PERCEPTION OF KEEP-FIT PARTICIPANTS'ON THE BENEFITS OF WEIGHT LOSS DRUGS IN BENIN METROPOLIS

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Juliet Ukamaka UGBOR

EDU2009557

DEPARTMENT OF HUMAN KINETICS AND SPORTS SCIENCE

FACULTY OF EDUCATION

UNIVERSITY OF BENIN

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A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF HUMAN KINETICS AND SPORTS SCIENCE, FACULTY OF EDUCATION,UNIVERSITY OF BENIN, BENIN CITY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE(EDUCATION)B.Sc.(Ed.)DEGREE IN HUMAN KINETICS AND SPORTS SCIENCE.

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CERTIFICATION

We,the undersigned,certify that this research project was carried out by Juliet UkamakaUGBOR with the matriculation number EDU2009557 in the Department of Human Kinetics and Sports Science,Faculty of Education,University of Benin,Benin City.In partial fulfillment for the award of BSc.(Ed)degree in Human Kinetics and Sports Science.

Dr.R.F.ANI
Project Supervisor

24/6/2024
Signature and Date

Dr.R.F.ANI
Project Coordinator

24/6/2024
Signature and Date

Dr.G.E.Arainru
Head of Department

24-06-2024
Signature and Date

DEDICATION

Dedicated to God Almighty whose love and mercy has kept me through the rough and smooth paths of this work and my years in the University, and also to my beloved family.

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ABSTRACT

This study was carried out to find out Keep-fit participants'perception of the benefits of weight loss drugs to participants in Benin metropolis.Three research questions were raised,while two hypotheses were formulated and tested at a 0.05 level of significance. The study utilized a descriptive survey research design.The population of this study was made up of 549 keep-fit participants in Benin metropolis.The simple random sampling technique was used in selecting a sample size of 275 participants,which constituted 50 percent of the population.The test instrument for the study was a questionnaire titled "Keep-Fit Participants'Perception of the Benefits of Weight Loss Drugs Questionnaire (KPBWLDQ)". Data was analyzed using percentages,mean and standard deviation,and Pearson correlation statistics tested at 0.05 level of significance.

The findings of the study based on the research questions raised and hypotheses formulated showed the following:there were some prevailing attitudes of keep-fit participants towards weight loss drugs use,such as;fear of its side effects,likelihood of been detrimental to health, belief that its solely for obesed individuals and those who upon dieting/exercise fail to lose weight,uncertainty about drugs efficacy as to weight reduction,and so on;some factors influence the consideration or avoidance of weight loss drugs among keep fit participants/enthusiasts,such as being more effective than

diet/exercise,rapid results,its safety,convenient to use,and so on;keep fit enthusiasts consider the benefits and inherent risks linked with the use of weight loss drugs in their health and fitness journeys;there is no significant relationship between keep fit participants'attitudes towards weight loss drugs and their engagement in structured fitness regimens;there is a significant relationship between the decision to consider or avoid weight loss drugs and the factors influencing individuals dedicated to fitness.

It was concluded that the prevailing attitude of keep-fit participants towards weight loss drug use should be sustained as well as the factors influencing the consideration or avoidance of weight loss drugs.These are coupled with keep-fit enthusiasts considering the benefits and risks associated with the use of weight loss drugs so as to ensure their safety.It was recommended that Keep-fit participants should be informed as to the benefits and inherent risks linked with the use of weight loss drugs in their health and fitness journeys/lifestyle;and also, there should be targeted interventions to enhance public awareness and safe usage of weight loss drugs,amongst others.

CHAPTER ONE

INTRODUCTION

Background to the Study

The increasing global prevalence of obesity has ushered in an era where the management of excess weight requires a nuanced and multifaceted approach (World Health Organization,Bray et al.,2016).The obesity epidemic,characterized by a complex interplay of genetic, environmental,and lifestyle factors,necessitates strategies that extend beyond conventional lifestyle modifications.This evolving landscape has led to a paradigm shift,with pharmaceutical interventions assuming a more prominent role in the holistic approach to obesity management (Apovian et al.,2015).Weight loss drugs,such as phentermine,orlistat,and liraglutide,have emerged as integral components designed not only to supplement but also to synergize with lifestyle changes,offering a comprehensive solution to the challenges posed by obesity.

These medications operate through diverse mechanisms,reflecting a sophisticated understanding of the physiological pathways involved in weight regulation.From appetite suppression to the reduction of nutrient absorption and enhancement of metabolic processes,weight loss drugs aim to provide individuals with tailored tools that address the multifaceted nature of obesity. As the global prevalence of obesity continues to escalate

and the need for effective, sustainable interventions grows, there is an imperative to delve into the intricate web of perceptions and attitudes surrounding weight loss drugs. Understanding how these interventions are perceived, accepted,and integrated into broader weight management strategies is crucial for developing targeted and patient-centered approaches to combat obesity on a global scale.

The public's perceptions of weight loss drugs are dynamic and varied, embodying a spectrum of views that oscillate between optimism and reservations (Fabricatore &Yank,2008;Waters et al.,2010).Optimism often stems from the potential benefits these drugs offer in achieving substantial and sustained weight loss.However, reservations are rooted in concerns related to potential side effects, uncertainties regarding long-term efficacy, and ethical considerations surrounding the use of pharmaceutical interventions. Of particular interest are the perspectives of keep-fit participants-individuals already deeply engaged in healthy lifestyles. Their unique vantage point offers invaluable insights into the dynamic interplay between pharmaceutical interventions and the broader canvas of comprehensive weight management.Analyzing the factors influencing their acceptance or reluctance towards weight loss drugs contributes to a nuanced comprehension of the multifaceted role these drugs play in the intricate landscape of combating obesity.

The delicate balance between the potential benefits and risks of weight loss drugs necessitates a thorough and meticulous evaluation(Colquitt et al.,2014).This evaluation encompasses an in- depth exploration of potential side effects, the intricate dance of interactions with concurrent medications,and the imperative for sustained healthcare monitoring to ensure patient safety and efficacy. Establishing a robust foundation for understanding the landscape of pharmacological management requires an extensive literature review that synthesizes evidence from authoritative guidelines.The guidelines,such as those provided by the Endocrine Society,delineate the framework for the pharmacological management of obesity,providing a compass for evidence- based decision-making(Apovian et al.,2015).Furthermore,a meticulous examination of long-term outcomes and safety profiles,as evidenced in studies like Yanovski et al.'s comprehensive JAMA review(2014),adds nuanced perspectives to the ongoing discourse,informing the understanding of the long-term impact and sustainability of these interventions.Beyond the immediate pharmacological considerations,the exploration of perioperative nutrition guidelinesprovides a broader context,offering a holistic perspective on the considerations surrounding weight loss drugs within the evolving landscape of obesity interventions (Mechanick et al., 2020).This comprehensive approach is not merely an academic exercise but a crucial step in navigating the

intricacies of weight management and advancing evidence-based strategies to combat obesity effectively on a global scale.

Statement of the Problem

The use of weight loss drugs in the pursuit of fitness and well-being raises pertinent questions about the motivations,beliefs,and concerns of keep-fit enthusiasts.Despite the expanding market and availability of these pharmaceutical interventions,there is a noticeable gap in our understanding of how individuals committed to maintaining a healthy lifestyle perceive the benefits and drawbacks associated with weight loss drugs.

This research aims to address the following questions:

Research Questions

1.What are the prevailing attitudes of keep-fit participants in Benin metropolis towards the use of weight loss drugs?

2.What factors influence the decision to consider or avoid weight loss drugs among individuals dedicated to fitness in Benin metropolis?

3.How do keep-fit enthusiasts weigh the perceived benefits and the tendency of risks associated connected with the use of weight loss drugs in their health and fitness journeys?

Hypotheses

1.There is no significant relationship between keep-fit participants attitudes towards weight loss drugs and their engagement in structured fitness regimens.

2.There is no significant relationship between the decision to consider or avoid weight loss drugs and the factors influencing individuals dedicated to fitness.

Purpose of the Study

This research aims to investigate and understand the perceptions of Keep Fit participants regarding the benefits of weight loss drugs. By exploring their unique perspectives, the study seeks to uncover insights into how individuals already engaged in healthy lifestyles perceive the role and effectiveness of pharmaceutical interventions in weight management. The purpose is to provide a nuanced understanding that can inform tailored strategies, ensuring weight loss drugs align with the preferences and goals of keep-fit participants. Ultimately,this exploration contributes to a more comprehensive approach to obesity management that incorporates the viewpoints of those actively committed to maintaining a healthy lifestyle.

Significance of the Study

This research on the perceptions of keep-fit participants regarding the benefits of weight loss drugs carries substantial significance for various stakeholders:

1.Targeted Intervention Development: The study's insights will facilitate the development of targeted interventions, allowing healthcare professionals to tailor weight loss drug prescriptions based on the nuanced preferences and attitudes of individuals actively committed to maintaining a healthy lifestyle.

2.Enhanced Patient Engagement: Understanding how keep-fit participants perceive the benefits of weight loss drugs can foster better communication and engagement between healthcare providers and patients, promoting shared decision-making and adherence to prescribed interventions.

3.Informed Healthcare Practices: Healthcare practitioners can benefit from a more nuanced understanding of how keep-fit participants view the role of weight loss drugs in their health journey, enabling providers to align recommendations with patient expectations and values.

4.Public Health Implications: The findings may have broader public health implications by informing educational campaigns and community outreach programs that aim to raise

awareness about obesity management options, considering the preferences of those already engaged in fitness activities.

5.Advancement of Research Discourse: This study contributes to the academic discourse by shedding light on a specific aspect of the intersection between healthy lifestyles and pharmaceutical interventions. It may inspire further research, driving the evolution of obesity management strategies.

6.Global Health Impact: As obesity remains a global health concern, the study's findings

have the potential to impact global health strategies by providing insights into the preferences and attitudes of a group actively involved in health-conscious practices.

Scope and delimitation of the Study

This research focuses on investigating keep-fit participants 'perceptions of the Benefits of weight loss drugs. This study was delimited to participants actively engaged in maintaining a healthy lifestyle through structured fitness regimens in Benin metropolis. Their perceptions will be explored in comparison to those not actively involved in fitness activities.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

In this chapter, the related literature was reviewed under the following sub-headings:

- Theoretical Framework
- Conceptual Framework
- Available weight loss medications, efficacy,and safety
- Current practice patterns around weight loss medication use
- Perception of Benefits and Adverse Effects of Weight loss medication/drugs
- Intervention currently included in Weight loss counseling and efficacy
- Weight loss counseling
- Barriers to weight loss counseling
- Knowledge, Attitude,and Practice regarding Weight reduction drugs/agents and supplements
- Summary of Reviewed Literature

Theoretical Framework

The theoretical framework that guided this study was the Theory of Reasoned Action

(TRA)(Fishbein&Ajzen,1975).The theory was expounded in the 1960s and later modified to the Theory of Planned Behavior.The Theory of Reasoned Action (TRA)explains the connections between beliefs,attitudes,intentions,and behavior.According to this theory,it is believed that individuals are thoughtfull and make decisions based on the information they have The theory suggests that an individual's intention to perform a behavior is the primary predictor of that behavior. Regarding the Theory of Planned Behavior, intention is the most important factor in a person's behavior. Intention indicates a person's readiness to engage in a behavior, which is influenced by their attitude towards the behavior,the subjective norms surrounding it, and their percieved control over the behaviou.

An individual's attitude is shaped by their comprehensive assessment of engaging in the behavior and their beliefs regarding its outcomes. Attitude encompasses knowledge, emotions, beliefs, intentions, and perceptions. Conversely, subjective norms pertain to the societal influences that sway an individual towards participating in or abstaining from a specific behavior. These influences can impact the decision-making process due to an inherent inclination to comply with others' viewpoints and meet their anticipations.

These pressures can impact the decision to engage in behavior due to an inherent desire to align with others'opinions and to act according to others'expectations.Perceived behavioral control refers to the perceived ability that an individual has to carry out a certain behavior.

The individual's attitude and subjective norms have an impact on perceived control.Usually, the person's perceived control and consequently their intention to engage in the behavior will be higher when the attitude and subjective norm are favorable.

The Theory of Reasoned Action facilitates comprehension of healthcare providers' behavior concerning the utilization of weight loss medications for obese patients. This study explores the elements of the theory by positing that providers' inclination to engage in a behavior is influenced by their beliefs, attitudes, subjective norms, and perceived control..The TRA is useful in determining the perception of keep-fit participants on the benefits of weight loss drugs to them

Conceptual Framework

The prevalence of obesity in the United States (U.S.)is high.In 2011-2012,more than one-third (35%or 78.6 million)of American adults were obese (Ogden,Carroll,Kit,&Flegal,2014).Although there have been no significant changes in

obesity prevalence since 2003-2004, the number of individuals living with obesity remains at an all-time high.Furthermore,the prevalence of extreme obesity(body mass index [BMI]≥40 kg/m²)increased by 70%between 2000 and 2010 (Sturm &Hattori,2013).Obesity is a major health concern,leading to negative health outcomes due to related co-morbidities.

Obesity substantially increases the risk of morbidity and mortality due to the wide range of accompanying co-morbidities.The Centers for Disease Control (CDC)reports that obesity- related conditions are among the leading causes of preventable death,including cardiovasculardisease,stroke,type 2 diabetes,and certain types of cancer (CDC,2016a).In general,as body mass index (BMI)goes up,the likelihood of having multimorbidity (the presence of multiple chronic diseases at the same time)also rises for both males and females.TAccording to the data, the prevalence of multimorbidity among individuals with normal weight is 23% in men and 28% in women. These percentages increase to 44% in men and 51% in women with extreme obesity. (Booth,Prevost,&Gulliford,2014).A weight loss of 5-10%of total baseline body weight can significantly reduce cardiovascular disease risk factors,including lowering blood pressure and blood cholesterol,as well as preventing or delaying the development of type 2 diabetes (CDC, 2016)

The direct and indirect costs associated with obesity in the United States.are staggering While direct medical costs may include prevention,diagnostic,and treatment services associated with obesity and obesity-related diseases,indirect medical costs may include premature mortality,higher disability insurance premiums,and productivity loss due to obesity (Hammond&Levine,2010).According to Finkelstein,Trogdon,Cohen,and Dietz (2009), According to the data, the projected yearly healthcare expenses linked to obesity in the United States amounted to $147 billion..In general, the yearly healthcare costs related to obesity have increased to nearly 10%of total medical xpenses.Medical expenses for obese individuals across all payers are approximately 42%, or $1,429 more than the expenses for normal-weight individuals. Similarly,in 2006, medical spending for obese beneficiaries cost 'Medicare'over $600 per beneficiary per year more than normal-weight beneficiaries (Finkelstein et al.,2009)

Despite the obesity epidemic,appropriate and consistent management of obese individuals in primary care settings remains variable(Bleich,Pickett-Blakely,&Cooper,2011;

Shiffman et al.,2009).Current clinical guidelines from the U.S.Preventive Services The Task Force advises that all adult patients be screened for obesity,and those with a BMI of ≥30 kg/m²should be offered or referred to intensive,multicomponent behavioral interventions (Moyer,2012).Despite these guidelines,numerous cross-sectional studies

have indicated that obese individuals are often not consistently diagnosed,and weight loss counseling by providers remains infrequent,inconsistent,and suboptimal (Bleich,2011;Shiffman,2009;Smith,2011).

Studies have shown that when weight loss counseling is part of clinical practice,lifestyle interventions form the basis of primary care providers'(PCPs)guidance.Despite the availability and effectiveness of pharmacotherapy and bariatric surgery as weight loss options,these methods are frequently excluded or seldom recommended for individuals with obesity (Ferrante,Piasecki,Ohman-Strickland,&Crabtree,2009;Shiffman,2009).

Typically, lifestyle interventions are unable to guarantee sustained weight maintenance in the long term due to behavioral, environmental pressures, and biological mechanisms linked to weight loss, as noted by Korner & Aronne (2003) and Rosenbaum, Hirsch, Gallagher, & Leibel (2008). The combination of pharmacotherapy with conventional diet and exercise approaches has been shown to be an efficacious intervention for weight loss in individuals with obesity.(Yanovski SZ&Yanovski JA,2014).When combined with

lifestyle interventions,weight loss medications have resulted in 5-10%weight loss (Gadde,2011,Smith,2010;Yanovski,2014).

Available weight loss drugs, effectiveness,and safety Nine medications have currently received approval from the Food and Drug Administration (FDA) for weight loss in the treatment of obesity. These pharmaceutical agents are utilized as a supplementary treatment to lifestyle interventions and are generally prescribed for individuals who have been unsuccessful in losing weight through diet and physical activity alone, as well as for those who face heightened health risks stemming from comorbid conditions associated with obesity.Pharmacotherapies approved for long-term therapy are categorized based on their specific targeted location of action. Centrally acting agents encompass medications such as lorcaserin (BelviqTM), phentermine/topiramate (QsymiaTM), and bupropion/naltrexone (ContraveTM, MysimbaTM). Conversely, peripherally acting agents consist of orlistat (XenicalTM) and liraglutide (SaxendaTM). Additionally, there are four centrally acting amphetamine derivatives designed for short-term usage (≤12 weeks) which include phentermine, benzphetamine, phendimetrazine, and diethylpropion. Even though there are variances in mechanisms of action among these agents, it is essential to recognize that anti-obesity medications and weight loss drugs could potentially disrupt the physiological processes initiated by lifestyle modifications that encourage weight gain, thereby posing a challenge for long-term maintenance. These agents all achieve their effects through the reduction of food intake or nutrient absorption

and/or the increase in resting or activity-related energy expenditure (Jones & Bloom, 2015).

Generally, anti-obesity medications have demonstrated greater effectiveness in achieving weight loss compared to lifestyle interventions alone.A study conducted by Yanovski and Yanovski (2014) discovered that extended use of obesity medications,combined with changes in diet and exercise,led to substantial weight loss. The comparison of additional weight loss after one year between different anti-obesity drugs and a placebo showed varying results, ranging from approximately 3% to 9% of the baseline weight. Various randomized controlled trials examining these drugs in comparison to standard care with lifestyle interventions revealed a weight loss of 5-10%. For instance, a study by Gadde et al. (2011) evaluated the effectiveness of two doses of combined phentermine plus topiramate ER in obese subjects (n=2487) as an adjunct to diet and lifestyle modifications. Both doses showed significant efficacy in comparison to placebo. The percentage of patients achieving at least 5% weight loss was notably higher in the groups prescribed the combination drugs. However, the study's limitations included restrictions on BMI (45 kg/m^2) and lack of diversity in terms of ethnicity (86% white) and gender (70% female). It is important to consider these findings in the context of individual responses to

medications, including anti-obesity drugs.esity9 agents can be accompanied by adverse events.

Several agents that have recently received approval for long-term use have been prescribed separately for other indications for a number of years, resulting in well-documented adverse side effects. These medications consist of bupropion, naltrexone, phentermine, topiramate, and liraglutide. Beyond examining effectiveness, several randomized controlled trials have also assessed the safety profiles of these drugs. For instance, Smith et al. (2010) examined the safety of lorcaserin in terms of weight loss and maintenance, including the development of valvulopathy. The study found that the Among the 2472 patients evaluated in year one and the 1127 patients evaluated in year two, no significant increase was observed in the rate of cardiac valvulopathy. Although the selective affinity of its serotonin 2C receptors is not commonly linked to valvulopathy as seen with serotonin 2B receptors, long-term data regarding this matter are still under development.Overall, a number of randomized controlled trials have examined the safety and efficacy of weight loss medications. Their findings suggest that the decision to prescribe such medications should be personalized, taking into consideration a careful evaluation of the associated risks and benefits. Prevailing trending practice around weight loss drug use Several published studies have explored weight loss counseling

incorporating the use of weight loss medications. In the study conducted by Ferrante, Piasecki, Ohman-Strickland, and Crabtree (2012), family physicians' practice patterns and attitudes towards extremely obese patients were investigated. This included factors such as physician knowledge, demographic characteristics, care for extremely obese patients, weight management strategies, attitudes towards obesity management, challenges in physical examinations, access to necessary resources, and methods to improve healthcare. The study involved 255 practicing family physicians in New Jersey who completed self-administered surveys. The findings indicated that the most commonly recommended interventions were basic principles of good nutrition, such as adding fruits and vegetables (recommended by 81.4% of physicians almost always) and regular exercise (recommended by 79.2% of physicians almost always). On the other hand, only 46.4% of respondents reported almost never recommending weight loss drugs. It was found that higher self-reported knowledge about weight loss drugs was linked to more frequent recommendations of these drugs. Additionally, physicians with over 7% of extremely obese patients in their practice were less inclined to suggest weight loss medications compared to those with fewer than 7% of such patients. It's important to note that the self-reporteod nature of the study could have introduced biases by either overestimating or underestimating practice patterns. Response bias may also have

influenced the findings, as responders might have had a greater interest in obesity compared to non-responders, potentially limiting the generalizability of the results to the broader population.Glauser et al.(2015)looked into the methods used by primary care physicians (PCPs), endocrinologists (ENDOs),cardiologists(CARDs),and bariatricians(BARIs)for screening and managing obesity.300 practicing physicians in the United States were randomly selected to complete case vignette surveys that were specific to their specialty.Self-reported demographic and practice information was also collected. On average, one-third of primary care physicians (PCPs) and cardiology patients were obese, compared to 46% for endocrinologists (ENDOs) and 75% for bariatric surgeons (BARIs). When presented with a case vignette describing an obese patient with multiple comorbidities and risk factors, a BMI $\geq$ 30 kg/m^2 was the most commonly selected indication for weight loss medication across all physician groups. However, expectations regarding the percentage of expected weight loss for a given case were inconsistent. A significant number of physicians opted for a 15% expected weight loss (32% for PCPs, 21% for ENDOs, and 36% for CARDs) with a serotonin 2c receptor agonist, which is 10% higher than what has been documented in the literature. None of the physician groups perceived the available weight loss medications to be both safe and effective. It's important to note that the cases did not encompass all patient demographics,

comorbidities, and medical and personal histories that physicians encounter in clinical practice. This limitation could potentially affect responses and study outcomes. Nevertheless, these findings suggest that physicians may have inadequate knowledge to effectively utilize weight loss agents in clinical settings.

Studies investigating practice patterns regarding pharmacological interventions are scarce. Among the existing studies, the underlying factors affecting the prescription of weight loss medications have not been thoroughly explored.Perception of Benefits and Adverse Effects of Weight loss medication/drugs Despite obesity being common in the U.S.and linked to various health issues,primary care physicians in Granara's (2017)study were cautious about recommending weight loss drugs,especially for extended use. Overall, more than half of primary care providers expressed a predominantly negative view of pharmacotherapy as a viable treatment for obesity. Medical doctors tended to hold a more unfavorable perception compared to advanced practice clinicians. This, coupled with safety apprehensions and concerns regarding cost and insurance coverage, likely contributes to the low prescription rates across all types of primary care providers.

Primary care providers (PCPs) identified safety concerns as the predominant obstacles impeding them from prescribing weight loss medications. While there is a lack of established long-term safety data for the combination of agents approved for weight loss therapy, various drugs have been prescribed independently for a significant period, resulting in the clear establishment of adverse side effects. Randomized controlled trials have been conducted to assess the efficacy and safety profiles of these drugs.

Reported common adverse side effects included gastrointestinal upset,neurological complaints(i.e.head pain,feeling lightheaded,shaking;tingling sensations),low blood sugar, and increased heart rate(Yanovski,2014;Khera,2016).Serious adverse events were rarely mentioned,similar to placebo,depending on the type of drug,and consisted of conditions like gallstones,inflammation of the gallbladder,pancreatitis,severe low blood sugar,and heart valve issues (Khera et al.,2016).Serious adverse events were rarely reported and were similar to those with a placebo.These events varied based on the drug type and included conditions such as cholelithiasis,cholecystitis,pancreatitis,severe hypoglycemia,and valvulopathy (Khera et al.,2016).Though long-term trials have not been established,cardiac valvulopathy is generally associated with serotonin 2B receptor medications as opposed to the more selective serotonin 2C receptor medications recently approved (Smith et al.,2010).While weight loss medications may impose risk,obesity is

associated with significantly higher all-cause mortality relative to normal weight (Flegal,Kit,Orpana,&Graubard,2013).Thus,the adverse effects of medications should be weighed against the benefits seen with weight loss medications.The PCPs'concerns about safety in the current study support previous research findings where physicians did not perceive available weight loss medications to be safe or effective (Glauser et al.,2015). This implies that Primary Care Physicians (PCPs) may lack adequate understanding of the safety profiles associated with the medication options currently available.. Teaching Primary Care Providers about the pharmacodynamics of drugs and potential side effects could boost their confidence in prescribing medication,leading to better weight loss outcomes for obese patients.

In some findings, it was evident that primary care physicians Physicians demonstrated a higher tendency to recommend weight loss medications to patients with severe obesity compared to those with moderate or mild obesity..This is contrary to previous research,which found that physicians who cared for >7%of extremely obese patients were less likely to recommend weight loss medications compared to those who cared for<7%of extremely obese patients (Ferrante et al.,2009).

However, while not limited to pharmacotherapy, the results align with prior research indicating that BMI is a crucial element in delivering weight loss advice to patients..According to Bleich et al. (2011), individuals who were severely or morbidly obese were found to have a significantly higher probability of receiving a diagnosis for obesity. Consequently, they were nearly 6 times more likely to receive counseling for weight reduction compared to those who did not receive a diagnosis, as noted by Dutton et al. (2014)also found that a higher BMI(>35 kg/m²) was associated with receiving more frequent weight loss counseling.Based on their findings, it was apparent that the level of obesity played a significant role in the prescription of medication. A clear correlation was observed between the severity of weight issues and an uptick in prescribing practices. It is possible that obese individuals who do not fall into the severely obese category are missing out on valuable advice from their primary care physicians (PCPs) regarding the full spectrum of available and effective treatment options, including pharmacotherapy. By improving the knowledge and awareness of PCPs on when to broach the topic of weight loss pharmacotherapy with patients at all levels of obesity, it could lead to timelier interventions and potentially halt the advancement of obesity and its associated comorbidities.

A modest 5-10%weight reduction has been shown to improve lipids,decrease blood pressure,and reduce HbAic in patients with obesity (Wing et al.,2011).A systematic review showed that weight loss medications produced greater improvements in cardiometabolic risk factors than behavioral interventions alone(Yanovski &Yanovski,2014).Other studies have shown that weight loss medications resulted in a more pronounced improvement in blood pressure,lipids,and glycemic control when used for patients with pre-existing co-morbid disease(Gadde,2011).Medications designed for weight reduction are authorized for individuals with a body mass index (BMI) of 30 kg/m^2 or higher, or for those with a BMI of 27 kg/m^2 or higher who have one or more co-morbid conditions, to be used in conjunction with a calorie-restricted diet and enhanced physical activity.

According to these findings, it is suggested that Primary Care Physicians (PCPs) may be delaying intervention until patients reach the "severely obese" category and have already developed multiple comorbidities. PCPs Employing a more proactive strategy could entail advocating for and giving weight loss medications at an earlier stage of the disease to mitigate the enduring effects of obesity. Given the overall limited rates of prescribing short-term and long-term weight loss treatments by all primary care providers., it was found that APCs tended to prescribe medication more often than MDs. This difference in

prescribing frequency was especially notable when considering factors such as cost and insurance coverage. Additionally, APCs demonstrated a more positive attitude towards utilizing pharmacotherapy as a treatment for obesity and held higher expectations for weight loss outcomes when compared to MDs..This indicates that PCPs with greater expectation inclined to prescribe weight loss medications for obesity.Previous research has demonstrated that physicians with higher self-reported knowledge about weight loss medications tend to have fewer negative attitudes and more frequently recommend pharmacotherapy options (Ferrante et al.,2009).Given the predominance of NPs within the APC group, our findings could potentially be linked to the philosophical perspective of the nursing field. NPs typically adopt a comprehensive approach to patient-centered, context-specific diagnostic reasoning, and care planning that aligns with nursing theory and philosophy (Burman, Stepans, Jansa, & Steiner, 2002). Adhering to a patient-centered and highly personalized holistic approach can play a crucial role in achieving favorable outcomes for patients with obesity. The study authors observed that PCPs still exhibit reluctance in recommending weight loss medications, notwithstanding their established effectiveness. On the whole, anti-obesity medications have demonstrated greater efficacy in facilitating weight loss compared to solely relying on lifestyle interventions..A review by Yanovski and Yanovski (2014)found that long-term obesity

medications produced significant weight loss when used in combination with lifestyle modifications such as diet and exercise.Greater weight loss relative to a placebo was observed, ranging from around 3% to 9% of initial body weight at the 1-year mark.

Similarly,a systematic review by Khera et al.(2016),found that all five medications approve for long-term weight loss therapy achieved at least 5%weight loss at 52 weeks,a significant improvement in weight maintenance.

Obesity management is a complex issue that involves multiple factors. Our study findings indicate that for a significant number of patients, obesity management primarily involves behavioral counseling along with diet and exercise recommendations. It appears that Primary Care Providers (PCPs) may not be adequately informing their patients about the wide range of available and effective treatment options for obesity management. This lack of comprehensive education could be attributed to concerns about the perceived effectiveness, safety issues, and specific patient characteristics that are deemed necessary for certain treatments..When considering the Chronic Care Model (Bodenheimer,Wagner and Grumbach,2002),patients cannot be fully informed and engaged members in the decision- making process if they do not have fully informed and engaged PCPs.This study demonstrates the need for increased educational programs for PCPs regarding the indications,effectiveness, and potential risks associated with the use of weight loss

medicatAdvancing education can enhance the comprehension of weight loss medications among primary care doctors, allowing them to engage patients in well-informed discussions and involve them in the decision-making process more effectively. Accurate information on treatment options is crucial for both physicians and patients to collaboratively evaluate risks and benefits. Furthermore, early interventions with pharmacotherapy may help mitigate the morbidity and mortality associated with obesity and its related illnesses. Discrepancies in prescription practices among various primary care physician categories indicate the need for further research to fully understand these differences in attitudes and prescribing behaviors.. Interventions presently incorporated in weight loss counseling and their effectiveness.

Currently accessible Weight loss interventions consist of lifestyle modifications, pharmacological strategies, and surgical procedures.. At this time, lifestyle modifications focusing on dietary changes and increased physical activity are regarded as the fundamental component of weight loss counseling in primary care settings for individuals who are classified as overweight and obese. Bleich et al.(2011) analyzed cross-sectional clinical encounter data from physician

office visits to identify whether obese patients received weight-related counseling from their physicians.Data on obese adults(n=2458)was obtained from the National Ambulatory Medical Care Survey(NAMCS).Researchers discovered that 33.3%of the obese participants were diagnosed with obesity,17.6%were provided weight reduction counseling,20.5% received exercise advice,and 25.2%were given diet guidance.

Counseling about other weight loss interventions including obesity medication and surgery was not studied.Likewise,Shiffman et al.(2009)conducted a cross-sectional study evaluating what weight management interventions American adult patients(n=3500)reported receiving from physicians. Data was obtained through a random-digit dialed telephone survey conducted in 2005-2006. During the study period, 41.6% of the respondents were classified as having normal weight, 35.9% as overweight, and 22.5% as obese based on their BMI. Participants were questioned about the weight management interventions suggested by physicians. Ten interventions were listed, including informing individuals about the health risks related to being overweight, recommending dietary changes, suggesting diet and exercise, asserting that diet and exercise are the sole methods for weight loss, prescribing weight loss medication, advising over-the-counter weight loss products, proposing bariatric surgery, providing educational material on weight loss, referring to a dietitian/nutritionist, and

recommending a formal diet program. Twenty-eight percent of the respondents (14.1% of obese participants) claimed they had never been offered any of these interventions. The most commonly reported interventions were physicians informing about the health risks of being overweight (48%) and suggesting diet and exercise (46.5%). Only 4.0% of the respondents (9.8% of obese participants) reported receiving a prescription for weight loss medication. Bariatric surgery was recommended to 1.5% of the participants. Both studies had limitations due to their cross-sectional design. Moreover, the subjective nature of reports on weight loss counseling might have led to recall bias, potentially causing an under or overestimation of weight-related counseling. Despite lifestyle modifications being the most frequently recommended approach, diet and exercise have not demonstrated long-term effectiveness for achieving weight loss success.Although many individuals are able to lose weight with diet,many go on to regain all or a majority of the weight lost (MacLean, Bergouignan,Cornier,&Jackman,2011).Aside from behavioral and environmental factors, neurohormonal mechanisms have been identified as promoters of weight regain after weight loss caused by dietary restriction In addition to reduced energy expenditure,restricting calories results in compensatory changes in the peripheral hormonal pathways including decreased levels of anorexogenic hormones,and

increased levels of ghrelin leading to increased appetite (Rosenbaum,Hirsch,Gallagher,& Leibel,2008).The combination of decreased energy expenditure and changes in neurohormonal status leads to increased food intake,restoration of fat cell mass,and thus weight regain (Korner &Aronne,2003).

Physical activity by itself leads to only modest weight loss.Donnelly,Jacobsen,Heelan, Seip,and Smith (2000)investigated the impact of continuous versus intermittent exercise on body weight and composition over 18 months in moderately obese,previously sedentary women(n=22).In the study, the continuous exercise group engaged in a workout routine three times a week lasting 30 minutes each session, targeting 60-75% of their maximal aerobic capacity. On the other hand, the intermittent group participated in brisk walking twice a day for 15 minutes on each occasion, totaling 5 days a week. The weight loss observed was minimal in both groups. Specifically, participants in the continuous group showed a 2.1% reduction in weight from the baseline, while those in the intermittent group experienced a 1.0% decrease. It should be noted that the study's findings may have limited generalizability due to the small sample size and the specific inclusion criteria of women with moderate obesity.The amount of weight loss seen in this study is comparable to a recent meta-analysis by Thorogood et al.(2011)that evaluated the effect of isolated aerobic exercise programs on weight loss in overweight and obese

populations.The findings from 14 randomized controlled trials involving a total of 1847 subjects revealed that moderate-intensity aerobic exercise programs lasting 6-12 months resulted in a modest weight reduction. The weighted mean difference indicated an average weight loss of -1.6kg for 6-month programs and -1.7 kg for 12-month programs. However, the meta-analysis results were constrained by the lack of homogeneity among the studies included. Discrepancies in study populations and exercise interventions may have contributed to inconsistent data, potentially impacting the overall weight reduction observed in the pooled analysis. While commonly suggested lifestyle modifications in weight loss counseling have demonstrated modest effects, relying solely on exercise may not be sufficient for significant weight loss. Moreover, dietary restrictions often lead to weight regain due to changes in energy expenditure and hormonal signals triggered by weight loss.

Weight loss counseling

Despite the clinical guidelines indicating the necessity for the assessment and management of obesity, there is a lack of consistent recommendation for weight loss interventions to all overweight and obese patients by many healthcare providers. Various studies have highlighted the differences in obesity care and diagnosis based on patient characteristics.

According to a research carried out by by Bleich et al. in 2011, one of the secondary goals was to analyze the factors that influenced the obess' acceptance of an obesity medical check-up and over weight issues kind of counseling from physicians, patient demographics, and clinical encounters. The findings revealed a higher likelihood of receiving an obesity diagnosis for old and young women, adults from the ages of 18 to 29, and severely/morbidly obese individuals. Furthermore, individuals diagnosed with obesity were almost 6 times more probable to receive weight-reduction counseling, nearly 3 times more likely to receive diet counseling, and 2.5 times more likely to receive exercise counseling compared to those without a formal obesity diagnosis. Other determinants of receiving weight-loss counseling included seeking consultation with a cardiologist or other internal medicine specialist, attending a preventive visit, or having longer consultations with the physician.Dutton and colleagues (2014)examined the association between patient characteristics, physician characteristics,and the physician-patient relationship and the likelihood of weight loss counseling by primary care physicians. Data from a cross-sectional study involving 143 primary care patients with obesity (mean BMI: 36.9 kg/m²) was gathered through self-reported surveys. The study revealed that a higher BMI (>35 kg/m²), greater medical conditions, and having a female physician were linked to receiving more frequent weight loss counseling. Factors such as

the frequency of physician visits and the duration of the physician-patient relationship were not correlated with the amount of weight loss counseling received. Additionally, a study by Simkin-Silverman et al. (2005) examined data from the Primary Care Weight Control Project to determine predictors of obesity identification and weight control advice. It was found that body mass index played a significant role in receiving an obesity diagnosis, while factors like a history of type 2 diabetes, hypertension, high cholesterol, arthritis, patient readiness for change, and the number of past visits were associated with receiving weight control advice. Although body mass index and waist circumference were noteworthy predictors of weight control advice in univariate models, they were no longer significant in multivariable models due to the influence of other risk factors like diabetes. The literature indicates that people with obesity characteristics and prognosis for weight-related counseling vary. The BMI of a ptient, obesity-related conditions, and the frequency of visits or time spent with healthcare providers seem to play a role in the consumption of weight loss advices and information in primary health care environments. A clear perception of these predictors could impact intervention strategies for obesity care and management.

Impedements to weight loss advice Various obstacles have been identified in the literature concerning weight loss counseling in primary care settings. Conversely, there

has been limited research examining specific barriers related to prescribing weight loss medications. Given that both counseling and prescribing are essential aspects of managing obesity.,there are multiple barriers that may intersect.In their study,Gunther,Guo,Sinfield,Rogers,and Baker (2012)interviewed general practitioners, practice nurses,and overweight or obese patients to investigate obstacles to following certain guidelines in adult obesity management within general practice settings.Barriers identified in this study encompass a reluctance to assume responsibility for implementing obesity guidelines, lack of uniformity in weight management strategies across practices, deficiency in counseling skills, limited time allocated for patient interactions, perceived scarcity of available psychological and nutritional services, and constraints enforced by health commissioners.Huang et al. (2004)discussed barriers identified by physicians in focus groups.Physicians were recognized as having negative attitudes towards patient motivation and capabilities for weight loss,doubts about the effectiveness of weight loss counseling,limited resources for managing obesity comprehensively,time constraints from a high patient caseload,not utilizing dieticians enough or lacking experience with them,lacking in brief counseling skills,and inadequate knowledge of optimal clinical practices. According to the study, a significant obstacle identified was the physicians' sense of being unprepared to deliver counseling on diet, exercise, and weight loss. This

indicates that healthcare providers might lack confidence, resources, and/or necessary knowledge concerning the appropriate use of medications and their advantages. Forman-Hoffman, Little, and Wahls (2006) highlighted obstacles to efficiently managing obesity within the Veteran's Health Administration (VHA) primary care facilities. The primary obstacle related to offering diet and exercise counseling was the inadequate education on obesity during medical schooling and residency training. Furthermore, the lack of information from the VHA to primary care practitioners and their patients about available weight management services was recognized as a notable impediment. Additionally, the attitudes of healthcare clinicians may also pose a barrier to weight loss counseling. For instance, the researchers explored whether clinicians counsel obese patients in a positive or negative manner. .

Conclusively,there are various obstacles to providing weight loss counseling.A consistent lack of training,skills,and resources was evident throughout the literature.Obstacles were linked to weight loss guidance in relation to diet and physical activity but did not encompass barriers related to the use of medication treatments.

Knowledge,Attitude,and Practice regarding Weight reduction drugs/agents and Supplements Keep-fit is the activity of keeping one's body in good condition by doing special exercises.

Excessive fat accumulation that may impact everyday activities is what defines being overweight and obese(World Health Organization,2011).Obesity is widely recognized as an epidemic and a significant public health concern.Nowadays,obesity is classified as an illness,putting individuals at a heightened risk for various severe secondary conditions like hypertension,type 2 diabetes,dyslipidemia,metabolic syndrome,heart issues,and specific types of cancer.(World Health Organization,2011;James,Jackson-Leach&Mhurchu et al,2004;Yang,Zhou &Chen et al,2009;Freedland,Wen,Wuerstle et al,2008;Nguyen,Magno,Lane,Hinojosa &Lane, 2008) Obesity rates are on the rise in both developing and developed countries because of a lack of physical activity and the widespread availability of processed fast food.It is now ranked as the fifth most common cause of death globally.(DeNicola,Aburizaiza,Siddique,Khwaja & Carpenter,2015;Balbo,2012).According to Alshahrani (2020),multiple recent studies have shown that the increase in the prevalence of overweight and obese people is related to modern lifestyles involving increased daily animal consumption instead of the consumption of organic food,fruits,and vegetables(Al-Haqwi,Al-Nasir,Ahmad,Masaudi,Alotaibi &Bashir,2015;Al- Nuaim,1997;Alshahrani,2020).

Dietary supplements are items that include various dietary components like vitamins, extracts,and herbs.Their purpose is to enhance a regular diet by providing specific nutritional benefits.(Rios-Hoyo &Gutierrez-Salmea,2016;Food and Drug Administration,1994;

Alshahrani,2020).The majority of these supplements have not undergone thorough evaluation in double-blinded,randomized clinical trials to determine their clinical effects.While some small preclinical studies might show that dietary supplements and over-the-counter (OTC)weight loss products can help reduce weight through different mechanisms,most of these products do not have enough evidence overall.Factors like purity,impact on other health conditions,interactions with food and drugs,and possible side effects should all be considered.(Food and Drug Administration,2015;Geller,Shehab,Weidle et al.2015) Self-medication in Nigeria is a common practice.Several studies show that OTC products and herbal remedies are widely used to treat diabetes,epilepsy,and obesity,and to manage pain episodes(Al-Rowais,2002;Eldado,Alotaibi,Alenazi,Albogami&Mohamed,2017;Alhazzani,Alqahtani, Abouelyazid,et al.2016;Alshahrani,Alavudeen,Alakhali,Al-Worafi,Bahamdan &

Vigneshwaran,2019).Community pharmacies are viewed as crucial suppliers of weight loss products and supplements because they offer quick access to healthcare professionals

without any waiting period.This circumstance has caused dietary supplements and over-the-counter weight loss products to be readily available to the public.(Alshahrani,Alavudeen,Alakhali,AlWorafi,Bahamdan&Vigneshwaran,2019;Andronicou,Krska,Hackett &Richards,2009; George,Lovelady,Connolly,Parmar &Davies,2010;Royal Pharmaceutical Society of GreatBritain.2005)

Unlicensed weight-reducing products have been an alert for a long time in Nigeria.The National Agency for Food and Drug Administration and Control (NAFDAC)keeps fighting the presence of such unlicensed and adulterated products in the Nigerian market.The majority of these items have a high level of sibutramine (a regulated pharmaceutical substance)and are being sold by unauthorized establishments and sellers(Alsayari,Almghaslah,Khaled,et al.2018)

This study assessed the keep-fit participants'perception of the benefits of weight loss drugs to participants in Benin metropolis.

Summary of Reviewed Literature

The Theory of Reasoned Action(TRA)was developed in the late 1960s and later modified to the Theory of Planned Behavior.The TRA explains how beliefs,attitudes, intentions,and behavior are connected.According to this theory,individuals are believed to

be rational and base their decisions on the information that is accessible to them.The idea suggests that behavior can be anticipated by the person's intention to carry out the behavior.When it comes to the Theory of Planned Behavior,intention plays the most crucial role in determining a person's actions.Intention is based on an individual's attitude towards a behavior,subjective norms,and perceived control of the behavior,which determines their readiness to perform it.

An individual's attitude is shaped by their comprehensive assessment of executing the behavior and their perceptions of the behavior's outcomes..The decision to engage in a behavior may be influenced by pressures to conform to others'opinions and expectations. In conclusion,perceived behavioral control refers to the individual's perceived ability to carry out the behavior.The individual's perception of control is affected by their attitude and subjective norms.Usually,the person will feel more in control and more likely to engage in the behavior if their attitude and subjective norm are positive.

Thus, the Theory of Reasoned Action aids in elucidating healthcare providers' actions regarding the utilization of weight loss medications for individuals. This research delves into the elements of the theory, positing that providers' intention to engage in a behavior is influenced by their beliefs, attitudes, subjective norms, and perceived control. The

TRA proves to be valuable in evaluating the.perception ofkeep-fit participants on the benefits of weight loss drugs to them.

Reviewed literature indicates that a decrease in body weight by 5-10%from the initial baseline can greatly lessen the risk factors related to cardiovascular disease,such as reducing blood pressure and cholesterol levels,and also can help in the prevention or delay of type 2 diabetes Onset.

The literature revealed that when weight loss counseling is incorporated into clinical practice, studies have found that lifestyle interventions are the foundation of primary care provider's (PCP's)counseling.Although pharmacotherapy and bariatric surgery are other available and effective weight loss interventions,they are often not included or rarely recommended to individuals suffering from obesity Lifestyle interventions alone are not particularly successful in providing long-term weight maintenance due to behavioral and environmental pressures as well as biological mechanisms induced by weight loss.Adding pharmacotherapy to standard diet and exercise methods has proven to be a successful treatment choice for weight loss in people.Related literature also posited that when combined with lifestyle interventions,weight loss medications have resulted in 5-10%weight loss. Reviewed related literature suggested that Nine (9)medications are currently Food and Drug Administration(FDA)approved for weight loss.These agents are

used as an adjunct therapy to lifestyle interventions and are typically reserved for individuals unable to lose weight with diet and physical activity alone and for those at greater health risk due to co-morbid complications associated with obesity.Pharmacotherapies approved for long-term therapy are classified based on their targeted location of action.Centrally acting agents include lorcaserin (BelviqTM),phentermine/topiramate(QsymiaTM),and bupropion/naltrexone (ContraveTM, MysimbaTM).Peripherally acting agents include orlistat (XenicalTM)and liraglutide (SaxendaTM) Four centrally acting amphetamine derivatives are also available for short-term use (≤12 weeks) including phentermine,benzphetamine,phendimetrazine,and diethylpropion. Related literature showed that differences between mechanisms of action exist between agents.However,anti-obesity medications and/or weight loss drugs may interfere with the physiological mechanisms induced by lifestyle interventions that promote weight gain and challenge long-term maintenance.All agents produce their effects by reducing food intake or nutrient absorption and/or increasing resting or activity-related energy expenditure. Overall,the related literature showed that anti-obesity medications and/or weight loss drugs have shown higher efficacy in producing weight loss than lifestyle interventions alone.

Related literature also found that long-term obesity medications produced significant weight loss when used in combination with lifestyle modifications such as diet and exercise.

The literature reviewed showed that despite the benefits inherent in the intake of weight loss drugs,there also exist side by side its adverse effects.Reported common adverse side effects included gastrointestinal upset,neurological complaints (i.e.headache,dizziness,tremor; paresthesias),hypoglycemia,and elevated heart rate.Serious adverse events were infrequently reported,comparable to placebo,varied depending on drug type,and included conditions such as cholelithiasis,cholecystitis,pancreatitis,severe hypoglycemia,and valvulopathy.While weight loss medications may impose risk,obesity is associated with significantly higher all-cause mortality relative to normal weight.Thus,the adverse effects of medications should be weighed against the benefits seen with weight loss medications. In relation to the benefits accruable to weight loss drugs,literature has it that a modest 5-10%weight reduction has been shown to improve lipids,decrease blood pressure,and reduce HbAle in patients with obesity.A systematic review showed that weight loss medications

produced greater improvements in cardiometabolic risk factors than behavioral interventions alone.Other studies have shown that weight loss medications resulted in a

more pronounced improvement in blood pressure,lipids,and glycemic control when used for patients with preexisting co-morbid disease.Research indicated that weight loss drugs are authorized for individuals with a body mass index(BMI)of 30 kg/m2 or higher,or a BMI of 27 kg/m2 or higher with additional health complications,when combined with a low-calorie diet and more exercise.

CHAPTER THREE

METHODOLOGY

This chapter presents the method and procedure that will be applied in this research which is to be x-rayed under the following sub-headings:

- Research Design
- Population of the Study
- Sample and Sampling Technique
- Research Instrument
- Validity of the instrument
- Reliability of the instrument
- Method of Data Collection
- Method of Data Analysis

Research Design

The study was conducted using a descriptive survey research design.According to Ogunbiyi(2012),descriptive research is concerned with the development of theories of

prediction and also the development of valid explanatory data that can serve as a basis for further research work.Survey research design typically employs a questionnaire to determine the opinions,attitudes,preferences,and perceptions of persons of interest to the researcher.

Population of the Study

The population for this study consisted of 549 keep-fit participants who work out in some gymnasia in Benin metropolis.The distribution of the keep-fit participants is shown in the table that follows:

Local Government Areas	**Name ofGymnasium**	**Population**
Egor	Lifetime gym, Uselu	57
Egor	Celebrity Fitness, Uselu	70
Oredo	Celebrity fitness, GRA	100
Oredo	Gym Stallion, GRA	152
Ovia North East	Erudite Gym, Isiohor	70
Ovia North East	Green Cardio, UNIBEN (Ugbowo Campus)	100
Total		**549**

Source: Admin Desk of the respective gymnasia (2024).

Sample and Sampling Technique

The sample size was 275 keep-fit participants. This was obtained using a simple random sampling technique to select 50 percent from each gymnasia facility comprising the population. The distribution of the sampled respondents is shown in the table that follows:

Local Government Area	Name of Gymnasium	Population	Samplesize
Egor	Lifetime gym, Uselu	57	29
Egor	Celebrity Fitness, Uselu	70	35
Oredo	Celebrity fitness, GRA	100	50
Oredo	Gym Stallion, GRA	152	76
Ovia North East	Erudite Gym, Isiohor	70	35
Ovia North East	Green Cardio, UNIBEN (Ugbowo	100	50
Total		**549**	**275**

Research Instrument

A self-developed and structured questionnaire was used to generate the desired information regarding the keep-fit participants' perception of the benefits of weight loss drugs to participants in Benin metropolis. The questio nnaire was divided into two sections. Section A was for the collection of information on the personal data of respondents, while Section B had statements formulated from the variables of the study under the modified Likert scale response options of:

Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD).

Validity of Research Instrument

The questionnaire was submitted to the project supervisor and two other experts in Human Kinetics and Sports Science, for vetting, correction, and approval before distributing it to the respondents to ensure its content and construct validity.

Reliability of Research Instrument

Reliability of the instrument was carried out through the administration of the test instrument to respondents once, and thereafter, Cronbach alpha statistics were used to analyze the data. A correlation coefficient value of 0.89 was obtained, showing that the

research instrument was reliable. This statistical tool/procedure is to ensure for instrument' s internal consistency.

Method of Data Collection

The questionnaire will be distributed to the respondents (keep-fit participants) and retrieved on the spot to avoid loss.

Method of Data Analysis

The data collected from the respondents through the questionnaire forms will be analyzed using descriptive statistics of frequency and percentage for their bio-data, while mean and standard deviation will be used for analysis of the research questions. In testing the hypothese s, Pearson correlation statistics will be used.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

Presentation of Results

Research Question 1: What are the prevailing attitudes of keep-fit participants in Benin metropolis towards the use of weight loss drugs?

Table 1: Mean and Standard Deviation of responses on prevailing attitudes of Keep Fit participants towards the use of weight loss drugs

SIN	**Prevailing Attitudes of Keep-Fit Participants towards the Use of Weight Loss Drugs**	**Mean**	**SD**	**Decision**
1.	I do not fancy the use of weight loss drugs	3.40	0.729	Agree
2.	I hardly use weight loss drugs for fear of their potential side effects	3.58	0.589	Agree
3.	I prefer engaging in physical fitness exercises than taking dietarysupplements	3.43	0.714	Agree
4.	I would rather ingest organic food, fruits, and vegetables and exercise to keep fit and avoid weight gain	2.98	0.813	Agree
5.	Over-the-counter weight reduction prod ucts may be detrimental to my health, so I avoid them	3.42	0.648	Agree

6.	I take part in special exercises regularly so as to prevent patronizing weight loss drug vendors	3.59	0.593	Agree
7.	I think weight reduction agents are effective and safe	3.52	0.652	Agree
8.	Weight loss drugs should be limited to obese patients who could not reduce their weight by exercise and diet	3.45	0.662	Agree
9.	If I were an obese patient, I would beknowledgeable regarding what products may reduce weight in a safe way	3.45	0.725	Agree
10.	I am not sure of the weight loss drugs' efficacy regarding weight reduction	3.68	0.527	Agree
11.	Weight loss drugs should be restricted to those who failed to lose weight with diet/exercise	2.49	1.044	Disagree
12.	Weight loss drugs should only be used by people with extreme obesity	3.40	0.688	Agree

The data in Table 1 showed that the mean values range from 2.49 to 3.68, while the standard deviation values range from 0.527 to 1.044. With an average mean of 3.37, it is seen that the respondents agreed to the items as regards prevailing attitudes of keep-fit participants towards the use of weight loss drugs. The low values of the standard deviation show that their responses do not deviate far from one another.

Research Question 2: What factors infl uence the decision to consider or avoid weight loss drugs among individuals dedicated to fitness in Benin metropolis?

Table 2: Mean and Standard Deviation of responses on factors influencing the decision to consider or avoid weight loss drugs among individuals dedicated to fitness

SIN	Factors influencing the decision to consi keep-fitparticipants	Mean	SD	Decision
13.	Weight loss drugs are more effective than	3.00	0.918	Agree
14.	Weight loss drugs enable more rapid resul	3.34	0.661	Agree
15.	Weight loss drugs have a long-lasting effe	3.28	0.745	Agree
16.	Weight loss drugs aresafe	3.12	0.869	Agree
17.	Weight loss drugs are more convenient to	3.23	0.811	Agree
18.	Weight loss drugs help those with cases o	3.24	0.808	Agree
19.	Weight loss drugs may not be entirely safe to keep fit	3.39	0.654	Agree

The data in Table 2 showed that the mean values range from 3.00 to 3.12, while the standard deviation values range from 0.654 to 0.918. The mean values showedthat the respondents agreed with all the items as regards factors influencing the decision to consider or avoid weight loss drugs among Keep Fit participants. The low values of the standard deviation show that their responses do not deviate far from one another.

Research Question 3: How do keep-fit enthusiasts weigh the perceived benefits and potential risks associated with the use of weight loss drugs in their health and fitness journeys?

Table 3: Mean and Standard Deviation of responses on Keep Fit enthusiasts' perception of the benefits and potential risks associated with the use of weight loss drugs in their health and fitness journeys

S/N	Keep Fit Enthusiasts' Perception of the Benefits and Potential Risks associated with the Use of Weight loss Drugs	Mean	SD	Decision
20.	Weight loss drug intake may cause gastrointestinal upset	3.57	0.571	Agree
21.	Ingestion of weight loss drugs may result in neurological complaints like headaches, dizziness, tremor, and so on.	3.16	0.828	Agree
22.	Use of weight loss drugs as against exercises can cause hypoglycemia and elevated heart rate	3.40	0.694	Agree
23.	Weight loss drugs have serious adverse effects/conditions such as pancreatitis, cholecystitis, valvulopathy, and so on	3.02	0.910	Agree
24.	The potency of weight loss drugs has been seen to decrease blood pressure	3.33	0.675	Agree
25.	Weight loss medications can produce improvement in cardiometabolic risk factors than behavioral interventions alone	3.29	0.742	Agree
26.	The use of weight loss drugs by patients with pre-existing comorbid disease can help in improving their blood pressure, lipids, and glycemic control	3.13	0.874	Agree

The data in Table 3 shows that the mean values range from 3.02 to 3.57, while the standard deviation values range from 0.571 to 0.910. The mean values showed that the respondents agreed with all the items as regards keep-fit enthusias ts ' perception of the benefits and potential risks associated with the use of weight loss drugs in their health and fitness journeys. The low values of the standard deviation show that their responses do not deviate far from one another.

Hypotheses Testing

Hypothesis 1: There is no significant relationship between keep-fit participants' attitudes towards weight loss drugs and their engagement in structured fitness regimens.

Table 4: Pearson Correlation statistics on the relationship between keep-fit participants' attitudes towards weight loss drugs and their engagement in structured fitness regimens.

Variables	N	Mean	SD	r-value	p-value	Decision
Attitude to weight loss drugs	275	40.40	4.742	0.004	0.942	H_o is accepted
Engagement in Fitness regimen	275	1.41	0.494			

The data in Table 4 showed that the r-value of 0.004 shows a positive weak relationship between keep fit participants' attitudes towards weight loss drugs and their engagement in structured fitness regimens, while the p-value of 0 .942 which is greater than 0.05 level of significance infers that the null hypothesis is accepted/retained; thus, there is no significant relationship between keep fit participants ' attitudes towards weight loss drugs and their engagement in structured fitness regimens.

Hypothesis 2: There is no significant relationship between the decision to consider or avoid weight loss drugs and the factors influencing individuals dedicated to fitness.

Table 5: Pearson Correlation statistics on the relationship between the decision to consider or avoid weight loss drugs and the factors influencing individuals dedicated to fitness.

Variables	N	Mean	SD	r-value	p-value	Decision
Decision on weight loss drugs	275	22.60	3.995	0.947	0.000	H_o is rejected
Factors influencing dedication to fitness	275	22.91	3.449			

The data in Table 4 showed that the r-value of 0.947 shows a positive strong relationship between the decision to consider or avoid weight loss drugs and the factors influencing individua ls dedicated to fitness, while the p-value of 0.000 which is less than 0.05 level

of significance infers that the null hypothesis is rejected; thus, there is a significant relationship between the decision to consider or avoid weight loss drugs and the factors influencing individuals dedicated to fitness.

Discussion of Findings

The findings of research question 1 revealed that there were some prevailing attitudes of keep-fit participants towards weight loss drug use, such as; fear of its side effects, likelihood of being detrimental to health, belief that it's solely for obese individuals and those who upon dieting/exercise fail to lose weight, uncertainty about drugs efficacy as to weight reduction, and so on. This follows the assertion of Fabricatore and Yank (2008) and Waters et al. (2010) who asserted that the public's perceptions of weight loss drugs are dynamic and varied, embodying a spectrum of views that oscillate between optimism and reservations. Optimism often stems from the potential benefits these drugs offer in achieving substantial and sustained weight loss.

However, reservations are rooted in concerns related to potential side effects, uncertainties regarding long-term efficacy, and ethical considerations surrounding the use of pharmaceutica l interventions. Additionally, Blanck, Khan, and Serdula (2004) and Sadek, Elnour, Kalbani, et al. (2016) highlighted that the poor knowledge of community pharmacists affects the public's awareness of the risks and adverse effects of medications. This, in turn, influences public attitudes and behaviors towards these drugs, especially

given that many people obtain medications from family, friends, and other non-physicians. This underscores the major public health concern of safety and the risks of misuse, emphasizing the necessity for data on public awareness and knowledge regarding the use and risks associated with these drugs.

The findings of research question 2 showed that some factors influence the consideration or avoidance of weight loss drugs among keep-fit participants/enthusiasts, such as being more effective than diet/exercise, rapid results, safety, convenience to use, and so on. Corroborating these, Gadde's (2011) study showed that weight loss medications resulted in a more pronounced improvement in blood pressure, lipids, and glycemic control when used for patients with preexisting co-morbid disease.

The findings of research question 3 showed that keep-fit enthusiasts consider the benefits and potential risks associated with the use of weight loss drugs in their health and fitness journeys. This follows the documentation of Wing et al (2011) who found that a modest 5-10% weight reduction has been shown to improve lipids, decrease blood pressure, and reduce HbA1c in patients with obesity. Also, a systematic review showed that weight loss medications produced greater improvements in cardiometabolic risk factors than behavioral interventions alone (Yanovski & Yanovski, 2014).

The findings of hypothesis 1 revealed that there is no significant relationship between keep-fit participants ' attitudes towards weight loss drugs and their engagement in structured fitness regimens. Based on this, Waters et al. (2010) opined that as the global prevalence of obesity continues to escalate and the need for effective, sustainable interventions grows, there is an imperative to delve into the intricate web of perceptions and attitudes surrounding weight loss drugs. Understanding how these interventions are perceived, accepted, and integrated into broader weight management strategies is crucial for developing targeted and patient-centered approaches to combat obesity on a global scale.

The findings of hypothesis 2 showed that there is a significant relationship between the decision to consider or avoid weight loss drugs and the factors influencing individuals dedicated to fitness. In consensus with this finding, Colquitt et al (2014) emphasized that the delicate balance between the potential benefits and risks of weight loss drugs necessitates a thorough and meticulous evaluation. This evaluation encompasses an in-depth exploratio n of potential side effects, the intricate dance of interactions with concurrent medications, and the imperative for s usta ined healthcare monitoring to ensure patient safety and efficacy.

CHAPTER FIVE

SUMMARY,CONCLUSION AND RECOMMENDATIONS

Summary

This study was carried out to find out Keep-fit participants'perception of the benefits of weight loss drugs to participants in Benin metropolis.Three research questions were raised,while two hypotheses were formulated and tested at a 0.05 level of significance.Related literature was reviewed to gather information on eminent scholar's views on the study.This study utilized a descriptive survey research design.The population of this study was made up of 549 keep-fit participants in Benin metropolis.The simple random sampling technique was used in selecting a sample size of 275 participants,which constituted 50 percent of the population.A descriptive statistic using frequency and percentages was used in the data analysis of the respondents'bio-data,while mean and standard deviation were applied in the data analysis of raised research questions. The Pearson correlation statistics was used in testing the formulated hypotheses at 0.05 level of significance.

The findings of this study based on the research questions raised and hypotheses formulated showed the following

- there were some prevailing attitudes of keep-fit participants towards weight loss drug use,such as;fear of its side effects,likelihood of being detrimental to health,belief that it's solely for obese individuals and those who upon dieting/exercise fail to lose weight, uncertainty about drugs efficacy as to weight reduction,and so on. some factors influence the consideration or avoidance of weight loss drugs among keep- fit participants/enthusiasts,such as being more effective than diet/exercise,rapid results safety,convenience to use,and so on
- Keep Fit enthusiasts consider the benefits and potential risks associated with the use of weight loss drugs in their health and fitness journeys.
- there is no significant relationship between keep fit participants'attitudes towards weight loss drugs and their engagement in structured fitness regimens.
- there is a significant relationship between the decision to consider or avoid weight loss drugs and the factors influencing individuals dedicated to fitness.

Conclusion

Based on the Keep-fit participants'perception of the benefits of weight loss drugs to participants in Benin metropolis,the following conclusion was made;that the prevailing attitude of keep-fit participants towards weight loss drug use should be sustained as well as the factors influencing the consideration or avoidance of weight loss drugs.These are coupled with keep-fit enthusiasts considering the benefits and risks associated with the use of weight-loss drugs to ensure their safety

Recommendations

Following the submission mentioned earlier,the subsequent recommendations were provided.

1.Most weight loss drugs should be taken,especially when dieting/exercise fails in weight reduction

2.In taking weight loss drugs,keep-fit participants should be knowledgeable about their efficacy and safety.

3.Keep-fit participants should be informed as to the benefits and potential risks linked with the use of weight loss drugs in their health and fitness journeys/lifestyles

4.There should be targeted interventions to enhance public awareness and safe usage of weight loss drugs.

REFERENCES

Abahussain, N.A., Abahussain, E.A. & Al-Oumi, F.M. (2007). Pharmacists' attitudes and awareness towards the use and safety of herbs in Kuwait. Pharm Pract (Granada). 2007;5(3):125- 129. doi:10.4321/S1886- 36552007000300005

Ahmad, N.N., Robinson, S., Kennedy-Martin, T., Poon, J.L. & Kan, H. (2021). Clinical outcomes associated with anti-obesity medications in real-world practice: A systematic literature review. Obes Rev. 2021 Nov;22(1 1): el3326. doi: 10.1111/obr.13326.

Ahmad, W, Ahmad, A., Ali, M.D., et al. (2019). A questionnaire-based study for weight loss by using herbal drugs in Darnmam (Eastern Region), Kingdom of Saudi Arabia. J Pharm Bioallied Sci. 2019;11 (3):248- 253. doi: 10.4103/jpbs.JPBS_ l 02_19

Albury, C., Strain, W.D., B rocq , S .L ., Logue, J., Llo yd, C. & Tahrani, A. (2020). Language Matters working group. The importance of language in engagement between health-care professionals and people living with obesity: a joint consensus statement. Lancet Diabetes Endocrinol. 2020 May;8(5):447-55. doi: 10.1016/S2213-8587(20)30102-9.

Al-Haqwi, A., Al-Nasir, M., Ahmad, N., Masaudi, E., Alotaibi, S. & Bashir A. (2015). Obesity and overweight in a major family practice center, central region, Saudi Arabia. Saudi J Obes. 2015; 3:12. doi:10.4103/2347- 2618.158690

Alhazzani, A.A., Alqahtani, A.M., Abouelyazid, A, et al. (2016). Public aware- ness, knowledge, and attitudes toward epilepsy in the Aseer region, Saudi Arabia - A community-based cross-sectional study. Epilepsy Behav. 2016; 63:63-66. doi:10.1016/j.yebeh.2016.07.041

Al-Nuaim, A.R. (1997). Population-based epidemiological study of the prevalence of overweight and obesity in Saudi Arabia, regional variation. Ann Saudi Med. 1997; 17:195- 199. doi:10.5144/0256-4947.1997.l 95

Al-Rowais, N.A. (2002). Herbal medicine in the treatment of diabetes mellitus. Saudi Med J

Alsayari, A., Almghaslah, D., Khaled, A. et al. (2018). Community pharmacists' knowledge, attitudes, and practice of herbal medicines in Asir Region, Kingdom of Saudi Arabia. Evid Based Complement Alternat Med. 2018; 2018:1568139. doi:10.1155/2018/1568139

Alshahrani, S.M., Alavudeen, S.S., Alakhali, K.M., Al-Worafi, Y.M., Bahamdan, A.K. & Vigneshwaran, E. (2019). Self-medication among King Khalid University students, Saudi Arabia. Risk Manag Health Policy. 2019; 12:243- 249. doi:10.2147/RMHP.S230257

American Diabetes Association (2022). Standards of Medical Care in Diabetes-2022 Abridged for Primary Care Providers. Clin Diabetes. 2022 Jan;40(1):10-38. doi: 10.2337/cd22-as01.

Andronicou, A-M., Krska, J., Hackett, A. & Richards, J. (2009). Supply of over-the-counter weight-loss products from community pharmacies. Int J Pharm Pract. 2009; 17:333- 337. doi:10.1211/ijpp.17.06.0003

Apovian, C. M., Aronne, L. J., Bessesen, D. H., McDonnell, M. E., Murad, M. H., Pagotto, U. & Endocrine Society. (2015). Pharmacological Management of Obesity: An Endocrine Society Clinical Practice Guideline. Journal of Clinical Endocrinology & Metabolism, 100(2), 342-362.

Aronne, L. J., Hall, K. D. M., Jakicic, J., Leibel R L, Lowe MR, Rosenbaum M, et al. Describing the Weight-Reduced State: Physiology, Behavior, and Interventions. Obesity (Silver Spring). 2021 Apr;29 Suppl l(Suppl 1):S9-S24. doi: 10.1002/oby.23086.

Associa9ao Brasileira para o Estudo da Obesidade e Sindrome Metab6lica (Abeso); Sociedade

Associa9ao Brasileira para o Estudo da Obesidade e Sindrome Metab6lica (Abeso). Diretrizes brasileiras de obesidade: 2016. Sao Paulo; 2016. Available from: https://bit.ly/2T5Flbn

Awad, A. & Waheedi, M. (2012). Community pharmacist' s role in obesity treatment in Kuwait: a cross-sectional study. BMC Public Health. 2012; 12:863. doi:10. l 186/1471-2458-12-863

Bahia, L., Coutinho, E.S., Barufaldi, L.A., Abreu Gde A, Malhao, T.A., de Souza, C.P., et al. (2012). The costs of overweight and obesity-related diseases in the Brazilian public health system: cross-sectional study. BMC Public Health. 2012 Jun 18; 12:440. doi: 10.l 186/14712458- 12-440.

Balbo, L. (2011). Saudi Arabia's fast food boom is finger-lickin' awful. Green Prophet; 2012. Available from: www.greenprophet.com/2012/04/ saudi-arabia-fast-food. Accessed August 19, 2011.

Behavioral Therapy on Body Weight in Adults with Overweight or Obesity: The STEP 3 Randomized Clinical Trial. JAMA. 2021 Apr 13;325(14):1403-13. doi: 10.1001 / jama.2021.1831.

Brasileira de Endocrinologia e Metabologia (SBEM). Obesidade e a Gordofobia - Percep9oes 2022.

E-book. Available from: https://abeso.org.br/wp-content/ uploads/2022/06/ebook_gordofobia-1.pdf

Bray, G. A., Kim, K. K., & Wilding, J. P. H. (20 16). Obes ity: A chronic relapsing progressive disease process. A position statement of the World Obesity Federation. Obesity Reviews, 17(1), 2-9.

Bray, G.A., Heisel, W.E., Afshin, A., Jensen, M.D., Dietz, W.H., Long, M., et al. (2018). The Science of Obesity Management: An Endocrine Society Scientific Statement. Endocr Rev. 2018 Apr 1;39(2):79-132. doi: 10.1210/ er.2017-00253.

Cataldi, M., Cignarelli, A., Giallauria, F., Muscogiuri, G., Barrea, L., Savastano, S., et al. (2020).

Caterson, I.D., Alfadda, A.A., Auerbac P., Coutinho, W., Cuevas, A., Dicker, D., et al. (2019). Gaps to bridge: Misalignment between perception, reality, and actions in obesity. Diabetes Obes Metab. 2019 Aug;21(8): 1914-24. doi: 10.1111/dom.13752.

Championing the use of peop le-first language in childhood overweight and obesity to address weight bias and stigma: A joint statement from the European-

Chen, F., Su, W., Ramasamy, A., Zvenyach, T., Kahan, S., Kyle, T., et al. (2019). Ten-year Medicare budget impact of increased coverage for anti-obesity intervention. J Med Econ. 2019 Oct;22(10):1096-104. doi: 10.1080/13696998.2019.1652185.

Child.h oodO besity-Group (ECOG), the European-Coalition-for-People-Living-with-Obesity (ECPO), the International-Paediatric-Association (IPA), Obesity-Canada, the European- Association-for-the-Study-of-Obesity Child.ho od - O b es it y - T a s k- F o rc e (E AS O - C O TF) ,

Chronic Disease and Assessing Bias and Stigmatization as Determinanst of Disease

Ciciurkaite, G., Moloney, M.E. & Brown, R.L. (2019). The Incomplete Medicalization of Obesity: Physician Office Visits, Diagnoses, and Treatments, 1996-2014. Public Health Rep. 2019 Mar/Apr;134(2):141-9. doi: 10.l 177/0033354918813102.

Colanton io, L.D., Rosenson, R.S., Deng, L., Monda, K.L., Dai, Y., Farkouh, M.E., Safford, M.M. et al. (2019). Adherence to Statin Therapy Among US Adults Between 2007 and 2014. J Am Heart Assoc. 2019 Jan 8;8(1): e010376. doi: 10.l161/JAHA.118.010376.

DeNicola, E., Aburizaiza, O.S., Siddique, A., Khwaja, H. & Carpenter, D.O. (2015). Obesity and public health in the Kingdom of Saudi Arabia Rev. Environ Health. 2015;30(3):191-205.

Diagnostic Term: The American Association of Clinical Endocrinologists and American Collegeof Endocrinology Position Statement. Endocr Pract. 2017 Mar;23(3):372-8.doi: 10.4158/EPl 61688.PS.

Dickinson, J.K., Guzman, S.J., Maryniuk, M.D., O'Brian, C.A., Kadohiro, J.K., Jackson, R.A., et al. (2017). The Use of Language in Diabetes Care and Education. Diabetes Care. 2017 Dec;40(12):1790-9. doi: 10.2337/ dcil7-0041.

Drucker, D.J. (2018). Mechanisms of Action and Therapeutic Application of Glucagon-like Peptide- I. Cell Metab. 2018 Apr 3;27(4):740-56. doi: 10.1016/j.cmet.2018.03.001.

Duncan, G.E. (2010). The "fit but fat" concept revisited: population-basedestimates using NHANES. Int J Be/zav Nutr Phys Act. 2010 May 24; 7:47. doi: 10.l 186/1479-5868-7-47.

Earnshaw, V.A., Quinn, D.M. (2012). The impact of stigmain healthcare on people living with chronic illnesses. J Health Psycho!. 2012 Mar;l 7(2):157- 68.

Elangovan, A., Shah, R. & Smith, Z.L. (2021). Pharmacotherapy for Obesity- Trends Using a Population Level National Database. Obes Surg. 2021 Mar;31(3):1105-12. doi: 10.1007/s l1695-020-04987-2.

Eldalo, A.S., Alotaibi, M.N., Alenazi, T.O., Albogami, H.A. & Mohamed, K.M. (2017).Use of herbal medicines in the treatment of obesity in Taif, Saudi Arabia. Saudi J Med Med Sci. 2017; 5:149.

Ezequiel, D.G.A., Leal, C.T.S., Assu, G.C. (2022). Abordagem multidisciplinardo individuo com excesso de peso: a linguagem importa? la ed. Juiz de Fora. 2022. v. 1. 14lp.

Fabricatore, A. N., & Yank, V. (2008). Weight Loss Expectations and Attrition in Treatment- Seeking Obese Women. Obesity, 16(10), 2356-2361.

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research. Reading, MA: Addison-Wesley.

Fontaine, K.R., Redden, D.T., Wang, C., Westfall, A.O. & Allison, D.B. (2003). Years of life lost due to obesity. JAMA. 2003 Jan 8;289(2):187-93. doi: 10.1001/jama.289.2.187.

Food and Drug Administration (2011). What is a dietary supplement? 2015. Available from: http://www.fda.gov/AboutFDA/Transparency/Basics/ ucm195635.htm. Accessed August 19, 2011.

Forum Intersetorial para Combate as DCNTs no Brasil. Linguagem Importa! (Language Matters!)

Franz, M.J., Vanw ormer, J.J., C rain , A.L., Boucher, J.L., Histon, T., Caplan, W., et al. (2007). Weight-loss outcomes: a systematic review and meta-analysis of weight-loss clinical trials with a minimum 1-year follow-up. J Am Diet Assoc. 2007 Oct;107(10):1755-67. doi: 10.1016/j.jada.2007. 07.017.

Freedland, S.J., Wen, J., Wuerstle, M. et al. (2008). Obesity is a significant risk factor for prostate cancer at the time of biopsy. Urology. 2008; 72:1102- 1105. doi: 10.1016/j.urology.2008.05.044

Gadde, K. M., Allison, D. B., Ryan, D. H., Peterson, C. A., Troupin, B., Schwarz, M. L., &

Geller, A., Shehab, N., Weidle, N. et al. (2015). Emergency department visits for adverse events related to dietary supplements . N EnglJ Med. 2015; 373:1531- 1540. doi:10.1056/NEJMsal504267

Geller, A.I., Shehab, N., Weidle, N.J., Lovegrove, M.C., Wolpert, B.J., Timbo, B.B. et al. (2015). Emergency Department Visits for Adverse Events Related to Dietary Supplements. N Engl J Med. 2015 Oct 15;373(16):1531-40. doi: 10.1056/NEJMsal 504267.

George, K., Lovelady, C., Connolly, D., Parmar, S. & Davies, M.J. (2010). Community pharmacy contribution to weight management: identifying opportunities. Int J Pharm Pract. 2010; 18:7- 12. doi:10.121 l /ijpp.18 .01.0003

Hall, K.D. & Kahan, S. (2018). Maintenance of Lost Weight and Long-term Management of Obesity. Med Clin North Am. 2018 Jan;102(1):183- 97. doi: 10.1016/j.mcna.2017.08.012.

Halpern, B. & Halpern, A. (2015). Sa.fety assessment of FDA-approved (orlistat and lorcaserin) anti-obesity medications. Expert Opin Drug Saf 2015 Feb;l 4(2):305-15. doi:

Halpern, B. & Halpern, A. (2015). Why are anti-obesity drugs stigmatized? Expert Opin Drug Saf

Halpern, B. & Mancini, M.C. (2020).Should the Same Sa.fetyScrutiny of Antiobesity Medications be Applied to Other Chronic Usage Drugs? Obesity (Silver Spring). 2020 Ju1;28(7): 1171-2.

Halpern, B. & Mancini, M.C. (2021). Controlled obesity status: A rarely used conce pt, but with particular importance in the COVID-19 pandemic and beyond. J Endocrinol Jnvest. 2021 Apr;44(4):877-80. doi: 10.1007/s406 l 8-020-01389-0.

Halpern, B., Mancini, M.C., de Melo, M.E., Lamounier, R.N., Moreira, R.O., Carra, M.K., et al. (2022). Proposal of an obesity classification based on weight history: an official document by the Brazilian Society of Endocrinology and Metabolism (SBEM) and the Brazilian Society for the Study of Obesity and Metabolic Syndrome (ABESO). Arch Endocrinol Metab. 2022 Apr 28;66(2):139-51. doi: 10.20945/2359-3997000000465.

Halpern, B., Mancini, M.C., de Melo, M.E., Lamounier, R.N., Moreira, R.O., Carra, M.K., et al. (2022). The new obesity classification based on weight history is not proposed as a guideline. Arch Endocrinol Metab. 2022 Nov l 7;66(6):936-7. doi: 10.20945/23593997000000571.

Hay, P., Palavras, M.A., da Luz, F.Q., Dos Anjos Garnes, S., Sainsbury, A., Touyz, S. et al. (2022). Physical and mental health outcomes of an integrated cognitive behavioral and weight management therapy for people with an eating disorder

characterized by binge eating and a high body mass index: A randomized controlled trial. BMC Psychiatry. 2022 May 24;22(1):355. doi: 10.l 186/s l2888-022-04005-y.

Heimburger, D. C. (2020). Clinical Practic e Guidelines for the Perioperative Nutrition, Metabolic, and Nonsurgical Support of Patients Undergoing Bariatric Procedures - 2019 Update: Cosponsored by the American Association of Clinical Endocrinologist/sAmerican College of Endocrinology, the Obesity Society, the American Society for Metabolic and Bariatric Surgery, the Obesity Medicine Association, and the American Societyof Anesthesiologists.Obesity, 28(4), 0 1-058.

Hemo, B., Endevelt, R., Porath, A., Stampfer, M.J. & Shai, I. (2011). Adherence to weight loss medications; post-marketing study from HMO pharmacy data of one million individuals. Diabetes Res Clin Pract. 2011 Nov;94(2):269-75. doi: 10.1016/j.diabres.2011.08.021.

James, W.P.T., Jackson-Leach, R., Mhurchu, C.N., et al. (2004). Overweight and obesity (high body mass index). In: Ezzati M, Lopez AD, Rodgers A, Murray CJL, editors.

Kyle, T.K. & Puhl, R.M. (2014). Putting people first in obesity. Obesity (Silver Spring). 2014 May;22(5):1211. doi: 10.1002/oby.20727.

L. A. R. (2011). Benefits of modest weight loss in improving cardiovascular risk factors in overweight and obese individuals with type 2 diabetes. Diabetes Care, 34(7), 1481- 1486. https://doi.org/10.2337/dc10-2415

Latner, J.D., Barile, J.P., Durso, L.E. & O' Brien, K.S. (2014). Weight and health-related quality of life: the moderating role of weight discrimination and internalized

weight bias. Eat Behav. 2014 Dec;15(4):586-90. doi: 10.1016/j.eatbeh.2014.08.014.

Leblanc, E.S., O' Connor, E., Whitlock, E.P., Patnode, C.D. & Kapka, T. (2011). Effectiveness of primary care-relevant treatments for obesity in adults: a systematic evidence reviews for the

Liraglutide 3.0 mg and Intensive Behavioral Therapy (IBT) for Obesity in Primary Care: The SCALE IBT Randomized Controlled Trial. Obesity {Silver Spring). 2020 Mar;28(3):529-36. doi: 10.1002/ oby.22726.

Lloyd, K.B., Thrower, M.R., Walters, N.B., Krueger, K.P., Stamm, P.L. & Evans R.L. (2007).

Mannucci, E., Dicembrini, I., Rotella, F., Rotella, C.M. (2008). Orlistat and sibutramine beyond weight loss. Nutr Metab Cardiovasc Dis. 2008 Jun; l 8(5):342-8. doi: 10.1016/j.numecd.2007.03.010.

Marso, S.P., Daniels, G.H., Brown-Frandsen, K., Kristensen, P., Mann, J.F., Nauck, M.A., et al. (2016). LEADER Steering Committee; LEADER Trial Investigators. Liraglutide and Cardiovascular Outcomes in Type 2 Diabetes. N Engl J Med. 2016 Jul 28;375(4):311-22. doi: 10.1056/ NEJMoa1603827.

Marso, S.P., Bain, S.C., Consoli, A., Eliaschewitz, F.G., J6dar, E., Leiter, L.A., et al. (2016). SUSTAIN-6 Investigators. Semaglutide and Cardiovascular Outcomes in Patients with Type 2 Diabetes. N Engl J Med. 2016 Nov 10;375(19):1834-44. doi: 10.1056/NEJMoa1607141.

Morrison, D., Mcl oone, P., Broshnahan, N., McCombie, L., Smith, A. & Gordon, J. (2013). A community pharmacy weight management program: an evaluation of effectiveness. BMC Public Health. 2013; 13:282.doi:10.1186/1471-2458-13-282

Nadolsky, K., Addison, B., Agarwal, M., Almandoz, J.P., Bird, M.D., DeGeeter, Chaplin, M., et al. (2023). American Association of Clinical Endocrinology Consensus Statement: Addressing

National Public Health Service for Wales (2011). Weight management interventions by community pharmacists: A rapid review of the evidence. Available from:

Nauck, M.A., Quast, D.R., Wefers, J. & Pfeiffer, A.F.H. (2021). The evolving story of incretins (GIP and GLP-1) in metabolic and cardiovascular disease: A pathophysiological update. Diabetes Obes Metab. 2021 Sep;23 Suppl 3:5-29. doi: 10.1111/dom.14496.

Nguyen, N.T., Magno, C.P., Lane, K.T., Hinojosa, M.W. & Lane, J.S. (2008). Association of hypertension, diabetes, dyslipidemia, and metabolic syndrome with obesity: findings from the National Health and Nutrition Examination Survey, 1999 to 2004. J Am Coll Surg. 2008;207:928- 934. doi:10.1016/j.jamcollsurg.2008.08.022

Obesity Action Coalition (OAC), The Obesity Society (TOS), and the World Obesity Federation (WOF). Pediatr Obes. 2023 Jun;18(6):e13024. doi: 1O. 1111 / ij po . 1 3 02 4 .

Oshman, L., Othman, A., Furst, W., Heisler, M., Kraftson, A., Zouani, Y., et al. (2023). Primary care providers' perceived barriers to obesity treatment and opportunities for improvement: A mixed methods study. PLoS One. 2023 Apr 18;18(4):e0284474. doi: I0.1371/journal.pone.0284474.

Pearl, R.L., Puhl, R.M., Himmelstein, M.S., Pinto, A.M., Foster, G.D. (2020). Weight Stigma and Weight-Related Health: Associations of Self-Report Measures Among Adults in Weight Management. Ann Behav Med. 2020 Nov 1;54(11):904-14. doi: 10.1093/abm/kaaa026.

Phan, K., Gomez, Y.H., Elbaz, L., Daskalopoulo u, S.S. (2014). Statin treatment non-adherence and discontinuation: clinical implications and potential solutions. Curr Pharm Des. 2014;20(40):6314-24. doi: 10.2174/1381 612820666140620162629.

Pomeranz, J.L., Taylor, L.M. & Austin, S.B. (2013). Over-the-counter and out-of-control: legal strategies to protect youths from abusing products for weight control. Am J Public Health. 2013 Feb;103(2):220-5. doi: 10.2105/AJPH.2012.300962.

Puhl, R.M., Himmelstein, M.S., & Pearl, R.L. (2020). Weight stigma as a psychosoc ial contributor to obesity. Am Psycho!. 2020 Feb-Mar;75(2):274-89. doi: 10.1037/amp0000538.

Quantification of Health Risks: Global and Regional Burden of Disease Attributable to Selected Major Risk Factors. Geneva: World Health Organization; 2004:497-596.

Raynor, H.A. & Champagne, C.M. (2016). Position of the Academy ofNutrition and Dietetics: Interventions for the Treatment of Overweight and Obesity in Adults. J Acad Nutr Diet. 2016 Jan;116(1):129-47. doi: 10.1016/j. jand.2015.10.031.

Rios-Hoyo, A. & Gutierrez-S almea, G. (2016). New dietary supplemenst currently know. Curr Obes Rep. 2016; 5:262-270.

Royal Pharmaceutical Society of Great Britain. Practice guidance: obesity and overweight (2005). Pharm J. 2005; 274:435-436.

Rubino, F., Batterham, R.L., Koch, M., Mingrone, G., le Roux, C.W., Farooqi, I.S., et al. (2023). Lancet Diabetes & Endocrinology Commission on the Definition and Diagnosis of Clinical Obesity. Lancet Diabetes Endocrinol. 2023 Apr;11(4):226-8. doi:10.10l6/S22l 38587(23)00058-X.

Rubino, F., Puhl, R.M., Cummings, D.E., Eckel, R.H., Ryan, D.H., Mechanick, J.I., et al. (2020). Joint international consensus statement for ending the stigma of obesity. Nat Med. 2020 Apr;26(4):485-97.doi: 10.1038/s41591-020- 0803-x.

Ryan, D.H., Lingvay, I., Colhoun, H.M., Deanfield, J., Emerson, S.S., Kahn, S.E., et al. (2020). Semaglutide Effects on Cardiovascular Outcomes in People with Overweight or Obesity (SELECT) rationale and design. Am Heart J. 2020 Nov; 229:61-9. doi: 10.1016/j.ahj.2020.07.008.

Sasdelli, A.S., Petroni, M.L., Delli Paoli, A., Collini, G., Calugi, S., Daile Grave, R., et al. (2018). Expected benefits and motivation to weight loss concerning treatment outcomes in group- based cognitive-behavior therapy of obesity. Eat Weight Disord. 2018 Apr;23(2):205-14. doi: 10.1007/ s40519-017-0475-9.

Schwartz, M.W., Seele y, R.J., Zeltser, L.M., Drewnowski, A., Ravussin, E., Redman, L.M., et al. (2017). Obesity pathogenesis: An Endocrine Society scientific statement. Endocr Rev. 2017 Aug 1;38(4):267-96. doi: 10.1210/er.2017-00111 .

Sharma, A.M., Birney, S., Crotty, M., Finer, N., Lieberman, G., Reynoso, R.A., et al. (2023). Drivers of adherence to medication in obesity management. P0 4.168. Poster presented in European Congress of Obesity, Dublin, 202 3, 17-20 May, 2023.

Shaw, Tronieri, J, Wadden, T.A., Berkowitz, R.I., Chao, A.M, Pearl, R.L., Alamuddin, N. et al. (2018). A Randomized Trial of Lorcaserin and Lifestyle Counseling for

Maintaining Weight Loss Achieved with a Low-Calorie Diet. Obesity (Silver Spring). 2018 Feb;26(2):299-309.doi: 10.1002/ oby.22081.

Siebenhofer, A., Winterholer, S., Jeitler, K., Horvath, K., Berghold, A., Krenn, C., et al. (2021). Long-term effects of weight-reducing drugs in people with hypertension. Cochrane DatabaseSystRev. 2021 Jan 17;1(1): CD007654. doi: 10.1002/14651858.CD007654.pub5.

Speight, J., Conn, J., Dunning, T. & Skinner, T.C. (2012). Diabetes Australia. Diabetes Australia position statement. A new language for diabetes: improving communications with and about people with diabetes. Diabetes Res Clin Pract. 2012 Sep;97(3):425-31 . doi: 10.1016/j. diabres.2012.03.015.

Stigma evaluation for diabetes and other chronic non-communicable disease patients: Development, validation and clinical use of stigma scale - The Kanden Institute Stigma Scale. J Diabetes Investig. 2022 Dec;13(12):2081-90. doi: 10.1111/jdi.13894.

Swinbur B.A., Kraak, V.I., Allender, S., Atkins, V.J., Baker, P.I., Bogard, J.R., et al. (2019). The Global Syndemic of Obesity, Undernutrit ion, and Climate Change: The Lancet Commission report. Lancet. 2019 Feb 23;393(10173):791-846. doi: 10.1016/S0140-6736(18)32822-8.

Taing, M., Clavarino, A.M. & McGuire T.M. (2017). Australian community pharmacists' knowledge of popular herbal/nutrient weight-loss complementary medicines. JP harm Pract Res. 2017; 47:463-4 70. doi:10.1002/jppr.1313

Tanaka, N., Hamamoto, Y., Kurotobi, Y., Yamazaki, Y., Nakatani, S., Matsubara, M., et al. (2022).

Thomas, C.E., Mauer, E.A., Shukla, A.P., Rathi, S. & Aronne. L.J. (2016). Low adoption of weight loss medications: A comparison of prescribing patterns of antiobesity pharmacotherapies and SGLT2s. Obesity {Silver Spring). 2016 Sep;24(9):1955-61. doi: 10.1002/oby.21533.

Thomas, D.D., Waring, M.E., Ameli, 0 ., Reisman, J.I. & Vimalananda, V.G. (2019). Patient Characteristics Associated with Receipt of Prescription Weight-Management Medications Among Veterans Participating in MOVE! Obesity {Silver Spring). 2019 Jul;27(7):1168- 76.doi: 10.1002/ oby.22503.

U.S. Preventive Services Task Force. Ann Intern Med. 2011 Oct 4;155(7):434-47. doi: 10.7326/0003- 4819-155-7-201110040-00006.

Van Alsten, S.C. & Harris, J.K. (2020). Cost-Related Non-adherence and Mortality in Patients with Chronic Disease: A Multiyear Investigation, National Health Interview Survey, 2000- 2014. Prev Chronic Dis. 2020 Dec 3;17:El51. doi: 10.5888/pcd17.200244.

Wadden, T.A., Foreyt, J.P., Foster, G.D., Hill, J.O., Klein, S., O' Neil. P.M., et al. (2011). Weight loss with naltrexone SR/bupropion SR combination therapy as an adjunct to behavior modification: the COR-BMOD trial. Obesity {Silver Spring). 2011 Jan;19(1):110-20. doi: 10.1038/oby.2010.147.

Wadden, T.A., Volger, S., Sarwer, D.B., Vetter, M.L., Tsai, A.G., Berkowitz, R.I., et al. (2011). A two-year randomized trial of obesity treatment in primary care practice. N Engl J Med. 2011 Nov 24;365(21):1969-79. doi: 10.1056/ NEJMoal 109220.

Waters, T. M., Yeager, R. L., & Thompson, D. (2010). The Relationship Between Weight Perceptions and Weight-Related Outcomes in US Adults. Permanente Journal, 14(2), 27- 33.

Weghuber, D., Khandpur, N., Boyland, E., Mazur, A., Frelut, M.L., Forslund, A. et al. (2023).

Wharton, S., Lau, D.C.W ., Vallis, M., Sharma, A.M., Biertho, L., Campbell- Scherer, D. et al. (2020). Obesity in adults: a clinical practice guideline. CMAJ. 2020 Aug 4;192(31):E875- 91. doi: 10.1503/cmaj.191707.

Wilding, J.P.H., Batterham, R.L., Davies, M., Van Gaal, L.F., Kandler, K., Konakli, K., et al. (2022). STEP 1 Study Group. Weight regain and cardiometabolic effects after withdrawal of semaglutide: The STEP 1 trial extension. Diabetes Obes Metab. 2022 Aug;24(8):1553- 64. doi: 10.1111/dom.14725.

Wilson, E.R., Kyle, T.K. & Nadglowski, J.F. Jr, (2017). Stanford FC. Obesity coverage gap: Consumers perceive low coverage for obesity treatments even when workplace wellness programs target BMI. Obesity (Silver Spring). 2017 Feb;25(2):370-7. doi:10.1002/oby.2l 746.

World Health Organization (n.d.). Obesityand Ovenveight. Retrieved from https://www.who.int/en/news-room/fact-sheets/detail/obesity-and-overweight.World Health Organization (2016).10 Facts on Obesity. 2016. Availablefrom: https://www.who.int/features/factfiles/obesity/facts/en/

Xia, Y., Kelton, C.M., Guo, J.J., Bian, B. & Heaton, P.C. (2015). Treatment of obesity: Pharmacotherapy trends in the United States from 1999 to 2010. Obesity {Silver Spring}.

Yang, P., Zhou, Y., Chen, B., et al. (2009). Overweight, obesity and gastric cancer risk: results from a meta-analysis of cohort studies. Eur J Cancer. 2009;45(16):2867-2873. doi:10.1016/j.ejca.2009.04.019

Yanovski, S. Z., & Yanovski, J. A. (2014). Long-term drug treatment for obesity: A systematic and clinical review. JAMA, 311(1), 74-86. http://doi.org/10.1001/jama.2013.281361

Yanovski, S. Z., Yanovski, J. A., & Gormally, J. F. (2014).Obesity Treatment: The Role of Pharmacotherapy. The Journal of the American Medical Association, 311(1), 74-86.

Zubiaurre, P.R., Bahia, L.R, da Rosa M.Q.M., Assumpc;ao , R.P., Padoin, A.V., Sussembach, S.P., et al. (2017). Estimated Costs of Clinical and Surgical Treatment of Severe Obesity in the Brazilian Public Health System. Obes Surg. 2017 Dec;27(12):3273-80.doi:

APPENDICES
APPENDIX I

DEPARTMENT OF HUMAN KINETICS AND SPORTS SCIENCE UNIVERSITY OF BENIN,BENIN CITY

QUESTIONNAIRE ON KEEP-FIT PARTICIPANTS'PERCEPTION OF THE BENEFITS OF WEIGHT LOSS DRUGS TO PARTICIPANTS IN BENIN METROPOLIS

This questionnaire titled "Keep-Fit Participants'Perception of the Benefits of Weight Loss Drugs Questionnaire (KPBWLDQ)"is designed to fulfill the requirements of an undergraduate program in Human Kinetics and Sports Science. You are required to fill out this questionnaire to give relevant information on the keep-fit participants' perception of the benefits of weight loss drugs to participants in Benin metropolis.

Please, kindly be objective in responding to the various questions by writing out or ticking(V)in the appropriate space/box corresponding to your opinion where necessary. Be rest assured that all information provided in this questionnaire shall be used strictly for academic purposes and shall be treated with utmost confidentiality.

Thanks

UKAMAKA,Juliet.

SECTION A:BIODATA

Gender:Male() Female()

KEYS:SA=Strongly Agree;
A=Agree;
D=Disagree;
SD=Strongly Disagree
VHE=Very High Extent

HE=High Extent
LE=Low Extent
VLE=Very Low Extent

SECTION B

Please answer the following items according to the scale below

S/N	ITEMS	SA		A	D	SD
	PREVAILING ATTITUDES OF KEEP-FIT PARTICIPANTS TOWARDS THE USE OF WEIGHT LOSS DRUGS					
1.	I do not fancy the use of weight loss drugs					
2.	I hardly use weight loss drugs for fear of their potential side effects					
3.	I prefer engaging in physical fitness exercises than taking dietary supplements					
4.	I rather ingest organic food, fruits, and vegetables and exercise to keep fit and avoid weight gain					
5.	Over-the-counter weight reduction products may be detrimental to my health, so I avoid them					
6.	I take part in special exercises regularly to prevent patronizing weight loss drug vendors					
7.	I think weight reduction agents are effective and safe					
8,	Weight loss drugs should be limited to obese patients who could not reduce their weight by exercise and diet					
9.	If I were an obese patient, I would be knowledgeable regarding what products may reduce weight in a safe way					
10.	I am not sure of the weight loss drugs' efficacy regarding weight reduction					
11.	Weight loss drugs should be restricted to those who failed to lose weight with diet/exercise					
12.	Weight loss drugs should only be used by people with extreme obesity					
	FACTORS INFLUENCING THE DECISION TO CONSIDER OR AVOID WEIGHT LOSS DRUGS AMONG KEEP-FIT PARTICIPANTS	**SA**	**A**	**D**	**SD**	
13.	Weight loss drugs are more effective than diet/exercise					
14.	Weight loss drugs enable more rapid results than exercise					
15.	Weight loss drugs have a long-lasting effect on weight loss than exercise					

16.	Weight loss drugs are safe				
17.	Weight loss drugs are more convenient to use				
18.	Weight loss drugs help those with cases of extreme obesity				
19.	Weight loss drugs may not be entirely safe for everyone to use to keep fit				
	HOW TO KEEP FIT ENTHUSIASTS WEIGH PERCEIVED BENEFITS AND POTENTIAL RISKS ASSOCIATED WITH THE USE OF WEIGHT LOSS DRUGS	**SA**	**A**	**D**	**SD**
20.	Weight loss drug intake may cause gastrointestinal upset				
21.	Ingestion of weight loss drugs may result in neurological complaints like headaches, dizziness, tremor, and so on.				
22.	Use of weight loss drugs as against exercises can cause hypoglycemia and elevated heart rate				
23.	Weight loss drugs have serious adverse effects/conditions such as pancreatitis, cholecystitis, valvulopathy, and so on				
24.	The potency of weight loss drugs has been seen to decrease blood pressure				
25.	Weight loss medications can produce improvement in cardiometabolic risk factors than behavioral interventions alone				
26.	The use of weight loss drugs by patients with pre-existing co-morbid disease can help in improving their blood pressure, lipids, and glycemic control				

APPENDIX II

RESULT OF RELIABILITY STATISTICS

```
GET   FILE='C:\Users\user\Documents\Ukamaka Juliet analysis.
sav'.
DATASET NAME DataSet1 WINDOW=FRONT. NEW
FILE.
DATASET NAME DataSet2 WINDOW=FRONT.
RELIABILITY
  /VARIABLES=Item1 Item2 iTEM3 iTEM4 iTEM5 iTEM6 iTEM7 iTEM8 iTEM9 iTEM10
iTEM11 iTEM12 iTEM13 iTEM14 iTEM15 iTEM16 iTEM17 iTEM18 iTEM19 iTEM20 iTEM21
iTEM22 iTEM23 iTEM24 iTEM25 iTEM26
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE CORR   /SUMMARY=TOTAL.
```

Reliability

```
[DataSet2]
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	20	100.0
	Excluded	0	.0
Total		20	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.893	.901	26

APPENDIX III

RESULTS OF DATA ANALYSIS

```
DESCRIPTIVES VARIABLES=Item1 Item2 Item3 Item4 Item5 Item6 Item7 Item8 Item9
Item10 Item11 Item12 Item13 Item14 Item15 Item16 Item17 Item18 Item19 Item20
Item21 Item22 Item23 Item24 Item25 Item26

/STATISTICS=MEAN STDDEV MIN MAX.
```

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Item1	275	1.00	4.00	3.3964	.72945
Item2	275	1.00	4.00	3.5818	.58854
Item3	275	1.00	4.00	3.4327	.71354
Item4	275	1.00	4.00	2.9818	.81256
Item5	275	1.00	4.00	3.4218	.64804
Item6	275	1.00	4.00	3.5927	.59310
Item7	275	1.00	4.00	3.5200	.65245
Item8	275	1.00	4.00	3.4473	.66174
Item9	275	1.00	4.00	3.4545	.72540
Item10	275	1.00	4.00	3.6764	.52734
Item11	275	1.00	4.00	2.4945	1.04417
Item12	275	1.00	4.00	3.3964	.68827
Item13	275	1.00	4.00	3.0036	.91818
Item14	275	1.00	4.00	3.3382	.66054
Item15	275	1.00	4.00	3.2836	.74451
Item16	275	1.00	4.00	3.1200	.86926
Item17	275	1.00	4.00	3.2255	.81056
Item18	275	1.00	4.00	3.2436	.80753
Item19	275	1.00	4.00	3.3855	.65385
Item20	275	1.00	4.00	3.5745	.57064
Item21	275	1.00	4.00	3.1636	.82753
Item22	275	1.00	4.00	3.3964	.69355

Item23	275	1.00	4.00	3.0182	.91002
Item24	275	1.00	4.00	3.3309	.67512
Item25	275	1.00	4.00	3.2909	.74169
Item26	275	1.00	4.00	3.1309	.87397
Valid N (listwise)	275				

```
COMPUTE attitude_to_weight_loss_drugs=SUM (Item1 to Item12).
EXECUTE.
COMPUTE decision_on_weight_loss_drugs=SUM (Item13 to Item19).
EXECUTE.
COMPUTE factors_influencing_dedication_to_fitness=SUM (Item20 to Item26).
EXECUTE. CORRELATIONS
  /VARIABLES=attitude_to_weight_loss_drugs engagement_in_fitness_regimen
  /PRINT=TWOTAIL NOSIG
/STATISTICS DESCRIPTIVES
/MISSING=PAIRWISE.
```

Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
attitude_to_weight_loss_drugs	40.3964	4.74218	275
engagement_in_fitness_regimen	1.4145	.49354	275

Correlations

		attitude_to_weight_loss_drugs	engagement_in_fitness_regimen
attitude_to_weight_loss_drugs	Pearson Correlation	1	.004
	Sig. (2-tailed)		.942
	N	275	275
engagement_in_fitness_regimen	Pearson Correlation	.004	1
	Sig. (2-tailed)	.942	
	N	275	275

```
CORRELATIONS
  /VARIABLES=decision_on_weight_loss_drugs
factors_influencing_dedication_to_fitness
```

```
  /PRINT=TWOTAIL NOSIG
/STATISTICS DESCRIPTIVES
/MISSING=PAIRWISE.
```

Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
decision_on_weight_loss_drugs	22.6000	3.99544	275
factors_influencing_dedication_to_fitness	22.9055	3.44908	275

Correlations

		decision_on_weight_loss_drugs	factors_influencing_dedication_to_fitness
decision_on_weight_loss_drugs	Pearson Correlation	1	.947**
	Sig. (2-tailed)		.000
	N	275	275
factors_influencing_dedication_to_fitness	Pearson Correlation	.947**	1
	Sig. (2-tailed)	.000	
	N	275	275

**. Correlation is significant at the 0.01 level (2-tailed).