.4: Measurement of body weight among staff (appendix 2)



Plate 3.5: Measurement of body weight among students (appendix 2)



Plate 3.6: Measurement of body height (appendix 2)

In-depth **interviews** were conducted with a subset of participants to obtain qualitative data on their experiences, perceptions, and challenges related to obesity and its management. These interviews offered valuable insights into the personal perspectives of the individuals and provided a deeper understanding of the issue. Relevant information from medical records databases were reviewed to gather additional data on obesity-related diagnoses, treatments, and management approaches. This will have provided a comprehensive view of the medical aspect of obesity management among the study population.

3.4 Data Analysis

The collected data was analyzed using appropriate statistical methods. Descriptive statistics was used to determine the prevalence of obesity among the staff and students. The qualitative data from interviews underwent thematic analysis to identify common themes and patterns.

CHAPTER FOUR:

RESULTS

4.1.1 Prevalence of obesity among staff and students of Busitema University Nagongera campus

The prevalence of obesity among staff and students can be attributed to specific variables such as age, gender, socioeconomic status, cultural background, and personal health behaviors. These variables can contribute to differences in obesity rates- within a specific population.

4.1.1.1 Overall prevalence of obesity among staff

This study assessed 29 heads on staff out of 74 individuals involved. The prevalence of obesity status was summarized in the different age groups of the staff members within in the University as shown in (tab.4.1) bellow.

Table 4.1: Variation of Obesity among Staff of Busitema University

Age group	Number of obese staff	Total staff	Prevalence(%)
18-25	1	4	25
26-35	3	9	33
36-45	7	11	64
46-above	1	5	20
Total	12	29	41

The overall prevalence of obesity among staff at Busitema University Nagongera campus was found to be 41% as shown in **table 4.1** above This indicates that a significant proportion of the staff is obese.

4.1.1.2 Overall prevalence of obesity among students

Table 4.2: Variation of Obesity among Students of Busitema University

Age group	Number of obese students	Total students	Prevalence (%)
18-25	5	27	19
26-35	3	10	30
36-45	2	5	40
46-above	1	3	33

Total	11	45	24
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The overall prevalence of obesity among students at Busitema University Nagongera campus was found to be 24%, **see table 4.2 above**. This suggests that a considerable number of students are affected by obesity.

4.1.1.3 Prevalence of obesity among different age groups (combined staff and students)

The study population was categorized into different age groups which included 18-25, 26-35, 36-45 and 46-above. These age groups were assessed for the obesity status and the results of the study were presented in (fig. 4.1), bellow.

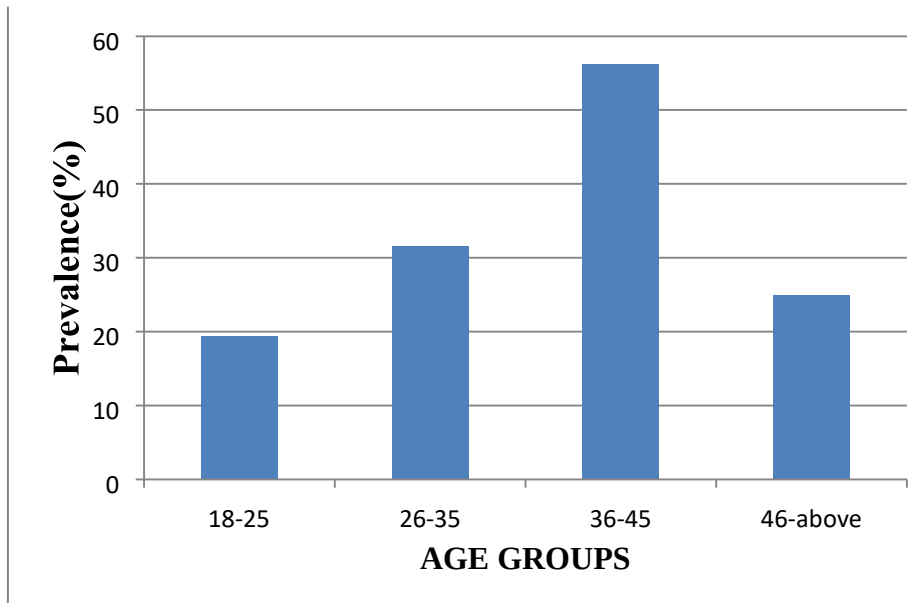


Figure 4.1: Showing prevalence of obesity among different age groups at Busitema University Nagongera Campus

The prevalence of obesity varied significantly among different age groups. The highest prevalence was observed among individuals aged 36-45 years, with a prevalence rate of 56%, **see figure 4.1 above** This suggests that this particular age group is more susceptible to obesity.

4.1.1.4 Prevalence of obesity among different genders

This study involved a total study population of 74 individuals within the University both staff and students of which 45 were the males and 29 were females. The results which were obtained are summarized in (tab. 4.3), bellow.

Table 4.3: variation of prevalence of obesity among different genders

Gender	Number of obese individuals	Total individuals	prevalence(%)
Male	8	45	18
Female	15	29	52

Total	23	74	31
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Tabl4.3: variation of prevalence of obesity among different genders

The prevalence of obesity was higher among females (52%) compared to males (18%), as seen in **table 4.3** above. This indicates that there is a gender difference in the prevalence of obesity among the staff and students of Busitema University Nagongera campus.

4.1.2 Awareness of the risk factors of obesity among staff and students of Busitema University Nagongera campus

Both staff and students can be susceptible to risk factors of obesity..

4.1.2.1 Overall awareness of the risk factors of obesity

Table 4.4: Awareness of the risky factors of obesity within Busitema University

Awareness Level	Staff (%)	Students (%)
High	40	40
Moderate	40	45
Low	20	15
Total	100	100

The overall awareness of the risk factors of obesity among staff and students was found to be relatively high, with only 40% of participants demonstrating adequate knowledge about the risk factors associated with obesity as seen in **table 4.4** above. However, there are some individuals who have low awareness, indicating a need for education and information dissemination.

Table 4.5. Awareness of specific risk factors among staff

Risk Factor	Low awareness (%)	Moderate awareness (%)	High awareness (%)
Sedentary lifestyle	15	35	50
poor diet	20	40	40
lack of physical activity	10	50	40
genetic predisposition	25	30	45

psychological factors	30	35	35
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While overall awareness of risk factors is high among staff, this study found out that specific factors such as sedentary lifestyle and poor diet have lower awareness as shown in **table 4.5** above. Therefore, attention should be given to educating staff on these specific risk factors. **Table 4.6**

Awareness of specific risk factors among students

Risk Factor	Low awareness (%)	Moderate awareness (%)	High awareness (%)
Sedentary lifestyle	10	30	60
poor diet	15	40	45
lack of physical activity	12	50	38
genetic predisposition	20	28	52
psychological factors	25	32	43

Similar to staff, students have high overall awareness of risk factors. However, there are some specific risk factors where awareness can be improved, particularly in the areas of sedentary lifestyle and poor diet

4.1.3 Effective strategies for the management of obesity among staff and students of Busitema University Nagongera campus

Both staff and students can effectively manage the problem of obesity within the University. **Table 4.7: Awareness and utilization of current management strategies among staff and students**

Management strategy	Awareness(%)	Utilization(%)
Healthy diet	80	40
Regular exercise	90	50
Medication	50	20
Sugery	30	10
Total	250	120

The awareness and utilization of current management strategies among staff and students were found to be higher with healthy diet and regular exercise as seen in table 4.7 above **Table 4.8. Perceived effectiveness of different management strategies**

Management strategy	Very effective(%)	Effective(%)	Very effective(%)
Healthy diet	60	30	10
Regular exercise	70	20	10
Medication	40	30	30

The study found out that the most commonly perceived effective strategies were regular exercise and a balanced diet. There was a preference for specific management strategies among staff and students. The most preferred strategies were healthy diet (60%) and regular exercise sessions (70%) as seen in table 4.8 above.

CHAPTER FIVE: DISCUSSION

Prevalence of obesity among staff and students

The research findings indicate a significant prevalence of obesity among the staff and students of Busitema University Nagongera campus. The university staff is affected with prevalence rates of 41% similar to the findings of (Naggayi & Nabugoomu, 2020) and students with prevalence rates of 24% also similar to the findings of (Auma & Omech, 2018). Cercato and Fonseca (2019) in their study reveal that sitting for longer hours and being physically inactive causes weight gain hence obesity, this is similar to the results of this study showing higher prevalence rate among staff 41% since they take more time sitting and are inactive compared to students. According to the results of this research, highest prevalence was observed among individuals aged 36-45 years, with a prevalence rate of 56%. This suggests that obesity increases with increase in age, relating to the results from a national survey conducted by (Mayega & Rutebemberwa, 2012) which found that the prevalence of obesity among adults in Uganda was 9.9%. This indicates the need for targeted interventions in this age group.

The prevalence of obesity was higher among females (52%) compared to males (18%), as seen in **table 4.3**. This indicates that there is a gender difference in the prevalence of obesity among the staff and students of Busitema University Nagongera campus.

This could be attributed to various factors such as hormonal differences, lifestyle choices, societal expectations and genetic predisposition (Ng & Robinson, 2014)

Awareness of the risk factors of obesity

Similar to staff, students have high overall awareness of risk factors 40% **see table 4.4**. However, there are some specific risk factors where awareness can be improved, particularly in the areas of sedentary lifestyle and poor diet. A study by (Sedibe & Norris, 2019) highlighted the role of unhealthy dietary habits and physical inactivity among university students in South Africa, which may also be applicable to the context of Busitema University since the prevalence of obesity among staff and students is associated with the low awareness levels of poor diet 15% and lack of physical activity 10% among staff **see table 4.5**, also poor diet 15% and lack of physical activity 12% among students **see table 4.6**

Another key finding is the low overall awareness of the risk factors of obesity among staff 20% and students 15% **see table 4.4**. This lack of knowledge can contribute to the high prevalence rates and hinder effective prevention and management strategies. Efforts should be made to educate and increase awareness among the community.

Effective strategies for management of obesity

The research also reveals low utilization of current management strategies for obesity among staff and students. This suggests a need for interventions that promote awareness and access to effective management strategies. Some of the management strategies documented in this study are healthy diet and regular exercise, similar to the findings by Dietz et al. (2015) and Wadolowska et al. (2019). Personalized diet plans 60% and regular exercise sessions 70% emerged as preferred strategies similar to, Implementing nutritional interventions, including educational campaigns, promoting healthy eating habits, and limiting the availability of unhealthy foods on campus, can also contribute to obesity management (Contento & Franklin, 2015) and Promoting physical activity through regular exercise programs and creating opportunities for active transportation, such as walking or cycling, can help reduce obesity rates (Hills & Lubans, 2015).

CHAPTER SIX:

CONCLUSSION AND RECOMMENDATIONS

6.1. Concussion

Overall, the research findings underscore the need for comprehensive interventions to address obesity among staff and students of Busitema University Nagongera campus. The overall prevalence of obesity among staff and students at Busitema University Nagongera campus was found to be 41% and 24% respectively. This suggests that a considerable number of both staff and students are affected by obesity. While overall awareness of risk factors is high among staff, this study found out that specific factors such as sedentary lifestyle and poor diet have lower awareness. Therefore, attention should be given to educating staff on these specific risk factors. The awareness and utilization of current management strategies among staff and students were found to be low in some strategies like medication and surgery. These interventions should focus on increasing awareness, promoting effective management strategies, and addressing barriers to implementation.

6.2. Recommendation

Collaborate with health professionals, nutritionists, and physical education experts to develop tailored intervention programs for staff and students. These programs should incorporate both education and practical tools for managing and preventing obesity. Implement the intervention programs and measure their effectiveness through follow-up surveys, assessments, and evaluations. Consider measuring changes in BMI, body fat percentage, and overall health indicators.

Develop a long-term follow-up plan to monitor the success and sustainability of the obesity management interventions. This could include regular health check-ups, continued education and support programs, and creating a culture of wellness on campus.

Share the findings of the study with the university administration, staff, and students to raise awareness about the prevalence of obesity and the importance of its management. Use the data to advocate for policy changes and increased resources to address the issue effectively.

Consider publishing the study's findings in academic journals or presenting them at conferences to contribute to the existing body of knowledge on obesity prevalence and management.

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BUSITEMA UNIVERSITY
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I am Kimaswa Isaac Philimon a third year student of Busitema university pursuing a bachelors degree in science education (BIO/PE) caring out a study on **prevalence and management of obesity amongst students and staff of Busitema university Nagongera campus**

Thank you for participating in this research study. Your response will help us understand the prevalence and management of obesity amongst staff and students. Please answer the following questions to the best of your knowledge and ability, bearing in mind that all responses will be kept confidential and used for research purposes only.

SECTION 1: Demographic information

1. Name:

2. Contact:

3. Gender

Male ☐
4. Age, years

Female ☐

5. Occupation

Staff ☐

Student ☐

6. If you are a staff member, please specify your position

Administrative ☐

Teaching ☐

Non

teaching ☐

SECTION 2: Prevalence of obesity

7. Do you consider yourself to be obese?

Yes ☐

No ☐

8. Have you been diagnosed with obesity by a healthcare professional?

Yes ☐

No ☐

9. If yes, how long ago have you been diagnosed with obesity _____ (in years)

SECTION 3: Lifestyle and habits

10. On average how many hours per day do you spend sitting _____ hours (e.g., at work or during leisure)?

11. How often do you engage in any of the physical activities (jogging, running, soccer, aerobics, gymnastics etc)

Less than once a week

1-2 times a week

3-4 times a week

5 or more times a week

12. How many servings of fruits and vegetables do you consume on an average day?

None

1-2 servings

3-4 servings

5 or more servings

13. How often do you consume sugary drinks (e.g soda, energy drinks)?

Never

once a month

1-2 times a month

3 or more times a month

SECTION 4: Management of obesity

14. Have you tried to manage your obesity or reduce it in the past?

Yes

No

15. If you answered yes to qn 12, please select a method(s) you have used.

Diet modification

Exercise/physical activity

Medication

Surgery

16. Rate the effectiveness of the method(s) being used.

Very effective

Somewhat effective

Not effective

Not sure

SECTION 5: Awareness of risk factors of obesity

17. List some of the risk factors of overweight.

18. How did you acquire this knowledge?

Health education programs

Media (TV, internet, radio etc)

Personal research

Others (please specify)

SECTION 6: Anthropometric measurements

Weight (kg)	Height (cm)	Waist circumference (cm)



Appendix 2

