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Use of Evidence-Based Clinical Practice Guidelines in Obesity Management in Women

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Walden University

College of Nursing

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Chizimako Eze

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the review committee have been made.

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Walden University

2021

Abstract

Use of Evidence-Based Clinical Practice Guidelines in Obesity Management in Women

by

Chizimako Eze

MS, Walden University, 2014

BS, Norfolk State University, 2007

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

February 2022

Abstract

Obesity is one of the Healthy People 2020 high-priority public health issue. Obesity is of importance due to the troubling higher prevalence in women because of the close link that exists between body weight and reproductive health in females from menarche to menopause and beyond. The identification of guidelines to improve or manage the care of female patients can alleviate the burden and complications from being overweight or obese. This project guided by the ADDIE (analyze, design, develop, implement, and evaluate) model was conducted in a family primary care clinic to address a gap in practice, the lack of knowledge about evidence-based clinical practice guidelines targeted for management of the care of women who were overweight or obese. The Medscape 2019 Obesity Clinical Practice guideline (CPG) was the basis for the provider education. The practice focused question sought to find out if provider knowledge and intent to use the CPG would increase after education about a CPG to improve care for female adult patients diagnosed as overweight or obese. One physician and one physician assistant attended the in-person 45-minute PowerPoint presentation. Pre and post surveys were used to measure confidence with using the obesity clinical practice guideline and knowledge about treating women with obesity. In the post survey, they were asked the same questions as well about their intent to follow the guideline. After attending the education, the providers showed an improvement in knowledge and intent to use the CPG for treating female patients. This DNP project supports Walden University's mission to promote positive social change because it educated providers about a clinical practice guideline so they can better identify and address obesity in women.

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Dedication

This project is dedicated to all the women that are struggling with their weight and the ones that are still finding the management of their excess weight very challenging from their childhood, adulthood, and into old age. Know that you have not been forgotten by the healthcare providers and the health team that are readily learning and finding ways to alleviate your burden in order to make life better for you and everyone else.

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I would like to thank the faculty members especially my chairperson, Dr. Melissa Rouse for having patience, understanding, and for the provided guidance throughout the project. My husband who has tirelessly provided all the support that I needed for my success, my children for their support, patience, and understanding. My parents, parents-in law, siblings, other family members, and friends who have encouraged me in one way or another to not give up in my academic and career advancement.

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Section 1: Nature of the Project

Introduction

The focus of this doctoral project is on female obesity, which should be understood in more detail to improve the wellbeing of this population. The adult female population experiences a higher prevalence of obesity compared to their male counterparts. Mauvais-Jarvis (2015) found a higher prevalence of obesity in American women than men globally as well as an increase in abdominal obesity. In many countries, women also had 2-10 times' higher visceral obesity relationship than men with metabolic syndrome, and a higher central adiposity predisposition than men of all ages, races, and in both urban and rural areas.

Despite the growth of new knowledge for health care clinicians, there has been a delay in implementing the new knowledge (White et al., 2016). Researchers have shown higher occurrence of obesity in women than men amongst non-Hispanic Blacks, non-Hispanic Asians, and Hispanic adults, with no significant difference in obesity prevalence for the youth (Hales et al., 2017). The prevalence of obesity among women between the ages of 20-30 years and 40-59 years was 38.3% higher than among men at 34.3% (Ogden et al., 2017). Reviews of prescription drugs for treatment of obesity show that doctors are not prescribing preventive drugs despite the obesity epidemic in the general population (Busko, 2019). This staff education project provided the awareness of evidence-based recommendations for the providers in the management of overweight or obesity for the female population.

Obesity is a Healthy People 2020 high-priority health issue because of its significant threat to the public's health (United States Department of Health and Human Services, 2017). The identification and implementation of recommended guidelines to improve or manage the care of female patients diagnosed as overweight or obese can alleviate the burden and complications from the disease. Development of this staff education project will help promote the use of a CPG that is essential and needed to equip care providers with a standardized practice using current evidence and knowledge to deliver safe and effective care to the women with obesity who utilize the wellness program.

Based on observation in clinical practice, the wellness program participants at the practice site that was originally intended for this DNP project are primarily women who are either overweight or obese. There was not a clinical practice guideline (CPG) being used for improvement or management of their care. This highlighted the need for a staff education project about the benefits of using a clinical practice guideline to impact obesity in women. The original site was no longer available so a primary care clinic treating overweight and obese women was selected. They were also not using a clinical practice guideline

Problem Statement

The initial practicum site for the doctoral project is a clinic located in the Mideast United States where I worked as a family nurse practitioner. The facility is a comprehensive healthcare clinic that treats approximately 500 to 1000 patients per year with lower volume during the pandemic. There is a new wellness program offered that is

focused on addressing obesity and mental health well-being for members. The majority of wellness program participants are overweight or obese women, which prompted a discussion with the site preceptor, who is also the chief executive officer of the organization, about the need for a staff education project in order to implement a CPG that will be used by providers. The supervisory physician and nurse practitioner have also expressed a need for implementation of a CPG in the wellness program. As a result of the needs assessment of the wellness program and many overweight and obese women, the goal is to achieve positive outcomes for the members engaging in the wellness program. Providing education to the providers about a CPG that is based on the best available scientific evidence will address this local and global problem.

When the initial site was lost, a new site was selected. The site where the education was completed is a primary care, family practice clinic in Virginia that treats approximately 1000 to 2500 patients per year. Many overweight and obese female patients seek care at this clinic, making this education appropriate.

The Doctor of Nursing Practice Essential VIII highlighted the impact the doctoral project holds and the significance for the field of nursing practice through the advanced practice nurses' role in using nursing specialty knowledge and the objectives of the DNP program to achieve better outcomes for patients (American Association of Colleges of Nursing, 2006). This staff education project that involved using the Medscape 2019 obesity CPG will provide the awareness of evidence-based recommendations in the management of overweight or obesity for the women seen in the wellness program. The use of the guidelines for the management of adult obesity along with the nursing specialty

knowledge highlighted the impact the doctoral project holds and the significance for the field of nursing practice through the achievement of positive social change for the patient population

Purpose Statement

The purpose of the doctoral project was to develop a staff education project that promotes the use of a clinical practice guideline (CPG) by providers who oversee a clinic wellness program to alleviate the burden and health complications for women who are overweight or obese. The United States Preventive Services Task Force (2018) reported more than 35% of men and 40% of women in America have obesity, are at risk for developing associated obesity health problems like coronary heart disease, diabetes, various types of cancer, gallstones, disability, and have an increased risk for death; particularly adults younger than 65 years.

The related practice focused question is: After being presented with education about a CPG to improve care for female adult patients diagnosed as overweight or obese, does knowledge and intent to use increase?

The 2019 Medscape released guidelines in the management of adult obesity has the potential to address the impact of the chronic nature of obesity in women. The CPG by Hamdy and Khardori (2018) was utilized as a basis for the staff education with the following steps:

1. Clinical evaluation by providers as the first step, after which a collaborative discussion will be conducted with the patient
2. Communication with the patient during visits about modest slimming or

weight loss and the health benefits to include significant impact in reducing comorbidities

3. Creating realistic calendar goals with the patient based on their preferences for physical activities and care coordination
4. Initiating the primary treatment goal by stabilizing body weight while continuously evaluating treatment plan
5. Initiating and incorporating additional treatment plans such as nutrition with physical activity, lifestyle modification then pharmacotherapy, and psychological counseling.
6. Promoting lifelong management with lifestyle maintenance, hunger management, and continuous follow-up visits.

This staff education project provided the awareness of evidence-based recommendations in the management of overweight or obesity for all the women seen in the wellness program.

Nature of the Doctoral Project

The sources of evidence that were collected to meet the purpose of this doctoral project, include the library searches using CINAHL, EBSCO, and other databases with key search terms for obesity in women compared to men, prevalence of obesity in women and men, obesity clinical practice guidelines, obesity treatment guidelines, obesity in primary care, obesity health risk assessment and global health. All the treatment guidelines gathered and synthesized for consistency in order to follow and update obesity treatment plan with effective and relevant evidence-based recommendations. The

Medscape guideline met the consensus from the literature review due to its treatment plan managing obesity as a chronic disease

The ADDIE approach was used in this doctoral project to organize and analyze the evidence. The staff education doctoral project procedural steps followed the ADDIE model as the instructional design model available for developing staff education project for in-service. ADDIE model according to Jeffery et al. (2015) and White et al. (2016) was utilized to guide the instructional process and as a framework for the staff education project and the five phases in the design process include the following:

1. Analysis and assessment phase for the understanding of learner (s) in order to provide high impact instruction
2. Designing of the instruction in the second phase with the learner and the desired end in mind during the objective's development
3. Development is the third phase that involves creation of the content and materials to be used during instruction.
4. Development is the third phase that involves creation of the content and materials to be used during instruction.
5. Evaluating is the final phase to determine both the effectiveness of the instruction and the readiness of the learners for the change in practice.

Appraisal of the educational materials by content experts was completed. An expert panel was needed for reviewing the educational materials and pre and post education surveys, to validate content for any needed revision with recommendations. The expert panel used for this project was one physician and two doctorally prepared

nurse practitioners with specialties in public health, adult, women's health, and chronic disease management from outside the practicum site. Modifications were made to the staff education project based on the expert panel assessment.

A pre and post survey was created and reviewed by the expert panel outside the clinical site. The same expert panel that reviewed the education content, was utilized. The surveys assisted with measuring for improvement in knowledge about the CPG after participants attended the education. The education material was taught at the primary care clinic practicum site. The goal and key recommendation for the staff education project was to implement the Medscape obesity CPG in order to promote high-quality patient-centered care for overweight and obese women. Development of this staff education project will help implement a CPG that is essential and needed to equip care providers with a standardized practice using current evidence and knowledge to deliver safe and effective care to the women with obesity that are utilizing the wellness program.

A pre and post education survey for assessment was administered to measure for improvement in knowledge and intent to follow the CPG. Demographic information was collected with the pretest in order to describe the sample. A question about intent to use the guideline was added to the posttest. No identifying information was collected from the participants. Descriptive statistics were used to describe the sample and are presented in the aggregate. Inferential statistics were used to determine if there is a difference in pretest and posttest scores from the survey.

Significance

The key stakeholders for this project were the providers who received the education and the overweight and obese women seen in primary care practice. The experts that reviewed the content and tests were also key stakeholders. One physician and two doctorally prepared nurse practitioners with specialties in public health, adult, women's health, and chronic disease management, from outside the practicum site made up the expert panel. The patients who will benefit from providers having improved knowledge about women and obesity are key stakeholders. As I continue to disseminate this information after project completion, I will continue to impact this group of key stakeholders.

The support for the staff education project was obtained with site approval according to Staff Education Manual (Center for Research Quality, 2019). The required form was signed by the site representative at the clinic. This representative was a key stakeholder as they supported this important provider education.

Potential contributions of the doctoral project to nursing practice involved improving nurse practitioners (NPs) confidence in the value of offering interventions to overweight and obese women within the primary care practice, and in referring individuals that are not responsive to initial efforts. NPs were the initial target group for this education however, the attendees of the education were one MD and one PA. As I continue to disseminate this education with the intent to reach Nurse Practitioners, the NPs will gain knowledge that will allow them to exam behaviors within the entire primary care team to ensure positive attitudes toward patients. The NPs will receive a

current review of literature related to the treatment of obesity in primary care practice for achievement of the successful goals in obesity management. After learning about this important topic and how they can positively impact this population, it is my hope that they will continue to explore this important topic to better serve this population.

There is potential for transferability of the doctoral project to similar practice areas due to the global impact of obesity and the need for multidisciplinary team approach in the treatment of the chronic nature of overweight and obesity. Semlitsch et al. (2019) conducted a systematic overview of international evidence-based guidelines on obesity and concluded that a multidisciplinary team should treat overweight and obesity as a chronic disease. They recommended the following which is similar to the Medscape 2019 CPG:

1. Implementation of a multifactorial and comprehensive lifestyle program that includes reduction in caloric intake, increased physical activity, and use of measures to support behavioral change for at least 6 to 12 months.
2. The body mass index (BMI) used as a routine measure for diagnosis with screening and addressing weight-related complications as part of weight reduction treatment plan Begin text here.
3. Long-term measures for weight maintenance necessary after weight reduction.
4. Offering bariatric surgery to those with a Body Mass Index (BMI) higher than or equal to 35 kg/m² when all non-surgical interventions have failed.

Furthermore, according to Luck-Sikorski et al. (2017), obesity affects more than 1.4 billion adults worldwide, along with the increase in chronic associated complications and health care costs. Obesity can progressively cause or exacerbate a broad spectrum of comorbidities like diabetes mellitus type 2, hypertension, dyslipidemia, cardiovascular disease, non-alcoholic fatty liver disease, reproductive dysfunction, respiratory abnormalities, psychiatric conditions, and it can increase the risk for certain types of cancer (Kyrou et al., 2018). The use of developed evidence-based practice guidelines is an identified and successful means of influencing patient outcomes while bringing best practice to bedside nursing (Terry, 2018). Implementing clinical practice guidelines through the staff education project has the potential implications for positive social change by significantly reducing the impact of obesity on patients and providers treating the complications of the disease.

Positive Social Change

The higher prevalence of obesity in women is a health issue of importance. There is a need to identify predisposing factors in women that cause them to gain more weight. There is also a need for a reduction in the rate of obesity in women. This DNP project supports Walden University's mission to promote positive social change because it will educate providers about a clinical practice guideline so they can better identify and address obesity in women. With their recommendations for treatment and weight management, the patients will also benefit by losing weight and being healthier. This project positively impacts social change because it addresses obesity, one of the many health issues that pose a considerable danger to the population's health.

Summary

Based on the observation regarding the majority of the women in the wellness program as either overweight or obese, the lack of any guideline for managing obesity in the clinic, the goal of obesity reduction and the management of its complications through interprofessional collaboration with Medscape CPG are necessary for a decrease in obesity prevalence in women that attend the wellness program. The staff education project provided the awareness of evidence-based recommendations in the management of overweight or obesity for the women seen in the wellness program.

The doctoral project utilized the data on the higher prevalence of obesity, which aligns with the practice-focused question regarding the delivery of staff education about a clinical practice guideline for promoting high-quality patient-centered care for overweight and obese women. Using scientific approaches for the management of obesity will improve health outcomes and safety for patients and ensure that evidence-based care is given to overweight or obese women seen in the clinic's wellness program.

In section 2, background information and context for the project will be discussed. The project's relevance to nursing practice and my role as a DNP student in the development and implementation of this project will also be addressed

Section 2: Background and Context

Introduction

The initial practicum site was a comprehensive healthcare clinic that treats approximately 500 to 1000 patients per year with lower volume during the pandemic. The new wellness program offered at the practicum site is focused on addressing obesity and mental health well-being for members. As a result of the needs assessment of the wellness program and many overweight and obese women, the goal was to achieve positive outcomes for the members engaging in the wellness program. The best available scientific evidence was supposed to be used to address this local nursing problem. Unfortunately, that site was no longer available thus a new site was selected. The new site is a primary care, family practice clinic in Virginia that treats approximately 1000 to 2500 patients per year. They treat many obese and overweight females making this staff education project applicable. It is staffed by two medical doctors, three physical assistants, and two nurse practitioners.

The purpose of the doctoral project was to develop a staff education project that will promote the use of a clinical practice guideline (CPG) by providers who oversee a clinic wellness program, in an attempt to alleviate the burden and health complications for women who are overweight or obese. The related practice focused question is: After being presented with education about a CPG to improve care for female adult patients diagnosed as overweight or obese, does knowledge and intent to use increase?

Concepts, Models, and Theories

The use of appropriate theories and models in obesity staff education was essential for better understanding of the intrapersonal and external issues that often create barriers to acceptance and change. The transtheoretical model (TTM) of behavioral change with the five stages of a change process was used to evaluate an individual's readiness to attempt to accept or change behavior. The use of TTM according to McEwin and Wills (2014), helped in understanding the complex process of behavioral changes in the staff as the target population. Also, TTM was used to encourage change by addressing the powerful competing influences like social, psychological, and environmental conditions that could affect any planning process (McEwin & Wills, 2014). TTM was chosen because it could be used to assess and obtain additional information on which stages the target population is currently experiencing. TTM helped to explain reasons for any engagement in the change process with the use of the information obtained in order to develop education strategies with the components that match each stage of the TTM. The five stage-cyclical process from the Prochaska and Diclementi's model of change according to McEwin and Wills (2014) provided guidance for the change efforts as follows:

Precontemplation Stage

The stage is where individuals are unaware that there is a problem and have no thoughts about changing or do not acknowledge the need for change. The strategies for this stage, such as health risk appraisals, are tailored for the risk and benefits of change for the target group and could be used to move them to the next stage.

Contemplation Stage

The stage is where individuals recognize that there is a problem and are intended to change within six months or are aware of the need for change and begin to think about changing the behaviors or accepting the change. The strategies that provide motivation for change, such as self-reflection, social reevaluation, and encouragement, could be utilized for those in this stage.

Preparation for Action Stage

This stage is where individuals are ready for change or intend to change within 30 days, prepare to make changes or have taken some steps toward accepting the change. The strategies that provide opportunities to learn goal-setting skills, increase self-efficacy, and to obtain any needed help in making concrete and realistic change or acceptance plans could help individuals at this stage to act on their plans of change.

Action Stage

The is stage is where individuals have recently started their change plans, such as within the past six months or engaging in change activities, as well as increase their acceptance of change or to deal with the changes. The strategies for this stage, such as social support identification, creation, reinforcement, problem-solving assistance, and providing feedback, could help an individual at this stage to maintain the change.

Maintenance Stage

The stage is where individuals continue the health-enhancing action for more than six months, and behaviors are reinforced to sustain the changes. The strategies that provide continued reinforcement, such as assistance with identifying and acceptance of

change, reminders of the benefits of the new change, and help with implementing plans could be used for the provision of long-lasting chronic disease management of obesity change process.

The TTM with the five stages of change focused on identifying or explaining the reasons for change, as well as evaluating individual's readiness to attempt or accept change so that intervention strategies and educational materials can match each stage for an adoption of change (Hodges & Videto, 2011).

The literature supported the important message of adherence in the management of obesity rather than a specific diet or other interventions as the important ingredient in success of obesity management. Adherence was achieved using an appropriate model or framework that will motivate the patients and the providers offering the recommended treatment plans for obesity management. This was supported by Reeves et al. (2016) use of social cognitive theory, which emphasize self-monitoring, goal setting, problem solving, social support, stimulus control, positive self-talk and self-reward with lifestyle coaches use of motivational interviewing counseling style are all activities that could promote adherence. The same with a semi structured approach during follow-up phone calls that are essential to the success of obesity management, so that intervention targets are addressed based on the participant preference for adherence in their obesity treatment plan. These follow-up calls to the patients show the need to promote adherence in the treatment plan for effective obesity disease management in order to achieve better outcomes for the patients.

Using a model was therefore needed as one of the pertinent elements that inform the doctoral project because it was essential for promoting adherence in the treatment plan for obesity management in the female population. This adherence was supported by Grover and Joshi (2015), that reported effective management of overweight and obesity depends on the understanding of the model of obesity as a chronic disease, which is the foundation of approaches to management.

These findings suggested the need to use the CCM as a theoretical framework due to it being useful in the management of overweight and obesity in clinical practice, as well as the need for providers' better understanding of the chronic nature of obesity with the associated health risks and complication (Grover & Joshi, 2015). The CCM was the theoretical framework that provided a proactive approach that is patient-centered, for promoting mutual and high-quality care for patients with chronic disease, and for promoting their adherence to their treatment plan. The provided staff education on the use of a CPG incorporated the CCM due to the potential to improve adherence by the providers using the CPG and for the patient's acceptance, as well as adherence to the treatment plan. Therefore, the related practice focused question is: After being presented with education about a CPG to improve care for female adult patients diagnosed as overweight or obese, does knowledge and intent to use increase?.

The ADDIE approach was used in this doctoral education project to organize and analyze the evidence. The staff education doctoral project procedural steps followed the ADDIE model as the instructional design model available for developing staff education project for in-service. ADDIE model according to Jeffery et al. (2015) and White et al.

(2016) was utilized to guide the instructional process and as a framework for the staff education project. Evidence generation for the doctoral project using the ADDIE model occurred in five phases of the design process.

Phase 1

Analysis and assessment phase for the understanding of learner(s). This first phase involved evaluating baseline knowledge, skill, and learning goals, as well as preferred learning style, all of which informed the instruction. This assessment phase measured participants knowledge of evidence regarding CPG in obesity management through online tests. Construction of the test items allowed for assessment of the knowledge, beliefs, and attitudes relevant to the evidence and goals of the project. Therefore, this assessment approach provided quantitative data to measure individual knowledge, as well as collective knowledge of the participants. It was also used to identify gaps in knowledge, which focused on the content and instructional design and provided data that can be linked before and after instruction for the evaluated effectiveness. The available resources were the participants, materials, technology, timeline, and fiscal pressures at the practicum site. All were evaluated to inform decisions about design, development, and implementation.

Phase 2

Designing of the instruction in the second phase with the learner and the desired end in mind during the objective's development. Clear objectives were set based on the identified gaps and for the target's knowledge base. Using the Bloom's taxonomy of cognitive learning to establish the domain of the learning to be targeted such as for the

purpose of changing knowledge on obesity, understanding the chronic nature, application of evidence-based strategies, synthesis the relevant evidence, and evaluation of learning, as well as instruction.

Phase 3

Development was the third phase that involved creation of the content and materials used during instruction. The materials and tools ensured that strong evidence was accurately transmitted, described each learning objective, and mapped the related content derived from the evidence, assigned the time allocated to present the content, described in detail the method for conveyance, made explicit any tools or technology associated with each learning objective and described all associated participants engagement.

Phase 4

Implementation was the fourth phase that involved the presentation of the content in keeping with the instructional design plan. This phase involved, online and video blended instruction in delivering content and support learning with the goal of supporting substantial learner engagement with the content to ensure provision of evidence-based obesity treatment plan and for active and engaged learning with ongoing feedbacks from the participants for improved learning.

Phase 5

Evaluating was the final phase to determine both the effectiveness of the instruction and the readiness of the learners for the change in practice. Testing was used during the evaluation, just as they were used during the preliminary or pretest assessment.

Relevance to Nursing Practice

Obesity management was needed for its relevance to nursing practice as literature review showed women of all ages especially the women in their childbearing age are all vulnerable to weight gain. This was supported by the close link existing between body weight for women of all ages and the reproductive health in all females from menarche to menopause and beyond due to the hormonal changes with clinical manifestations of hypothalamic-pituitary-gonadal (HPG) axis dysfunction in females (Kyrou et al., 2018). Additionally, the systematic reviews of randomized control trials (RCTs) is the highest level of evidence. This level of evidence is for evaluating interventions with the aim of the scoping review according to Hutchesson et al. (2020) who examined the extent and range of research undertaken to evaluate behavioral interventions. The purpose of the interventions is to support women of childbearing age, to prevent excess weight, and treat overweight and obesity. Hutchesson et al. identified an increasing volume of research over time undertaken to support women of childbearing age to prevent and treat overweight and obesity and highlighted that pregnancy behavioral interventions have resulted in only modest reductions in gestational weight gain (of about 0.7 kg), and few have improved maternal and child health outcomes. There were compelling calls for future intervention research to also focus on the preconception period. The reviews showed future research needed to examine delivery modes and mediums, optimal intervention duration and intensity. The involvement of health care providers, and involvement of under-represented populations should be considered. Both groups involvement will help to understand effective behavioral interventions, and to ensure that

interventions are scalable and can be implemented within policy and practice, such as through population and primary health care. Ritten and LaManna's (2017) primary aim was to examine the principal barriers to effective management of individuals with obesity and to consider how concerns might be overcome with emphasis on the role of the nurse practitioner (NP). The author highlighted the need for NPs confident in the value of offering interventions within the primary care practice, and in referring individuals that are not responsive to initial efforts. The need for NPs to examine the behaviors within the entire primary care team to ensure positive attitudes toward patients; they may additionally reflect on their knowledge, intake procedures, interview and examination techniques, and the treatments implemented.

Hutchesson et al. (2020) also argued that there is a substantial body of research from the two highest levels of evidence on behavioral interventions that support women of childbearing age to prevent and treat overweight and obesity, particularly from research published within the last decade. However, the majority had focused on weight management during or after a pregnancy event, which demonstrated a research gap to support weight management in the young adult female population in preconception and unrelated to pregnancy to improve their own chronic disease health trajectories, with reproductive and intergenerational health benefits for future planned and unplanned pregnancies.

Additionally, Ritten and LaManna (2017) supported Hutchesson et al.'s (2020) identified gap by highlighting the inadequate training in obesity management, insufficiently tailored resources, and reimbursement difficulties that can also compromise

treatment of individuals with overweight and obesity. Godwin et al. (2019) added to the premise regarding the issues with obesity management on the fact that impairment of the leading physical activity of daily living, such as walking is a major contributor to a dysmetabolic state driving many prevalent civilization diseases associated with insulin resistance, of which obesity is one. The author's exploratory pilot study of novel technology recommended enabling people with mobility disability to walk with minimal effort, in the sedentary range, which will help in obesity management.

Vittengl (2018), prior study tested physical impairment to include difficulty with instrumental activities of daily living, social dysfunction such as low social support and high social strain, and emotional eating with the use of food to cope with stress, as mediators of the bidirectional, longitudinal relations between depression and obesity with current analysis supporting the hypothesis for the longitudinal relations between depression and obesity as bidirectional and manifold. Among women but not men, depression predicted increased obesity, and obesity predicted increased depression, over a period of 18 years according to Vittengl (2018), that also measured at the mid-point of this period, the author identified three mediators that helped explain relations between obesity and depression among women. However, the specific mechanisms by which identified mediators may bring about changes in depression and obesity were not identifiable. Showing that current analysis on physical impairment, social dysfunction, emotional eating each partly-independently accounted for connections between depression and obesity.

Local Background and Context

Obesity is a local issue due its chronic nature with significant impact on the patients' quality of life, the negative impact on the economic healthcare cost, and the disease management challenges for primary care providers. This obesity issue is consistent with the observation in the clinical practice and practicum wellness program participants that are primarily women that are either overweight or obese. The assessment and identification of a well-delineated problem through problem analysis are the foundations for successful program implementation outcomes. According to Kettner et al. (2017), problem analysis is an effective strategy that assists in identifying the factors affecting the population and the use of needs assessment techniques by understanding the different perspectives of the target population or their needs through questions for data collection.

Nutrition, physical activity, and obesity are some of the many Healthy People 2020 high-priority health issues posing a considerable threat to the population health, which will need to be addressed in an appropriate manner (United States Department of Health and Human Services, 2010). This threat is supported by literature review on the likelihood of global obesity reaching 18% in men and exceeding 21% in women in five years (by 2025) if the prevalence trend in obesity continues (Kyrou et al., 2018). Therefore, obesity in women is a practical issue that not only poses a considerable threat to population health but also has economic threat at both the organization and aggregate levels. The summarized literature review highlights the impact of obesity and the recommended guidelines for the reduction in prevalence. Therefore, identifying the

health problem, the target population, and resolving the problem through staff education on the use of a CPG for health promotion and disease prevention will assist in achieving goals for health and quality of life for all patients seen at the wellness program. This highlighted the need for a staff education project about the benefits of using a clinical practice guideline that will help reduce the impact of overweight and obesity in women. Development of the staff education project helped to promote the use of a clinical practice guideline (CPG) by providers who oversee a clinic wellness program, to alleviate the burden and complications for women who are overweight or obese.

Role of the DNP Student

The practice concerns and observation regarding the health disparities among males and females regarding weight management, as well as the observed significant number of women that are overweight and obese at the practicum site created an opening in my review of current research regarding the prevalence of obesity in women. Having reviewed the impact of obesity on the population health, it is of paramount importance to address the issue of obesity in clinical practice by following a CCM and the implementation of evidence-based guidelines for systemic management of each individual patient. A systematic literature review and an overview of international evidence-based guidelines performed according to Semlitsch et al. (2019) included analysis of 19 guidelines for appropriate recommendations with the final consensus on the need for a multidisciplinary team in the treatment of overweight and obesity as a chronic disease, implementation of a multifactorial comprehensive lifestyle program that will promote a reduction in caloric intake, increase physical activity, and use of measures

to support behavioral change for at least 6 to 12 months with follow-ups. The additional need to use body mass index (BMI) as a routine measure for diagnosis along with the evaluation for weight-related complications from screening and addressing the identified complications as part of the weight reduction treatment plan. Lastly, is the need for the maintenance of weight loss with long-term measures especially after weight reduction, to include offering behavioral therapy, medication management, and or bariatric surgery to people with a BMI higher than or equal to 35 kg/m² with unsuccessful non-surgical interventions.

The achievement of obesity management goals involved the application of reasoning strategies gained from advanced nursing practice specialty. These reasoning strategies included several components of the evidence-based process decision making used in formulating a focused clinical question, searching appropriate evidence, critically appraising evidence, incorporating the identified and appraised evidence, evaluating the effects of the decision and the effectiveness in achieving clinical outcomes that are an essential part of advanced practice nursing professional obligation to society.

This staff education project provided the clinic provider staff with relevant and evidenced-based guidelines for use in overweight and chronic obesity management for the achievement of positive outcomes for patients. Having experienced a family member who struggled with her weight throughout her adult life and ended up passing from obesity related complications, I am aware and have a better understanding of the challenges the impact of obesity disease management could have on families. I am motivated to use my role as a doctoral- prepared nurse to engage in this project that

involves using the combination of knowledge derived from clinical practice, while recognizing the cognitive and inherent biases that could alter my perception. Overcoming these biases required my ensuring that individual preferences are considered along with the evidence-based recommendations with their effective strategies that will assist in not jumping to conclusions. Implementing such measures to overcome biases will ensure that value-based care will be incorporated into staff education with patients' preferences in mind during their care plan development and provision.

Role of the Project Team

Appraisal of the educational materials by content experts was completed with feedback provided within two weeks. An expert panel was needed for reviewing the educational materials and pre and post education surveys, to validate content or for any needed revision with recommendations. The project team as the expert panel for this project were one physician and two doctorally prepared nurse practitioners with specialties in public health, adult, women's health, and chronic disease management, from outside the practicum site. The role of the team included creating and reviewing the pre and post survey as the expert panel. The same expert panel reviewed the education content, which was utilized with modifications made to the staff education project based on the expert panel assessment and feedback.

The education material was taught to the practicum clinic staff. This staff education project will help with implementing a CPG that is essential and needed to equip care providers with a standardized practice using current evidence and knowledge to deliver safe and effective care to women with obesity. The pre and post survey were

used to measure for improvement in knowledge and intent to use the CPG after class attendance.

Summary

Obesity in women is a practical issue that poses a substantial threat to the population's health, puts economic strain at both the organization and aggregate levels. As literature review highlighted the impact of obesity and the recommended guidelines for the reduction in prevalence. Identifying the health problem, the target population, and resolving the problem through staff education on CPG that involved health promotion and disease prevention will assist in achieving goals for health and quality of life for patients. There is currently a clinical practice guideline available for use in the improvement or management of care for overweight or obese females, however, the CPG are not being used by most providers to include the wellness program at the practicum site. This highlighted the need for a staff education project to promote the benefits of using a clinical practice guideline to effectively reduce the negative impact of overweight and obesity in women. Development of the staff education project is intended to help to promote the use of a CPG by providers who oversee a clinic wellness program, to alleviate the burden and complications for women who are overweight or obese.

This section addressed concepts, models, and theories to support this DNP staff education project. Relevance to nursing practice as well as local background and context were addressed. The role of the DNP student and the project team were identified and explained.

In Section 3, collection and analysis of evidence for the project will be discussed.

Sources of evidence and the analysis procedures used in this doctoral project will be explored.

Section 3: Collection and Analysis of Evidence

Introduction

This doctoral project is based on obesity health issues in the female population at the practicum site, which is a clinic located in the Mideast United States. The facility is a comprehensive healthcare clinic that treats approximately 500 to 1,000 patients per year with lower volume during the pandemic and has a new wellness program offered with a focus on addressing obesity and mental health well-being for members. Most wellness program participants are overweight or obese women, and the facility does not follow any clinical practice guidelines for their treatment plans. The goal for this project is to achieve positive outcomes for the female members engaging in the wellness program by providing education to the providers about a CPG that is based on the best available scientific evidence that will address this local and global problem.

This doctoral project is significant for the field of nursing practice through the advanced practice nurses' role in using nursing specialty knowledge and the objectives of the DNP program to achieve better outcomes for patients. This staff education project involved using the Medscape 2019 obesity CPG that provided the evidence-based recommendations for the management of overweight or obesity for the women seen in the wellness program.

This project will improve care with the outcome of alleviating the burden and health complications for women who are overweight or obese. Obesity is a local issue due its chronic nature with significant impact on the patients' quality of life, negative impacts on economic healthcare costs, and disease management challenges for primary care

providers. The obesity issue was observed in the clinical practice site and wellness program participants who are primarily women, are either overweight or obese. Therefore, obesity in women is a practical issue that not only poses a considerable threat to population health but also has economic threats at both the organization and aggregate levels. The summarized literature review highlighted the impact of obesity and the recommended guidelines for the reduction in prevalence. Therefore, identifying the health problem, the target population, and resolving the problem through staff education about a CPG for health promotion and disease prevention will assist in achieving goals for health and quality of life for the female patients seen at the wellness program.

Practice-Focused Question(s)

The purpose of this doctoral project was to develop a staff education project that promotes the use of a CPG by providers who oversee a clinic wellness program, to alleviate the burden and health complications for women who are overweight or obese.

The related practice focused question is: After being presented with education about a CPG to improve care for female adult patients diagnosed as overweight or obese, does knowledge and intent to use increase?

Sources of Evidence

The sources of evidence collected to meet the purpose of this doctoral project, that include the library searches for electronic databases using CINAHL, EBSCO, MEDLINE, ProQuest Nursing and Allied Health Source, Cumulative Index of Nursing and Allied Health, Cochrane Database of Systemic Reviews, Databases of Abstracts of Reviews of Effects (DARE), Centers for Disease Control and Prevention, National Center

for Health Statistics, and other databases with key search terms for obesity in women compared to men, prevalence of obesity in women and men, obesity clinical practice guidelines, obesity treatment guidelines, obesity in primary care, obesity healthrisk assessment and global health.

Additional sources include research from professional organizations such as American Nurses Association, American Association of Nurse Practitioners, American Obesity Treatment Association, Obesity Medicine Association, American Obesity Association, Obesity Society, American Board of Obesity Medicine for review of information on how to train health care professionals on the management of obesity. Experts in the nursing field and other fields such as department of psychology and sociology were consulted to review all the additional factors that could promote or hinder any educational activities while addressing the practice focused question.

Books, encyclopedias, and handbooks on clinical research for the doctor of nursing practice, translation of evidence into nursing and health care practice, and theoretical basis for nursing were utilized for any needed resources. Additional resources in generating and assessing evidence for nursing practice, appraisal, synthesis, and generation of evidence, designing, and managing programs, and nursing informatics were reviewed for assistance in the translation of evidence into practice. All the treatment guidelines were gathered, analyzed, and synthesized for consistency and relevance in addressing the practice focused question in order to follow and update the obesity treatment plan with effective and relevant evidence-based recommendations.

Obesity management is needed for its relevance to nursing practice as literature review showed women of all ages especially the women in their childbearing age are all vulnerable to weight gain. This was supported by the close link existing between body weight for women of all ages and the reproductive health in all females from menarche to menopause and beyond due to the hormonal changes with clinical manifestations of hypothalamic-pituitary-gonadal (HPG) axis dysfunction in females (Kyrou et al., 2018). Additionally, the systematic reviews of randomized control trials (RCTs) according to Hutchesson et al. (2020) identified an increasing volume of research over time undertaken to support women of childbearing age to prevent and treat overweight and obesity and highlighted that pregnancy behavioral interventions have resulted in only modest reductions in gestational weight gain (of about 0.7 kg), and few have improved maternal and child health outcomes. Hutchesson et al. also highlighted the fact that the majority of research has focused on weight management during or after a pregnancy event, demonstrating a research gap to support weight management in the young adult female population in preconception and unrelated to pregnancy to improve their own chronic disease health trajectories, with reproductive and intergenerational health benefits for future planned and unplanned pregnancies.

Additionally, there are compelling calls for future intervention research to focus on the preconception period, as well as future research needed to examine delivery modes and mediums. Optimal intervention duration and intensity, involvement of health care providers, and involvement of under-represented populations will need to be considered. This consideration is to understand effective behavioral interventions, and to ensure that

interventions are scalable and can be implemented within policy and practice, such as through population and primary health care. Ritten and LaManna's (2017) primary aim was to examine the main barriers to effective management of individuals with obesity while considering how concerns might be overcome with emphasis on the role of the nurse practitioner (NP). The author highlighted the need for NPs confident in the value of offering interventions within the primary care practice, and in referring individuals that are not responsive to initial efforts. The need for NPs to examine the behaviors within the entire primary care team to ensure positive attitudes toward patients. The NPs may additionally reflect on their knowledge, intake procedures, interview and examination techniques, and the treatments implemented.

Godwin et al. (2019) added to the premise regarding issues with obesity management due to certain factors that contribute to the difficulties in the disease management, which is on the fact that impairment of the physical activity of daily living, such as walking is a major contributor to a dysmetabolic state driving many prevalent civilization diseases associated with insulin resistance, of which obesity is one. Hence the recommendation to enable people with mobility disability to walk with minimal effort, in the sedentary range to help in obesity management (Godwin et al., 2019).

However, Vittengl (2018) tested the impact of physical impairment to include difficulty with instrumental activities of daily living, social dysfunction such as low social support and high social strain, and emotional eating with the use of food to cope with stress. The study showed that current analysis on physical impairment, social dysfunction, emotional eating each partly-independently accounted for connections

between depression and obesity. Therefore, physical impairment does not directly impact obesity as the specific mechanisms by which identified mediators may bring about changes in depression and obesity were not identifiable.

Also, despite progress in understanding obesity, advancements in the clinical management of the disease, the overall health care system still face challenges with the chronic disease, according to Bray et al. (2018), suggesting the need for adipocyte biology and endocrine review for making treatment decisions, with clinicians' consideration to body fat distribution and individual health risks in addition to body mass index. Bray et al., argued that current data indicate that some (but not all) individuals can achieve modest long-term weight loss with any one of the diets evaluated.

Participants

The originally intended participants were one doctor and a nurse practitioner. After proposal approval and IRB submission, the original clinical practicum site withdrew, and a new site was obtained. The prior intent and literature were still fitting for the new clinical site. A family practice clinic in Virginia with two medical doctors, three physical assistants, and two nurse practitioners was selected as the new clinical site. All the providers were asked to participate in the staff education, however the final attendees were one MD and one PA. It is my intent to further disseminate this education to reach more providers to include MDs, NPs and PAs.

Procedures

Appraisal of the educational materials by content experts was completed. An expert panel is needed for reviewing the educational materials and pre and post education

surveys, to validate content or for any needed revision with recommendations (Polit & Beck, 2012). The expert panel used for this project was one physician and two doctoral prepared nurse practitioners with specialties in public health, adult, women's health, and chronic disease management, from outside the practicum site. Modifications were made to the staff education project based on the expert panel assessment. A pre and post survey (Appendix A & B) was created and reviewed by the expert panel outside the clinical site. The same expert panel that reviewed the education content, was utilized. The survey was used for measuring for improvement in knowledge about the CPG after participants attend the education. A pre and post education survey were needed to measure for improvement in knowledge and intent to follow the CPG. Demographic information was collected with the pre-test in order to describe the sample. A question about intent to use the guideline was added to the post test. No identifying information was collected from the participants. Descriptive statistics were used to describe the sample and were presented in the aggregate. Inferential statistics was used to determine if there is a difference in pre-test and post-test scores.

Protections

The Walden University Institutional Review Boards (IRB) procedures were followed to ensure ethical protection of the participants in the doctoral projects. The signed IRB form A from the organization was obtained and submitted to IRB for approval, which was approved prior to the presentation. The information gathered was stored in a password protected electronic system to ensure the integrity of the evidence is maintained. Unique identifiers were created for the class participant surveys so the pre

and post surveys could be compared to identify increase in knowledge and intent to use the CPG. No identifying information was collected from the participants and data was coded with ID a to ID z for unique identification number for each participant. Information such as the region of the data sources was used and any information identifying the organization's identity was redacted according to the Staff Education Manual (Center for Research Quality, 2019). The clinical site did not require institutional review board (IRB) approval for completion of this project but it was approved by the Walden IRB.

Analysis and Synthesis

The systems used for recording, tracking, and organizing data were word processing programs such as Microsoft Word and Excel Spreadsheet. A statistical book was used for coding and statistical analyses of the evidence. Demographic information was collected with the pre-test in order to describe the sample. No identifying information was collected from the participants and data was coded with ID a to ID z for unique identification number for each participant to avoid errors in duplication from received responses. A "0" code was not utilized as there was no missing values and outliers. The participants ID a-z, age, race, highest education achieved, prior knowledge about obesity and treatment guidelines, any beliefs and attitudes regarding overweight/obesity, and interest in obesity management was in the questionnaire and was also used as variables for analyzing the pre survey. The post education survey was administered and used to measure for improvement in knowledge and intent to follow the CPG. A question about intent to use the guideline was added to the post survey.

Descriptive statistics were used to describe the participants and summarize the data for it to be more comprehensible which will be presented in aggregate (Polit, 2010). Inferential statistics involved the use of data from the sample to make inferences or draw conclusions about whether there is an increase in knowledge and intent to use CPG.

Summary

This section addressed the sources of evidence to support and inform this DNP project. Obesity management is needed for its relevance to nursing practice as literature review showed women of all ages especially the women in their childbearing age are all vulnerable to weight gain. The important and overall message was on adherence in the management of obesity rather than a specific diet or other interventions as the important ingredient in success of obesity management. Adherence could be achieved using appropriate model of framework that will motivate both the patients and the providers offering the recommended treatment plans for obesity management.

Analysis and synthesis of data were addressed. Protection of class participants was described. All the treatment guidelines were gathered, analyzed, and synthesized for consistency and relevance to address the practice focused question in order to follow and update the obesity treatment plan with effective and relevant evidence-based recommendations

In section 4, findings, implications, and recommendations for the project will be discussed. I will also discuss the strengths and limitations of the project.

Section 4: Findings and Recommendations

Introduction

The local problem for the doctoral project is based on obesity health issues in the female population. Obesity management is needed for its relevance to nursing practice as the literature review showed women of all ages especially the women in their childbearing age are all vulnerable to weight gain. This was supported by the close link existing between body weight for women of all ages and the reproductive health in all females from menarche to menopause and beyond (Kyrou et al., 2018). Additionally, Hutchesson et al. (2020) also highlighted the fact that most of the research has focused on weight management during or after a pregnancy event. The findings demonstrated a research gap to support weight management in the young adult female population in preconception and unrelated to pregnancy. The need to achieve the goal of improving their own chronic disease health trajectories, reproductive and intergenerational health benefits for future planned and unplanned pregnancies

The purpose of this doctoral project was to promote the use of a clinical practice guideline (CPG) by providers, to alleviate the burden and health complications for women who are overweight or obese. After proposal approval and initial IRB submission, the original practicum site withdrew, and a new site had to be obtained. Upon approval from the Walden program director, and my chair, instead of providing education to the providers of a wellness program, obesity education was provided to other providers at another primary care family practice clinic. A family practice clinic in Virginia with two medical doctors, three physical assistants, and two nurse practitioners was selected as the

new clinical site. The presentation was scheduled to be conducted during a lunch time due to the providers' busy schedule. The new site still met the criteria to continue progress with this DNP staff education project. Obesity in women is a universal problem seen in healthcare and education about this topic still had the potential to positively impact social change.

The practice focused question was modified slightly and is: After being presented with education about a CPG to improve care for female adult patients diagnosed as overweight or obese, does knowledge and intent to use increase?

The presentation was scheduled to be conducted during a lunch time due to the providers' busy schedule. The presentation was conducted during lunch and lasted 45 minutes. Only two providers were able to attend since the others had to attend to the patients. Attempts were made for additional dates to present to the other providers but could not be accommodated since the facility had scheduled visits with pharmacy sales representatives during their lunch times.

The doctor and physician assistant that attended the education session both verbalized comfort level and preference with using a paper survey instead of the online survey. The pretest survey was given prior to the presentation and each used a unique identifier like ID a to ID e. They were asked to use the same unique identifier for the pre and post survey so scores could be compared for statistical analysis. Education was delivered by PowerPoint presentation (Appendix C) and the education lasted 45 minutes. After the class, the post education survey was completed via paper using the same unique

identifiers. The results were stored on a secured and password protected system and the results were analyzed.

Findings and Implications

To establish the usability of the educational program, the pretest, and the posttest, three experts (one physician and two doctoral-prepared nurse practitioners) were identified and invited to participate in establishing relevance of the materials to be used for this project. The experts were asked to review the presentation and the pretest/posttest, which is like a questionnaire or self-assessment. Revisions were based on their feedback.

The unanticipated limitations or outcomes of the project were in the data collection methods and the education recipients. The originally intended site was a wellness clinic that treats obese female patients. Due to changes affecting the practicum site, they withdrew from the project and a new site was obtained. Five providers were the target participants but only one doctor and one physician assistant were able to receive the education.

Two providers (MD and PA) participated in the obesity education ($n = 2$). The male and female participants male ($n = 1$) and female ($n = 1$) and both are Caucasian Americans ($n = 2$). One of the participants self-reported being 61 and up years of age ($n = 50\%$) and the other participant was between 41-50 years ($n = 50\%$). Half (50%) had a doctorate degree and the other half bachelor's degree ($n = 1$). See Table 1 for demographics.

Table 1*Demographics of the Participants*

	Frequency (<i>n</i>)	Percentage
Gender		
Female	1	50%
Male	1	50%
Age		
18 to 30	0	0.0%
31 to 40	0	0.0%
41 to 50	1	50%
51 to 60	0	0.0%
61 and up	1	50%
Title		
PA	1	50%
MD	1	50%
Education		
Bachelor's degree	1	50%
Doctorate degree	1	50%
Race/Ethnicity		
White	2	100%
Asian	0	0.0%
Black	0	0.0%
Mixed	0	0.0%
Other	0	0.0%

On the pre-education survey, both participants reported not attending obesity training in the last 12 months (100%). Both participants (100%) had not heard of the obesity CPG nor used obesity CPG in their practice ($n=2$). On the use of CPG confidence: Both participants did not agree or disagree with feeling confident about using the CPG (100%). On treatment confidence: The two participants neither agreed or disagreed (100%) feeling confident in treating overweight/obese female patients. On meeting the needs confidence level: Both participants neither agreed nor disagreed

feeling confident about meeting the needs of obese individuals (100%). On beliefs and attitudes: Both participants have mixed beliefs and attitude towards obese individuals (100%). On interest in learning more about overweight/obesity: Both participants have interest in learning more about overweight /obesity management in the female population (100%). On the ability to understand chronic nature of obesity: One participant had good understanding of the importance of obesity treatment as a chronic disease (50%), the other had adequate understanding (50%). On the ability to describe complications and comorbidities: One participant had good understanding (50%); the other participant needed a refresher (50%). On the ability to use the obesity CPG: One participant needed a refresher (50%) and is new to the provider, and the other participant said use of the CPG is new (50%). On the importance of using obesity CPG: Both participants had adequate understanding (100%). On the influence of beliefs and attitudes in obesity treatment: Both participants had adequate understanding (100%). On the learning style: One participant preferred, visual, reading and writing, and auditory (50%), the other participant preferred visual learning (50%). On the pre-education stage: One participant was in the preparation, action, and maintenance stage (50%), the other participant was in the maintenance stage (50%).

On the post education survey: On the use of CPG confidence: One participant neither agreed nor disagreed (50%) and the other participants agreed to feeling confident about using the CPG (50%). On treatment confidence: One participant neither agreed nor disagreed (50%) and the other participant agreed to feeling confident about treating obese individuals (50%). On meeting the needs confidence level: One participant neither agreed

nor disagreed (50%) and the other participant agreed to feeling confident about meeting the needs of obese individuals (50%). On change in the beliefs and attitudes regarding overweight/obesity: One participant had a change (50%), and the other participant had no change (50%). On having more interest in learning more about obesity: Both the participants have more interest (100%). On the understanding of the importance of treating obesity as a chronic disease: Both participants have good understanding (100%).

On the ability to describe complications and comorbidities: Both participants have good understanding (100%). On the ability to describe and use the obesity CPG: Both participants have adequate understanding. On the importance of screening, diagnosing, communicating, and being receptive to the reactions of obesity treatment: Both participants had good understanding (100%). On the influence of beliefs and attitudes in obesity treatment: Both participants had good understanding (100%). On the improvement of knowledge: Both participants reported having an improvement in their knowledge level (100%). On the intent to use or follow the obesity CPG: Both participants reported intent to use the CPG (100%). On the post education survey: Both participants are in the preparation stage (100%).

The implications resulting from the findings include the ability of the two providers to apply the education about female obesity not only to the patients they treat in their practice but also to themselves ($n = 1$ female) and their families using the CPG. The CPG is applicable to all communities, institutions and organizations so although the participants were not the originally intended target group for this education, it was still relevant. The potential implication for positive social change is a little different than

originally intended. With this group of 2 practitioners, there is the opportunity for both to make changes within themselves, their families, and their organizations, which will have overall positive social impact on the female population. The two practitioners reported increase in knowledge and the intent to use the CPG, which will also benefit the female populations that they will be seeing in their current practice

Recommendations

The proposed or recommended solutions that will potentially address the gap-in-practice, as informed by the findings discussed above include the use of the CPG to improve care with the outcome of alleviating the burden and health complications for women who are overweight or obese. The use of CPG in addressing the chronic nature of obesity that has significant impact on the patients' quality of life, negative impacts on economic healthcare costs, and disease management challenges for primary care providers. The CPG from Medscape that could be found on the reference page is free and easily accessible to all healthcare providers to use in making their organizational policies, practice guidelines, protocols, or standards for providing care to overweight or obese individuals seen in their practices. The PowerPoint slides provided in the appendices also provided additional details needed to understand or use the CPG. The proposed secondary recommendations are also highlighted on the strategies for improving the quality and patient self-care goals on the PowerPoint slides and they include the use of motivational interviewing strategies for patient's involvement in their care. The use of the stages of behavioral change to guide the patient's receptiveness and willingness to change. The use of Medicare 5 A interview techniques to ensure adequate

coverage and reimbursement of care services during billing. Finally, the use of chronic care model to ensure maintenance of obesity care as a chronic disease requiring long term care and planning. Additional recommended implementation and evaluation procedures are the use of ADDIE phases and stages of change by all the healthcare providers. The use of the ADDIE model that is also in sufficient detail on the PowerPoint slides will help administrative decision makers not involved in development and planning but can assign and monitor the new and current healthcare providers use of CPG through monthly audits to ensure compliance.

Contribution of the Doctoral Project Team

The doctoral project team responsibilities included appraisal of the educational materials and surveys, as content experts. The project team included one physician and two doctoral- prepared nurse practitioners with specialties in public health, adult, women's health, and chronic disease management, from outside the practicum site. The team graciously provided feedback within two weeks. Each member of the expert panel reviewed the educational materials and pre and post education surveys with feedback, to validate content or for any needed revision with recommendations to ensure usability (Polit & Beck, 2012).

The education materials that were revised based on recommendations were intended to be taught to the practicum clinic staff which includes a supervisory physician and one nurse practitioner that see patients in the wellness program. However, due to changes in the practicum site, the education was provided to family practitioners in a family practice, primary care clinic. This staff education project educated the providers

about a CPG that is essential and needed to equip care providers with a standardized practice, using current evidence and knowledge to deliver safe and effective care to women with obesity. The pre and post survey assisted with measuring for improvement in knowledge and intent to use the CPG after class attendance. The plan is to extend the education beyond the DNP doctoral project education participants with intent to share at nursing professional membership organizations that I currently belong to. I also plan to provide more educational resources and presentations for my nurse practitioner and physician colleagues who work in different settings.

Strengths and Limitations of the Project

The strengths of the doctoral project include information about treatment of overweight and obese adult women seen in clinical practice that allows the transferability of the project to other clinical sites for the improvement in outcomes for women seen in those locations. Although the statistical analysis showed no significant increase in knowledge due to the small sample size, both providers noted improvement in their knowledge about obesity and their intent to use CPG could be considered a strength. The increase in learner confidence level with the use of CPG was a success which will help increase the usability of the CPG in their everyday practices.

A small number of participants in the education was a limitation. This could not be avoided due to the high volume of patients being seen at the clinic and limited time allowed to educate. Another limitation is the change in practicum site which impacted the ability to implement the originally identified changes for the targeted providers and thus the women in the wellness clinic.

The recommendation for future projects related to this topic and using similar methods includes utilizing more clinical sites from different states in order to have a more global impact on female populations. This would improve the confidence level of providers seeing these patients nationwide and can positively impact the economic burden of obesity, thus affecting positive social change.

In section 5, plans to disseminate the project will be discussed. I will also discuss the analysis-of-self in my role as practitioner, scholar, and project manager and professional goals.

Section 5: Dissemination Plan

Sharing the results of my DNP project is one of the dissemination efforts that is important for the improvement of female patient outcomes because it involves improving the confidence level of providers seeing the obese population. By educating providers about the use of the obesity clinical practice guidelines, the theoretical framework to initiate and improve the patients' change process, the use of motivational interviewing skills, as well as in the maintenance of patients' chronic disease management care, the result was more knowledgeable providers.

The first goal is to reach a broader audience, to do this, I have already presented the education to a wellness program in Virginia. I will also present the CPG education to groups of NPs in my clinical circle of influence. I was able to reach some of my peers to through this project and will continue to share the education with others in my peer group.

The second goal within the next three years is to be an active participant in the organizations where I hold membership; the American Nurses Association (ANA), American Association of Nurse Practitioners (AANP), and National Society of Leadership and Success (NSLS). I would like to present my DNP project via lecture and poster presentations to increase awareness of the CPG and encourage its use to positively impact obese females. Based on the nature of the project, the highlighted audiences and venues would be appropriate for dissemination of the project to the broader nursing profession. To achieve positive outcomes, the goal involves dedicating two hours a week in the next 6 months to 1 years for meetings, phone calls, and emails focused on

advocating for the use of evidence-based approaches to include the CPG in clinical practices.

Analysis of Self

Providing an analysis of self in the role as a practitioner involves the evaluation of one's strengths and weakness in the provision of evidence-based care to patients. This is an essential process that doctoral-prepared nurses undertake as scholars, health care practitioners, quality improvement project developers, and nurse leaders in advocating for safety and quality of patient care with resultant positive healthcare outcomes. Self-evaluation was and will continue to be an ongoing process for me because it created opportunities for improvement in my DNP project experience.

As a scholar, the completion of the program and project was challenging due to difficulty locating clinic sites especially when stationed overseas. I thought I had secured a clinical site but as the end of my project neared, the site had changed focus and could no longer support my project. With the loss of my clinical site, I was discouraged and unsure that I would be able to finish this project.

As a project manager, I worked closely with my dissertation chair, and we came up with an alternative plan. I had to realize that this was just a bump in the road but not a roadblock completely. I forged ahead and identified peers and other practitioners that could serve as participants in my education. Upon reflection, I am proud that I was able to overcome this significant obstacle.

Insights gained on the scholarly journey include having a lot of patience and following the Walden recommended resources and guidelines that acted as a guide to

help with the completion of the project. I gained leadership qualities during this program and project, which will help me facilitate collaborative teams throughout the remainder of my career. My achieved leadership skills will help me relate to others by creating a sense of belonging, and collaboration toward team goals. I have learned to be more sincere, common sense-focused, realistic, practical, and to have more patience with others. I will continue to learn and apply the knowledge and skills in my personal and professional life by engaging with others in a variety of ways such as asking questions, learning, and collaborating with other professionals. These skills will help me to positively impact patient and population health outcomes.

Summary

The purpose of the doctoral project started out to improve the care given to the female obese patients enrolled in the wellness program. With the loss of the clinical site, two practitioners at a family practice clinic became the participants of this staff education project. The goal even with the change in participants is to reduce the prevalence of obesity in the women using evidence-based clinical practice guidelines for the effective management of obesity and its complications in clinical practice. This staff education project provided the two practitioners in their healthcare settings the knowledge to implement and disseminate the use of CPG that is essential and needed to deliver safe and effective care to women with obesity. The result was improved knowledge and the intent to use the CPG by the providers seeing these patients. This will positively impact the health outcomes of the female population with obesity.

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Appendix A: Pre-Education Survey

Pre-Education Survey for Introduction of Obesity Clinical Practice Guideline

Participant Unique Identifier:

Please check the age range that is applicable to you

Age Range	18-30	31-40	41-50	51-60	61 and up
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Please check which race is applicable to you

Race	White	Asian	Black	Mixed Race	Other
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Please check the highest education you have achieved

Highest Education	High School	Associate/Bachelors	Masters	Doctorate	Other
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1. Prior to training:

- Have you attended any obesity training in the last 12 months?
Yes No N/A

Comment:

- Have you heard of obesity clinical practice guideline?
Yes No N/A

Comment:

- Have you used obesity clinical practice guideline in your practice
Yes No N/A

Comment:

2. Thinking about your daily work practice, to what extent do you agree or disagree with the following:

a) I feel confident in using obesity clinical practice guideline for overweight/obese female patients.				
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
b) I feel confident about treating overweight/obese female patients.				
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
c) I feel confident in meeting the communication and treatment needs, wishes and preferences of overweight/obese females				
Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree

3. What are your beliefs and attitudes regarding overweight/obesity in the female population?

Positive Negative Mixed None

4. Do you have interest in learning more about overweight/obesity management in the female population?

Yes No Don't know It depends on the topic

5. Using the following scale, please rate your ability as follows:

- **Good:** You have a good standard of skills and/or knowledge. You use these skills and knowledge on a regular basis and feel confident in your ability. No refresher required.
- **Adequate:** Your skills and/or knowledge meets the standard required. You may only use the skills and knowledge from time to time or you may not feel confident in your ability. You and your supervisor may agree that you need to refresh specific knowledge or skills from this selection.
- **Needs refreshing:** You previously had this standard of skills and/or knowledge, but it is no longer current, or you have not used it in your work recently/regularly. You therefore no longer have the skills and/or knowledge to meet the standard. A refresher is required.
- **New to me:** Either you have never worked in a care provider role previously or you haven't previously covered this topic. Training/development is required.

* Please note: This self-assessment is not an assessment of your overall competency. Following the education session, you will reevaluate your knowledge and skills. Your answers will be utilized to determine if there is an increase in knowledge.

Please rate your current ability to:

5.0 Understand the importance of treatment of overweight/obese female patients as a chronic disease							
Good	<input type="checkbox"/>	Adequate	<input type="checkbox"/>	Needs Refreshing	<input type="checkbox"/>	New to me	<input type="checkbox"/>
5.1 Describe the complications of obesity and							
Good	<input type="checkbox"/>	Adequate	<input type="checkbox"/>	Needs Refreshing	<input type="checkbox"/>	New to me	<input type="checkbox"/>
5.2 Describe how to use the obesity clinical practice guideline for treatment of overweight/obese female patients							
Good	<input type="checkbox"/>	Adequate	<input type="checkbox"/>	Needs Refreshing	<input type="checkbox"/>	New to me	<input type="checkbox"/>
5.3 Describe why it is important to screen, diagnose, and be receptive to an individual's reactions to obesity treatment and communicate with them							
Good	<input type="checkbox"/>	Adequate	<input type="checkbox"/>	Needs Refreshing	<input type="checkbox"/>	New to me	<input type="checkbox"/>
5.4 Understand why beliefs and attitudes regarding overweight/obesity can influence communication and treatment adherence with them							
Good	<input type="checkbox"/>	Adequate	<input type="checkbox"/>	Needs Refreshing	<input type="checkbox"/>	New to me	<input type="checkbox"/>

6. What is your Preferred Learning Style?

- **Visual:** Learning by seeing such as charts, graphs, picture aids, and power points
- **Read/Write:** Learning by reading and writing such as books, texts, and note taking
- **Auditory:** Learning by hearing such as listening, verbal instructions, and discussions
- **Kinesthetic:** Learning by doing such as tactile or hands on

Please rate your current learning style:

Visual Read/Write Auditory Kinesthetic

7. What stage of learning about obesity do you consider yourself to be in?
- **Pre-Contemplation** :No intention to hear about obesity changes
 - **Contemplation**: Aware a problem with obesity in the females exists but with no commitment to action
 - **Preparation**: Intent of taking action to address the problem with obesity in females
 - **Action**: Active modification of the needed changes in obesity in the female population
 - **Maintenance**: Sustaining the changes regarding obesity or replacing the old with newchanges
 - **Relapse**: Falling back to the old obesity treatment plans for the female population

Please rate your current level:

Precontemplation	Contemplation	Preparation	Action	Maintenance	Relapse
------------------	---------------	-------------	--------	-------------	---------

Appendix B: Post-Education Survey

Post-Education Survey After Education on Obesity Clinical Practice Guideline

Participant Unique Identifier:

1. Thinking about your daily work practice, to what extent do you agree or disagree with the following:

e) I feel confident in using obesity clinical practice guideline for overweight/obese female patients.				
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
b) I feel confident about treating overweight/obese female patients.				
Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
c) I feel confident in meeting the communication and treatment needs, wishes and preferences of overweight/obese females				
Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree

2. Have your beliefs and attitudes regarding overweight/obesity in the female population changed?

Yes No Not sure NA

3. Do you now have interest in learning more about overweight/obesity management in the female population?

Yes No Don't know It depends on the topic

4. Using the following scale, please rate your ability as follows:

- **Good:** You have a good standard of skills and/or knowledge. You use these skills and knowledge on a regular basis and feel confident in your ability. No refresher required.
- **Adequate:** Your skills and/or knowledge meets the standard required. You may only use the skills and knowledge from time to time or you may not feel confident in your ability. You and your supervisor may agree that you need to refresh specific knowledge or skills from this selection.
- **Excellent:** You previously had this standard of skills and/or knowledge, but it is no

longer current, or you have not used it in your work recently/regularly. You therefore have acquired the skills and/or knowledge to meet the standard. The education was helpful..

- **No Change:** Either you have never worked in a care provider role previously or you haven't previously covered this topic. Training/development did not make a difference in your knowledge.

* Please note: This self-assessment is not an assessment of your overall competency. Following the education session, you will reevaluate your knowledge and skills. Your answers will be utilized to determine if there is an increase in knowledge.

Please rate your current ability to:

4.0 Understand the importance of treatment of overweight/obese female patients as a chronic disease	Good <input type="checkbox"/>	Adequate <input type="checkbox"/>	Needs Refreshing <input type="checkbox"/>	New to me <input type="checkbox"/>
4.1 Describe the complications of obesity and	Good <input type="checkbox"/>	Adequate <input type="checkbox"/>	Needs Refreshing <input type="checkbox"/>	New to me <input type="checkbox"/>
4.2 Describe how to use the obesity clinical practice guideline for treatment of overweight/obese female patients	Good <input type="checkbox"/>	Adequate <input type="checkbox"/>	Needs Refreshing <input type="checkbox"/>	New to me <input type="checkbox"/>
4.3 Describe why it is important to screen, diagnose, and be receptive to an individual's reactions to obesity treatment and communicate with them	Good <input type="checkbox"/>	Adequate <input type="checkbox"/>	Needs Refreshing <input type="checkbox"/>	New to me <input type="checkbox"/>
4.4 Understand why beliefs and attitudes regarding overweight/obesity can influence communication and treatment adherence with them	Good <input type="checkbox"/>	Adequate <input type="checkbox"/>	Needs Refreshing <input type="checkbox"/>	New to me <input type="checkbox"/>

5. Do you think there is an improvement in your knowledge about the use of obesity treatment clinical practice guideline?

Yes

No

Don't know

No interest

6. Do you intend to use or follow the obesity clinical practice guideline?

Yes No Don't know No interest

7. What stage of learning about obesity do you consider yourself to be in after the education?

- **Pre-Contemplation** :No intention to hear about obesity changes
- **Contemplation**: Aware a problem with obesity in the females exists but with no commitment to action
- **Preparation**: Intent of taking action to address the problem with obesity in females
- **Action**: Active modification of the needed changes in obesity in the female population
- **Maintenance**: Sustaining the changes regarding obesity or replacing the old with newchanges
- **Relapse**: Falling back to the old obesity treatment plans for the female population

Please rate your current level:

Precontemplation	Contemplation	Preparation	Action	Maintenance	Relapse
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Appendix C: Virtual Obesity Education Presentation

Obesity Clinical Practice Guideline Presentation

CHIZIMAKO EZE, MSNFP-BC, RN

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Issues Regarding the Prevalence of Obesity

- ▶ The Global Burden of Disease (GBD) reports...
- ▶ 1. Prevalence of global obesity epidemic worsening
 - ▶ Threatening of physical/economic health
- ▶ 2. Body-mass index (BMI) on population
 - ▶ No growth in level ageadjusted death and disability
- ▶ 3. Increased prevalence and decreased mortality
 - ▶ More years dealing with obesity issues

Gregg and Shaw (2017)

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Barriers to Overcoming Obesity Prevalence

- ▶ Potential hinders of obesity management include
 - ❖ Divergence in perceptions and attitudes below
 - ❖ 1. Attitudes of People with obesity (PwO)
 - ❖ 2. Attitudes of Health care providers (HCPs)
 - ❖ 3. Attitudes of Employer representatives (ERs)
 - ❖ Self-directed and medical management solutions

Kaplan et al. (2018)

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Strategies for Resolving Barriers to Obesity Management

- ▶ Collaborative efforts among PwO, HCPs, and Ers
- ▶ Implementation with modified processes below
 - ❖ 1. Further educating HCPs, PwO, and Ers
 - ❖ 2. Informing HCPs on real barriers for PwO
 - ❖ 3. Encouraging HCPs to schedule follow-up visits
 - ❖ 4. HCPs understanding among Ers programs effectiveness

Kaplan et al. (2018)



Improving the Quality and Patient Self Care Goal

- ▶ Modification and utilization of strategies below
 - ❖ 1. Foundational approaches to management/treatment of obesity
 - ❖ 2. Patients genetic, physiologic, and environmental factors
 - ❖ 3. HCPs patient screening /workup for complications/co morbidities
 - ❖ 4. Patient conversations about their weight using
 - ❖ Motivational interviewing strategies
 - ❖ Prochaska and Diclementi's change stages model
 - ❖ 5A's framework Medicare Intensive Behavioral Therapy (IBT)
 - ❖ 5. Plan care with chronic care model
 - ❖ 6. Addressing the issues with billing procedures

Ritten and LaManna (2017)



Relationship Building with Motivational Interviewing

- ▶ The interviewing techniques:
 - ❖ Asking permission to speak to patients about their weight
 - ❖ Asking open-ended questions to fostering a discussion
 - ❖ Reflective listening by interpreting of the patients' concerns
 - ❖ Elicitation of a change talk to avoid resistance from the patient
 - ❖ Affirmation by recognizing the efforts and progress made by the patient

Beck (2016)



Prochaska's Model of Change

- ▶ Verification of the Patients Stage foScreening, Diagnosis, and Treatment Plan
 - ❖ Precontemplation stageawareness of the need to change
 - ❖ Contemplation stage-recognize the need forchange
 - ❖ Preparation for action stageverify intend to change
 - ❖ Action stage-have plans already with need for review
 - ❖ Maintenance stage-reinforcement and sustenance

McEwin and Wills (2014)

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Use of 5A's Framework from Medicare Behavioral Intensive Therapy

- ▶ Use by primary providers to improve patient motivation and behavioral change
 - ❖ Ask-get permission to ask and assess related risks and obesity complications
 - ❖ Advice- individuals about their health risks and treatment options
 - ❖ Agree-collaboration on their health outcomes and treatment goals
 - ❖ Assist-help individuals to achieve their agreed-upon goals
 - ❖ Arrange-the follow-ups needed for achieving goal

Ritten & LaManna (2017)

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Use of Chronic Care Model for Obesity Theoretical Framework

- ▶ Useful in the management of overweight and obesity in clinical practice
 - ❖ Self-management support -Patient encouragement
 - ❖ Clinical information systems -Facilitate information exchange
 - ❖ Delivery system design -Staff involvement and coordination
 - ❖ Decision support-Use of CPG with patients preference
 - ❖ Health system/Health organization -Use of CCM
 - ❖ Community resources -Utilization of resources

Grover and Joshi (2015)

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Medscape 2019 Obesity Clinical Practice Guideline

- ▶ Multifactorial Implementation-comprehensive disease management
- ❖ Screening, diagnosis, review of weight related complications
- ❖ Review and mutual agreement on treatment plan
- ❖ Review of long term measures with follow up appointment
- ❖ Referrals to other specialist
- ❖ Offer bariatric surgery for treatment failures > 35 kg/m²

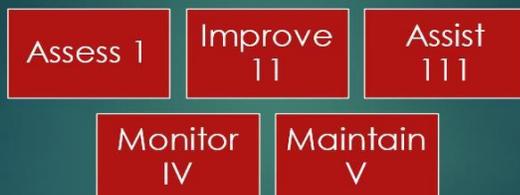
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Practical Use of Guideline in the Management of Adult Obesity

- ▶ Clinical evaluation, diagnosis, discussion, preferences
- ❖ Interviewing and communication of treatment options
- ❖ Setting realistic calendar goals with the patient
- ❖ First treatment goal is to stabilize body weight
- ❖ Initiating obesity management
- ❖ Communicating the risks of weight cycling

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ADDIE Phases and Stages of Change



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Assess with ADDIE Phase 1: Analyses and Assessment Phase

- ▶ Baseline knowledge, skill, and learning goals, preferred learning style through survey
- ❖ Patient Pre-Screening eg weight, BMI, waist circumference, comorbidities
- ❖ Patient Interviews using the 5A's
- ❖ Patient Motivation
- ❖ Mutual Treatment Plan
- ❖ Patient Discussion
- ❖ Support and Resources

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Improve with ADDIE Phase II: Improvement and Contemplation Phase

- ▶ Evaluation with Prochaska's Change Stage Introduction of CPG
- ❖ Motivation Stages and Practice use of 5As
- ❖ Obesity Treatment Options
- ❖ Communication of Treatment Options
- ❖ Benefits of Treatment Options
- ❖ Comorbidities for Effective Management

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Assist with ADDIE Phase III: Preparation and Assistance Phase

- ▶ Practice in the use of CPG
- ❖ Reevaluation of Change Stage
- ❖ Patient Treatment Plan
- ❖ Patient Preferences
- ❖ Treatment Plans Evaluation
- ❖ Physical Activity
- ❖ Nutrition
- ❖ Pharmacotherapy

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Monitor with ADDIE Phase IV: Implementation and Action Phase

- ▶ Learner engagement and demonstration in the use of CPG
- ❖ Re-evaluation of Change Stage
- ❖ Treatment plan Evaluation
- ❖ Outcome Evaluationeg weight, BMI, waist circumference
- ❖ Specialist Referrals
- ❖ Psychotherapy
- ❖ Addressing comorbidities

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Maintenance with ADDIE Phase V: Evaluating and Maintenance Phase

- ▶ Demonstrating the use of CPG in clinical practice
- ❖ Re-evaluation of Change Stage
- ❖ Treatment plan Evaluation
- ❖ Outcome Evaluation
- ❖ Weight Cycling
- ❖ Hunger management
- ❖ Self-management

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Summary

- ▶ The need for use of obesity CPG
- ❖ Barriers to overcoming the challenges in obesity management
- ❖ Strategies in addressing the barriers
- ❖ Goal of using the CPG in improving obesity care in females
- ❖ Practical use of CPG
- ❖ Following the Stages of Change

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Appendix D: Pretest Questions

Participants' Answers to Pretest Questions

	Q1. a	Q1. b	Q1. c	Q2. a	Q2. b	Q2. c	Q3	Q4	Q5. 0	Q5. 1	Q5. 2	Q5. 3	Q5. 4	Q6	Q7
	Pre	Pre	Pre	Pre	Pre	Pre	Pre	Pre	Pre	Pre	Pre	Pre	Pre	Pre	Pre
Participant 1	N	N	N	N	N	N	M	Y	A	NF	NF	A	A	V	M
Participant 2	N	N	N	N	N	N	M	Y	G	G	N	A	A	R/ W	P
# of participants and answers	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Question: 1.a: Not attending obesity training in past 12 months: Y for Yes and N for No

Question: 1.b: Had heard of the obesity CPG: Y for Yes and N for No

Question: 1.c: Used the CPG: Y for Yes and N for No

Question: 2.a: Confidence in the use of CPG: SA: Strongly Agree, A: Agree, D: Disagree, N: Neither agree nor Disagree

Question: 2.b: Confidence in treating obese women: SA: Strongly Agree, A: Agree, D: Disagree, N: Neither agree nor Disagree

Question: 2.c: Confidence in meeting the needs of obese women: SA: Strongly Agree, A: Agree, D: Disagree, N: Neither agree nor Disagree

Question: 3: On Participants' beliefs and attitudes: Positive: P, Mixed: M, Negative: N

Question: 4: Interest in learning more about overweight/obesity management in the female population: Y for Yes and N for No

Question: 5.0: On the ability to understand chronic nature of obesity: Adequate: A, Good: G, Needs Refreshing: NF, and New to Me: N

Question: 5.1 : On the ability to describe complications and comorbidities: Adequate: A, Good: G, Needs Refreshing: NF, and New to Me: N

Question: 5.2 : On the ability to use obesity CPG: Adequate: A, Good: G, Needs Refreshing: NF, and New to Me: N

Question: 5.3 : On the importance of using obesity CPG: Adequate: A, Good: G, Needs Refreshing: NF, and New to Me: N

Question: 5.4 : On the influence of beliefs and attitudes in obesity treatment: Adequate: A, Good: G, Needs Refreshing: NF, and New to Me: N

Question: 6 : On the learning style: Visual: V, Read/Write: R/W

Question: 7 : On the pre-education stage: Precontemplation PC, Contemplation: C, Preparation: P, Action: A, Maintenance M, Relapse: R

Appendix E: Post Questions

Participants' Answers to Posttest Questions

	Q1.a	Q1.b	Q1.c	Q2	Q3	Q4.0	Q4.1	Q4.2	Q4.3	Q4.4	Q5	Q6	Q7
	Post												
Participant 1	A	A	A	Y	Y	G	G	A	G	G	Y	Y	P
Participant 2	N	N	N	N	Y	G	G	A	G	G	Y	Y	P
# of participants and answers	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %

Question: 1.a: Confidence in the use of CPG: SA: Strongly Agree, A: Agree, D: Disagree, N: Neither agree nor Disagree

Question: 1.b: On treatment confidence: SA: Strongly Agree, A: Agree, D: Disagree, N: Neither agree nor Disagree

Question: 1.c: On meeting the needs confidence level: SA: Strongly Agree, A: Agree, D: Disagree, N: Neither agree nor Disagree

Question: 2: Change in beliefs and attitudes regarding overweight/obesity in the female population: No: N, Yes: Y

Question: 3: On having more interest in learning more about obesity: No: N, Yes: Y

Question: 4.0: On the understanding of the importance of treating obesity as a chronic disease: Excellent: E, Good G. Adequate: A

Question: 4.1: On the ability to describe complications and comorbidities: Excellent: E, Good G. Adequate: A

Question: 4.2: On the ability to describe and use the obesity CPG: : Excellent: E, Good G. Adequate: A

Question: 4.3: On the importance of screening, diagnosing, communicating, and being receptive to the reactions of obesity treatment: Excellent: E, Good G. Adequate: A

Question: 4.4: On the influence of beliefs and attitudes in obesity treatment: Excellent: E, Good G. Adequate: A

Question: 5: On the improvement of knowledge: No: N, Yes: Y

Question: 6: On the intent to use or follow the obesity CPG: No: N, Yes: Y

Question: 7: On the post education stage: Precontemplation PC, Contemplation: C, Preparation: P, Action: A, Maintenance M, Relapse: R