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# Staff Education for Obesity and an Evidence- Based Checklist to Manage Obesity

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This is to certify that the doctoral study by

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Abstract

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## Abstract

Obesity is a global problem that affects individuals of all ages. It results in a myriad of adverse health effects for children and adults. It is a preventable condition that can lead to a host of physical and psychological health conditions. Despite numerous attempts to decrease the incidence and prevalence of obesity, it continues to be a persistent problem. Efforts to decrease its incidence and prevalence are thus warranted within the nursing profession. Obesity management is inconsistent in clinical practice. This project aimed to deliver an education program to the staff of a pediatric clinic who serves many obese clients. It also involved the introduction of a checklist that can be used in the clinical setting to remind staff to deliver standardized care to obese clients. The theory of weight management was the principal guide for this project. The practice-focused questions were to determine if the educational program would increase the staff's knowledge on the problem of obesity and spark willingness to trial the checklist in practice. Staff knowledge was assessed using a pretest-posttest that was delivered prior to and within two weeks after program implementation, and the program's effectiveness was assessed using an evaluation tool developed by the author. Eleven staff members of the clinic participated in the program. The t-test results indicated a statistically significant increase in staff knowledge postimplementation, $t(10) = -3.03$, $p = .013$; and based on feedback, the staff demonstrated a willingness to trial the checklist in practice. These results suggest that staffs' awareness of a clinical problem can facilitate the desire to embrace a change that holds the potential to improve the health of obese clients, a positive social change.

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# Dedication

This project is dedicated to my late mother who succumbed to the adverse consequences of obesity and departed this life on August 25, 2013. Hopefully, this project will be beneficial in instituting change that will lead to the effective management of obesity in its early stages, and hence contribute to the reduction of obesity rates, as well as a decline in the adverse medical conditions associated with obesity in vulnerable populations and communities.

## Acknowledgments

It is with sincere gratitude that I thank all of the faculty members of Walden University who have assisted me during this educational journey. I will like to especially thank my committee chair Dr. Amy Swango-Wilson for her dedicated time, mentorship, advice, and encouragement in guiding me through this process; as well as Dr. Tracy Wright and Dr. Janice Long for their valid advice during the development of my Prospectus. I am also grateful to Dr. Joan Hahn for her advice, help and guidance as I developed my proposal and edited my final paper. In addition, this journey would not have been completed without the mentorship of my practicum preceptor Dr. Judith Urgo, and I would also like to extend my sincerest thanks to her. To my friends and colleagues who have offered advice, especially Dr. Helena Correia and Mrs. Elizabeth Dodd, a heartfelt "thank you" to you all. Special thanks to the staff and administrators who made this project a reality. Lastly, but by no means least, I would like to thank my family for their unrelenting support. To my husband Lenroy, your patience, belief in me even when I doubted myself, support and understanding over the last three years is deserving of a medal and I wholly share this accomplishment with you; and to my sister Ann and niece Roxey, your support and encouragement has also been duly noted and well appreciated.

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Section 1: Nature of the Project

## Introduction

Obesity is a global pandemic that transcends age, ethnicity, and gender. In the United States as many as 13.7 million children are obese (Imoisili et al., 2019) and World Health Organization (WHO) has indicated that more than 42 million children under the age of five years were overweight and obese (Koren et al., 2019). In addition, approximately one-third of U.S. adults fall victim to obesity (Winik & Bonham, 2018) and global estimates inform that as of 2016, 650 million adults over 18 years of age were obese (WHO, 2018). Researchers have also discussed the pervasive nature of obesity. Although there are disparities in obesity prevalence among different ethnic groups, the incidence of obesity across individuals of all ethnic backgrounds is evident. Currently, 48.1% of Blacks, 42.5% of Hispanics and 34.5% of Whites in the United States are obese (Newlin Lew et al., 2018). It is also clear that obesity does not discriminate on account of gender. In recent years, there has been an increasing trend in obesity among women, and a consistent elevated trend among men (Hernandez et al., 2017). Researchers have projected that by 2030 over 1.12 billion individuals worldwide will be overweight or obese (Mazloomy-Mahmoodabad et al., 2017). Thus, the global nature of the problem is discernible, and its persistence makes it a serious public health concern.

Within a small suburban private pediatric clinic in the Northern United States, a substantial number of clients are affected by obesity. However, the management of the obesity problem is suboptimal, and the problem persists among this population without improvement. Therefore, the aim of this project was to develop a staff education program

on obesity and design a checklist that focused on obesity management guidelines in primary care practice, educate the staff on the problem of obesity and the use of the checklist, and obtain staff feedback on the feasibility of its use in the clinical setting. The use of a checklist that highlights the recommended guidelines in the management of obesity can potentially contribute to an improvement in the management of obesity within this population. Education on the topic could also raise awareness of the problem, and thus prompt efforts to address it. Therefore, the project will reignite providers' awareness of the problem, remind them of the need to adequately address the problem, and can potentially lead to better and more effective treatment of obesity. Such actions could eventually lead to a reduction in obesity incidence and prevalence within that population and community. Consequently, individual, national, and global health could be improved if the incidence and prevalence of obesity are halted.

## Problem Statement

Pediatric obesity is defined as a body mass index (BMI) at or above the 95$^{th}$ percentile for age and sex (Centers for Disease Control and Prevention (CDC), 2020a; Imoisili et al., 2019) and in adults, it is defined as a BMI at or above 30 (CDC, 2020b). A high weight for length in infancy predisposes a child to obesity later in life (Hessler, 2015). Therefore, the tendency to become obese exist as early as infancy. In the United States, researchers have indicated that 8.1 % of infants and toddlers were classified as having a high weight for length in 2012 (Ogden et al., 2014; Resende Camargos et al., 2016) and 18% of children aged 2 to 5 years are obese (Busch et al., 2018). Once obesity

is diagnosed, it often persists and increases the tendency for lifelong health issues (Smego et al., 2017). An obese child often becomes an obese adult who carries an increased risk of adverse health conditions and premature morbidity and mortality (Di Cesare et al., 2019; Norman et al., 2015). Researchers have shown that children who were overweight by kindergarten had a four-fold greater risk of being obese by adolescence (Smego et al., 2017). In the Borgalusa Heart Study, in all children with a BMI greater than or equal to the 99$^{th}$ percentile, obesity was carried into adulthood (Smego et al., 2017). The adverse effects of obesity are overwhelming. There are physical, psychological, and economic consequences of obesity. The risk of acquiring chronic diseases such as Type 2 diabetes, cardiovascular disease, cancer, and hypertension increases with obesity (Knol et al., 2016; Powell et al., 2018). Furthermore, psychological problems such as depression and low self-esteem are more likely among obese persons (Powel et al., 2018). In a recent systematic review and meta-analysis, researchers concluded that obese children and adolescents had a higher risk for major depressive disorders (Rao et al., 2020). Aside from the physical and psychological burdens of obesity, it incurs heavy economic costs. It is estimated that the cost of treating obesity-related illness in the United States is close to 200 billion dollars (Sompayrac & Trundle, 2018). Since obesity is a persistent health problem that poses detrimental health effects to individuals of all ages, efforts to manage this problem effectively and successfully are warranted.

## Purpose Statement

In The United States, strategies proposed to help manage this pandemic have focused on weight management programs that include physical activity and healthy nutrition in various settings. The United States Preventative Services Task Force (USPSTF) recommends that all children aged 6 years and older should be screened for obesity, and if obese they should be referred to a comprehensive, intensive behavioral intervention to help improve their weight status (Imoisili et al., 2019). For adults, The American Heart Association, The American College of Cardiologists, and The Obesity Society (AHA/ACC/TOS) also emphasize comprehensive lifestyle intervention as the cornerstone of obesity management, with adjunctive therapies reserved for high risk and resistant cases (Ryan & Kahan, 2018). In addition, recognizing the pervasiveness of the obesity epidemic, numerous programs across the United States have focused on addressing obesity. The "5-2-1-0 Let's Go" program is one such program developed by the Barbara Bush Children's Hospital at Maine Medical Center. The program aims to promote healthy eating and physical activity for children from birth to 18 years to help prevent obesity (Early & Cheffer, 2019). It encourages eating five or more fruits or vegetables, two hours or less of screen time, one hour or more of physical activity, and zero sugary drinks and more water daily (Early & Cheffer, 2019; Hessler, 2015). This program has been recommended by the CDC as an effective initiative for fighting obesity (Hessler, 2015). The Michelle Obama's "Let's Move" initiative was another attempt to combat obesity with the goal of solving pediatric obesity within a generation (Let's

Move, 2021). The program focuses on creating a healthier start for children, empowering parents and caregivers, providing healthy food in schools, improving access to healthy, affordable foods, and increasing physical activity (Let's Move, 2021). Despite these efforts, obesity continues to be a significant health care issue and predisposes one to a myriad of adverse health conditions. Researchers have demonstrated that effective weight loss can be achieved through diet, physical activity, and behavior and lifestyle modification (Cohen et al., 2016; Roberts et al., 2015). As a result, guidelines for the management of obesity have focused on the implementation of these therapies. They also suggest referral to trained interventionists such as dieticians, psychologists, exercise specialists, and health counselors (Ritten, 2017).

Primary care providers are in an ideal position to identify and manage obesity in its early stages because of the frequency of visits and the ongoing rapport with their clients. It has been reported that even minimal discussion of weight by providers can positively affect a patient's behavior (Hite et al., 2019). However, several barriers hinder a provider's full compliance with the recommended guidelines for managing obesity. Among them are time and the lack of knowledge (Mazza et al., 2019; Roberts et al., 2015). The management of obesity in a busy office practice could be challenging for primary care physicians as they are faced with limited time to attend to a patient's complex problems (Ryan & Kahan, 2018). Therefore, screening for and appropriate management of obesity could be easily missed. Researchers have shown that healthcare providers do not consistently address the issue of obesity with their patients (Hite et al.,

2019), and current statistics inform that the screening rates for obesity in the primary care setting are merely 30% (Fitzpatrick et al., 2016). Thus, the objective of this project was to develop a checklist that focuses on obesity management guidelines in primary care practice, design and implement an education program on obesity, educate staff members in a primary care setting on obesity and the use of the checklist, evaluate for an increase in the staff's knowledge on obesity using a pre-and post- test design after staff education, and obtain feedback on the feasibility of the checklist's use in the clinical setting. The practice-focused questions to be answered were as follows: After receiving an educational program on the problem of obesity and its management guidelines will the staff of a pediatric clinic demonstrate an improvement in knowledge on obesity and the guidelines for managing the problem?" and "Will staff education on an evidence-based checklist to manage obesity promote staff's support for its use in the clinical setting? The purpose of these questions was to determine whether education on obesity and its management guidelines will increase the staff's knowledge on the subject; and after staff education on the use of an evidence-based checklist will the staff consider it to be favorable for use in the clinical setting. Despite the presence of established guidelines for obesity management it continues to be a persistent problem in society today. Hence, increasing the staff's knowledge on the problem of obesity, improvement in screening for obesity, and encouraging the utilization of recommended management strategies for obesity in the primary care setting was the main aim of this project. The use of a checklist

will remind providers to adhere to guidelines as they deliver care in a fast-paced primary care setting.

## Nature of the Doctoral Project

This project aimed to improve the quality of care delivered to obese clients in a primary care setting by staff education on the problem of obesity and the development of a checklist that can be used to encourage recommended guidelines in managing obesity. The use of checklists in the surgical arena has led to improvement in the safe delivery of care and positive patient outcomes (Noah et al., 2019; Sewell et al., 2019). The global adoption of the surgical checklist resulted in decreased morbidity and mortality through improved team communication and increased awareness of the minimum standards of care (Sewell et al., 2019). Researchers have demonstrated the positive influence of checklists in improving care in the surgical setting (Abbott et al., 2018; Remiszweski & Bidra, 2019; Smith et al., 2015). However, evidence addressing the use of a checklist to guide and promote the use of the recommended guidelines for obesity management in the primary care setting is lacking. Considering the persistence of the obesity problem globally, innovative strategies to manage the problem are needed. Hence, this project combined the development of a checklist based on current evidence and an educational program to promote evidence-based care in the primary care setting.

## Significance

The problem of obesity is a major public health concern. It poses a threat to individual and population health. It is a precursor to a host of chronic illnesses (Ryan &

Kahan, 2018; Powell et al., 2018) and the prevalence rates of the disease continue to rise globally (Durrer Schutz et al., 2019). As a result, it incurs an economic burden to society as healthcare costs for the treatment of these obesity-related comorbidities are alarming. In the United States the annual healthcare costs for treating diseases related to this problem amount to billions of dollars (Sompayrac & Trundle, 2018). The improvement of obesity management in primary care settings is vital to reduce these comorbidities, decrease healthcare costs, and improve the patient's health and quality of life (Durrer Schutz et al., 2019). To date, no country has been successful in reversing the prevalence of obesity (Ryan & Kahan, 2018).

Primary care providers are the first point of contact as patients seek treatment and guidance for obesity (Durrer Schutz et al., 2019) or other health problems. Therefore, adequate management of obesity in the primary care setting holds promise towards halting the prevalence of the disease. If obesity rates decline, individuals of all ethnic backgrounds, ages, and gender stand to benefit. They will boast an improved health status, having decreased their risks of falling victims to the comorbidities of the problem. National and global communities will be healthier and regulatory bodies such as WHO and CDC will benefit through the attainment of established public health goals. Moreover, society will benefit economically as the cost of treating obesity-related diseases will decrease. Ultimately, the quality of life for all will be improved.

Improvement in the quality of life for obese clients can only be achieved if the disease is managed effectively. Yet less than half of obese clients are informed of their

weight status or receive counseling on their weight in primary care settings (Hite et al., 2019). Therefore, education on obesity management guidelines and a structured reminder in the form of a checklist may help foster effective identification and management of the problem. Furthermore, it will promote the translation of evidence-based care into clinical practice. If this checklist proves to be feasible for use in the local practice setting, it can be tested in other similar practice settings to evaluate its potential for improving the management of obesity. A decline in obesity prevalence through effective management points to positive social change within the context of health and wellness. This would be significant for the global society as it holds the potential for improving population health and decreasing the incidence of chronic diseases. It will also be significant in terms of nursing practice, as the profession will be afforded an opportunity to solidify health promotion and disease prevention, essential components within the nursing paradigm.

## Summary

Individuals of all ages, races, and gender fall victim to the problem of obesity. It is a global pandemic that imposes detrimental and lifelong adverse health effects on individuals, and economic burdens on society. Consequently, efforts to curtail this problem have become and still remain a top priority in the healthcare arena. The need to arrive at sustainable measures to curtail the problem still exists despite ongoing efforts. If the rising obesity trend is reversed, it will lead to positive social change as individuals will be healthier and chronic diseases will lessen. It was the aim of this project to raise awareness of the problem to help improve the management of obesity in the primary care

setting. It involved a collaborative effort by health care workers to improve the delivery of care to obese clients. Therefore, it can serve as an initial step in the quest to halt the prevalence of obesity. The long-term goal would be to improve the health of a substantial proportion of the nation's and world's population.

Section 2: Background and Context

## Introduction

There is no doubt that the problem of obesity has elicited national and global public health concerns. It is a complex problem that requires a multifaceted approach in order to arrive at solutions to this problem (CDC, 2020c). Obesity is blind to color, class, or creed and has become a pervasive disease with catastrophic outcomes. Recent statistics comparing obesity rates from 1999-2000 and 2017 to 2018 reveal that obesity rates in children 6 through 11 years increased from 15.8 % to 19 % and in adolescents aged 12 to 19 years, it increased from 16% to 20.9% (Ogden et al., 2020). Obesity rates overall for men during the same period increased from 27.5% to 43%, and for women, the rates increased from 33.4% to 41.9% (Ogden et al., 2020). Judging from these statistics, the need to arrive at new and innovative ways to address this longstanding problem is obvious. Amidst the competing demands of complex clinical cases in busy practice environments, a modest tool such as a checklist holds potential to improve performance (White et al., 2016). It can serve as a trigger for details that could otherwise be lost and is well suited in practice settings prone to variability in the delivery of care (White et al. 2016). Hence, the development of a checklist on obesity management and the education of staff in the practice environment on the problem of obesity and the use of the checklist constitute this project's focus. The practice-focused question to be answered was whether these actions will increase staff's knowledge on obesity and elicit staff's willingness to

use this checklist for the purpose of improving the management of obesity in the practice setting.

The goal of basic science is the acquisition of knowledge and applied sciences use this knowledge for practical purposes (McEwen & Wills, 2019). As an applied science, the quest for new knowledge within the nursing profession is necessary to arrive at best practices for care delivery and to advance the profession as a science. This is often achieved through scholarly inquiry that is guided by concepts, theories, and or theoretical models and frameworks. The ensuing discussion will focus on concepts, models, and theories that served as a guide to this scholarly project. In addition, the project's relevance to nursing practice, and the local background and context will be reviewed. In conclusion, the student's role in the project will be outlined.

## Concept, Models, and Theories

Conceptual frameworks, models, and theories guide empirical inquiry and are developed from concepts that are central to the inquiry (White et al., 2021). They guide the research process and contribute to knowledge advancement (McEwen & Wills, 2019). Middle range theories, also referred to as practice or situation-specific theories, are better suited to guide inquiries within the practice setting (McEwen & Wills, 2019). This is because they consist of fewer, concrete concepts that can be operationally defined and tested (McEwen & Wills, 2019). This project focused on weight management, the education of staff on obesity, and a checklist designed specifically to promote effective weight management strategies in the primary care setting. Concepts relevant to weight

management and changes in practice were useful in guiding this project. The effective management of obesity in the primary care setting relies on familiarity with concepts related to weight management and a structured approach to the implementation of change. It also involves motivation for change. The theory of weight management and the Russwurm and Larrabee's model for evidence-based practice (EBP) change was selected to guide this project. The former addresses concepts related to weight management and the latter was developed to facilitate EBP changes.

The theory of weight management is a middle-range theory that was deduced from Orem's theory of self-care and the evidence surrounding weight management (Pickett et al., 2014). The main concepts in the theory are weight management behaviors (WMBs), weight management agency (WMA), weight contextual factors (WCFs), and weight control (WC) (Pickett et al., 2014). Weight management behavior (WMB) is a concept derived from Orem's concept of self-care, and WMBs are defined as the behaviors necessary for maintaining a healthy weight. WMBs are physical activity and eating behaviors (Pickett et al., 2014). These are the same behaviors that are key components of a comprehensive lifestyle intervention proposed for the management of obese persons (Ryan & Kahan, 2018) and thus must be considered when educating staff on the problem and designing an evidence-based checklist for managing obesity. The concept of WMA evolved from Orem's theoretical concept of self-care agency and represents one's ability to partake in WMBs in order to control one's weight (Pickett et al., 2014). As a result, this concept focuses on beliefs, motivation, and knowledge

associated with controlling and managing weight (Picket et al., 2014). WCF are internal and external factors that influence weight management such as age, sex, gender, ethnicity, socioeconomic status, environmental and social factors; and WC is conceived as health and is the outcome of WMBs which is determined by normal measures of weight, BMI and central adiposity (Pickett et al., 2014). The concepts in this theory are interrelated and point to the achievement of optimal health if all concepts are adequately realized. An educational program that details the magnitude of the obesity problem, the factors associated with obesity prevalence, and the guidelines for effective treatment, coupled with a structured reminder to use these guidelines when managing obesity provides pertinent knowledge and motivation for providers and their staff to manage obesity effectively. In essence, it will inform the clinicians on WCFs, and encourage and promote WMBs that will result in WC and optimal health. If recommended guidelines for weight management are consistently utilized, the client's WMA will be enhanced, and the obvious consequence will be the engagement in the appropriate WMBs that will promote WC.

This project sought to arrive at a viable solution for the consistent use of evidence-based weight management strategies in the primary care setting. The review of the concepts in the theory of weight management confirms its appropriateness for guiding this project. In this project, clinicians were synonymous with providers and was defined as advanced practitioners who provide skilled medical care to the patients at the bedside. The staff was defined as other skilled medical personnel working collaboratively with the

clinicians to provide medical care and other services to all patients seeking care at the facility.

In a setting where obesity management is suboptimal, a tool to remind providers to engage in recommended care will be the first step towards achieving best practices as it relates to obesity management. Ultimately, it is hoped that the use of such a tool will lead to a change in practice that will result in improvement in the weight status of obese clients at the facility. Russwurm and Larrabee's Model for EBP change is also an appropriate guide here. The initial four steps in the model inform on assessing the need for change in practice, linking the problem with interventions and outcomes, synthesizing the best evidence, and designing a change in practice (White et al., 2021). As this project sought to educate staff on the problem of obesity, design a checklist based on evidence and educate providers on this checklist for potential use in practice, these four steps of Russwurm and Larrabee's Model for EBP change were relevant and useful for the successful orchestration of this project.

## Relevance to Nursing Practice

The nursing profession is continually evolving as a science. The role of the nursing profession is multifaceted as nursing values efforts at health promotion and disease prevention. In recent years nursing practice has expanded to include not only bedside nursing care, but a broader scope of practice, and more diverse roles. Nurses encounter and care for clients in acute care settings, long-term care facilities, medical homes, outpatient centers, schools, communities, and other settings. Additionally, nurses

are assuming the roles of advanced practitioners, educators, advocators, policymakers, and researchers among others. Since disease prevention and health promotion are major aspects of nursing practice, efforts to maintain and improve the health of individuals should be a high priority in nursing practice. The available evidence speaks to the adverse effects of obesity throughout the lifespan. Researchers have indicated that children and adolescents with obesity are more likely to have a lower quality of life (Morrison et al., 2015; Powell et al., 2018) as they are more prone to chronic illnesses such as depression (Kebbe et al., 2018), asthma, and joint problems (Powell et al., 2018; Smith et al., 2020). These children often fall victim to bullying and frequently suffer from low self-esteem (Kebbe et al., 2018). In adulthood the likelihood of hypertension, cardiovascular diseases, diabetes, and cancer increases (Hyer, 2019; Imoisili et al., 2019). Faced with these comorbidities an obese individual is less likely to enjoy optimal health. Therefore, as health promotion advocates, the nursing profession should be concerned with improving the health of populations. By embracing measures aimed at promoting health and preventing disease nursing professionals are concurrently contributing to positive social change. Healthier populations result in improved quality of life for the national and global society.

There have been various practices used to address pediatric obesity in the past. Most practices have focused on a family-centered approach that incorporates lifestyle modification interventions. Interventions that include dietary counseling and interventions (Kalarchian et al., 2013; Koo et al., 2020; Rhodes et al., 2017;) physical

activity interventions (Lee & Kim, 2015; Morano et al., 2020) stepped-based approaches (Norman et al., 2015; Nobles et al., 2016), motivational interviewing (Christison et al., 2014; Early et al., 2019), and mindful eating interventions (Daly et al., 2016; & Kumar et al., 2018) have been tried in the past to address the problem of obesity with promising results. Additionally, school-based programs (Amini et al., 2016; Lovell, 2017) and internet-based programs (Whittemore et al., 2013) have also been encouraging in promoting weight loss. Despite these efforts, the statistics on obesity prevalence continue to be alarming as recent data inform that 14.4 million children and adolescents in the United States are currently obese (CDC, 2021).

Caregivers are losing the battle in controlling this pandemic and consistency in the delivery of care to obese clients is lacking. Studies indicate that 90% of healthcare providers have reported that they relied on professional judgment to assess children at risk for obesity resulting in inadequate assessments of weight status (Masse et al., 2018). A recent systematic review confirmed inconsistencies in weight management in primary care (Hyer, 2019). One study found that in patients with increased BMIs, nurse clinicians intervened 61% of the time, whereas physician's intervened 7.8% (Hyer, 2019; Magee et al., 2012). Another study found that although clinicians counseled the patient on weight status, advice was not generally based on guidelines (Hyer 2019; Schauer et al., 2014). As noted earlier, past efforts in tackling the problem of obesity have focused on establishing guidelines for the management of the disease and the establishment of various treatment modalities that include comprehensive lifestyle modification. Jarl et al

(2014) conducted a nurse practitioner-led study focusing on diet and lifestyle counseling that was significant for improved patient diet and lifestyle scores, increased physical activity, and an average weight loss of 3.6 pounds (Jarl et al., 2014; Hyer, 2019). As proponents of holistic care aimed at achieving maximum health and wellness physically, psychologically, and socially; efforts to decrease the incidence of obesity, a condition that hinders one's opportunity to achieve optimal health must be undertaken by nurses.

Improvement initiatives to address this noted inconsistency in managing obese clients are necessary. An educational program that informs and reminds primary caregivers of the urgent need for and importance of addressing the obesity problem as well as current established guidelines for practice; coupled with an evidence-based tool to enhance the management of obesity in the pediatric setting is a step in the right direction. The educational session will reaffirm the urgency of the obesity epidemic. It will also highlight the importance of adherence to best practices when treating obesity so that optimal results can be achieved. In addition, the checklist will prompt clinicians who practice in a fast-paced health care environment to consistently embrace evidence in the management of their obese clients. The use of this tool will promote evidence-based obesity management as it will remind and encourage the use of recommended guidelines in clinical practice. Such actions could potentially lead to the effective management of the disease in its early stages and possibly halt its progression to adverse outcomes in adulthood. The ultimate outcome will be disease prevention and health promotion and was the basis for the origins of this project.

## Local Background and Context

The local setting for this project was a pediatric office within a northeastern suburban region with a high percentage of Hispanic and African American clientele. At this clinical site, there is a significant number of patients who are overweight or obese. Furthermore, there seems to be a rising trend in obesity among this population. It has been reported that obesity affects ethnic and racial minority children disproportionately (Nelson et al., 2018). In children aged 2 to 5 years, Hispanic children have the highest obesity prevalence (15.6 %) followed by non-Hispanic Blacks (10.4%), and then non-Hispanic Whites (5.2%) (Nelson et al., 2018). Realizing the disparity among these ethnic groups, there has been national attempts to decrease obesity among these populations. The Racial and Ethnic Approaches to Community Health (REACH) program was developed 21 years ago by the CDC to reduce racial and ethnic health disparities (CDC, 2020d). Between 2014 and 2018, through the REACH program, over 2.9 million individuals were afforded better access to healthy foods and beverages as a means of reducing obesity through state and local programs (CDC, 2020d). Also, in REACH US communities, the prevalence of obesity decreased by 1 percentage point per year in 14 disadvantaged black communities from 2009-2012 (CDC, 2020d). Nevertheless, the problem of obesity persists affecting Blacks and Hispanics disproportionately. As mentioned earlier, other programs such as “Let’s Move” and “5-2-1-0 Let’s go” have been instituted to address the obesity problem with limited success. Additionally, the Institute of Medicine (IOM) through “Early Childhood Obesity Prevention Policies” have

recommended routine surveillance of children's weight status, exclusive breastfeeding for at least 6 months, promotion of healthy food choices, ensuring adequate sleep, decreasing screen time, and increasing opportunities for physical activity (McGuire 2012; Hessler, 2015). As of 2017, CDC reports indicated that among infants born in 2017, 19.2 % of infants were supplemented with formula before 2 days of age (CDC, 2020e). Thus, the urgency to address this problem among this population is evident as efforts at prevention have failed to curtail this epidemic. A checklist is a structured tool that serves as a reminder to perform necessary activities, and an educational program is an activity designed to transfer knowledge on a specific topic to a group of individuals. Therefore, this project aimed to design a checklist to promote evidence-based care, to transfer knowledge to the staff of this local setting on the problem of obesity and the recommended obesity management guidelines, and to introduce the checklist as a strategy for improving obesity care and to elicit the staff's support for potential use of the checklist in practice.

## Role of the DNP Student

Several reports over the last few decades have highlighted deficiencies in the quality of care delivered within the United States healthcare systems. The Institute of Medicine's (IOM's) reports "The Urgent Need to Improve Health Care Quality and "To Err is Human: Building a Safer Health System" were landmark reports that emphasized the problem on a large scale. The former highlighted how misuse, underuse, and overuse were affecting quality; while the latter commented on the prevalence of medical errors

(Joshi et al., 2018). These reports informed that as many as 44,000 Americans die annually as a result of preventable medical errors (Joshi et al., 2018). The need to improve the quality of care was evident. As such, there have been several regulations and initiatives aimed at improving the quality of care within the United States healthcare system. With the release of "Crossing the Quality Chasm," the IOM proposed a new framework for redesigning the United States healthcare system (Joshi et al., 2018). Consequently, health care industries and providers are now constantly challenged to provide safe, effective, efficient, timely, patient-centered, and equitable care (Joshi et al., 2018). This has forced these entities to demonstrate accountability for the care provided.

The quest to improve healthcare delivery in the United States has placed the United States health care industry in a state of great complexity and constant change. The Affordable Care Act (ACA) enacted in 2010, has set the tone for health care agencies to be more accountable for the care delivered. In this new era of accountability, health care agencies and providers are pressed to provide high-quality care at lower costs. An element of the ACA, spearheaded by the United States Department of Health and Human Services (USDHHS) has devised a national quality strategy "to improve the quality and delivery of healthcare services, patient health outcomes, and population health" (White et. al., 2021, p. 4). This strategy aimed to foster better and affordable care, and healthier people and communities (White et al., 2021).

In order to provide high-quality care, care delivery systems must invest in employees who are adept in planning programs designed for quality improvement. These

individuals must possess clinical, leadership, and critical thinking skills. These skills provide one with the expertise needed to successfully plan and implement programs aimed at quality improvement. In addition, care must be guided by current and best available evidence. Researchers have demonstrated that the use of evidence in practice has led to improved patient care outcomes. A recent study found that the use of an evidence-based care protocol improved patient care outcomes while decreasing cost in pediatric patients undergoing appendectomy (Khan et al., 2020). The study found a significant reduction in hospital length of stay and costs (Khan et al., 2020). Other studies have also pointed to the improvement in patient care outcomes (Munoz Venturelli et al., 2019; Warren et al., 2019) with the use of evidence-based care.

The doctor of nursing practice (DNP) program gained momentum when the IOM's report "The Future of Nursing: Leading Change, Advancing Health" was released in 2011 (Giardino & Hickey, 2020). The Essentials of Doctoral Education for Advanced Nursing Practice compiled by the American Association of Colleges of Nurses (AACN) focuses on preparing nurses to practice at the highest levels of professional practice (Giardino & Hickey, 2020). The curricula ensure that the student is schooled on executive leadership, systems thinking, health policy, practice management, informatics and technology, risk management, evaluation of evidence-based practice, patient safety, and the transformation of health care delivery (Giordano & Hickey, 2020). This ensures that the DNP student will be prepared to assume multifaceted roles in the health care industry. With such diverse curricula the DNP student has the opportunity to acquire

skills and expertise needed to contribute to improving health care quality and population health. Therefore, the role of the DNP student is to hone critical thinking skills, master the art of management and transformational leadership; develop the potential to perform as educators, mentors, and health care advocates; acquire the skills needed to conduct quality improvement initiatives; to become effective program planners and evaluators; and to collaborate with the interprofessional team to promote evidence-based care and generate new knowledge in nursing. Moreover, the DNP student should be concerned with devising strategies to facilitate the vision of Healthy People 2030 which is that all individuals will achieve their full potential for health and well-being at all stages in life (USDHHS, 2020). In essence, the DNP student should be an active proponent for health promotion, wellness, and the delivery of safe, efficient, effective, timely, patient-centered, and equitable patient care. By so doing the DNP student will be an active participant in the transformation of the United States healthcare system.

As a family nurse practitioner my role involves providing primary care to individuals across the lifespan. The project described above aimed to improve the health status of clients in the pediatric population by designing and implementing an educational program on the problem of obesity, and by designing a tool to promote the recommended management of obesity in this population. This would be achieved by making the staff more aware of the severity of the obesity epidemic and its lingering adverse effects through staff education. Consequently, it is hoped that the staff will be urged to improve practice by consistently providing obese clients with recommended care when prompted

through the use of a structured checklist. Therefore, my role in this project involved the analysis and synthesis of evidence relating to the care of obese clients, the design of a checklist based on recommendations, the education of the staff members of a pediatric clinic on obesity facts, the purpose of the checklist, and how to use it. This allowed me as a DNP student to exercise some of the competencies required to successfully complete the DNP program. I had the opportunity to review and synthesize the literature, develop a quality improvement tool, serve as an educator and leader, and collaborate with the interprofessional team in an attempt to improve the quality of care and promote health and wellness among the pediatric population. This project was thus independent of my clinical practicum experience as it was conducted in an outpatient pediatric clinic.

My motivation for this topic was twofold. Firstly, as a health care provider working with pediatric patients who are obese, I feel that I have an obligation to ensure that my clients are receiving care grounded in best practices. I believe that the provision of care that embraces best practices is key to promoting wellness, eliminating disparities, and improving population health. Therefore, since obesity was an identifiable problem among my clientele it was a catalyst for my engagement in this project. Secondly, obesity is a problem that has affected me personally. I strive to maintain a healthy weight status daily, and some of my friends and family members are also overweight or obese. My mother was obese in her adult years, and despite regular visits to a primary care provider the management of her obesity was not geared towards comprehensive lifestyle modification. Her providers will briefly mention that she was overweight and inform her

that she should exercise for weight management. It is my belief that tackling the problem at an early age, or in its early stages, is essential to stop the progression of the disease and hence my motivation for this project.

## Summary

Obesity is a serious health problem that is preventable if effective management strategies are utilized. Various governing bodies have embarked on efforts to address this problem, yet there are lingering effects as millions of individuals of all ages are still affected by this disease. Additionally, there is a lack of consistency in the management of obesity among primary care providers. Innovative strategies for dealing with this problem are warranted so that future generations can achieve their full potential for health and wellness across the lifespan. The staff education program was a lunch-and-learn activity designed to provide the staff with information on the problem of obesity. The checklist was a one-page tool designed for use by the healthcare team in the primary care setting who provide care for individuals with abnormal weight status. It highlighted the recommended guidelines when caring for patients who meet the criteria of obesity based on BMI status and reminded the team to intervene when appropriate. This intervention will heighten awareness of the incidence of obesity in this setting, promote the use of evidence in practice, and foster consistency in addressing abnormal weight status when delivering patient care. Hopefully, this will trigger the effective management of clients who are obese and lead to a decline in obesity incidence among the targeted population.

Section 3: Collection and Analysis of Evidence

## Introduction

The problem addressed in this doctoral project was obesity in the pediatric population. Obesity has climbed to epidemic proportions in children. Researchers have indicated that the number of children under the age of five years who are obese has increased from 32 million in 1990 to 41 million in 2016; with projections that if trends continue that number could rise to 70 million by 2025 (Yusop et al., 2018). As noted earlier, researchers have suggested that this problem impacts the Black and Hispanic populations disproportionately (Nelson et al., 2018). Strategies to address the problem of obesity in children have included family-focused comprehensive lifestyle modification, physical activity and dietary intervention programs, and government-funded initiatives. However, the problem persists and poses a threat to societal health and wellbeing. As a result, guidelines for treating the problem of obesity have been developed, and primary care providers who provide ongoing care for their clients are in an ideal position to initiate and follow through with these recommendations. Yet inconsistencies in the adherence to obesity treatment guidelines exist. This makes it a pressing problem requiring multiple and collaborative efforts to control it.

The purpose of this project was to: (a) design a checklist for use in the primary care setting that incorporates these guidelines; (b) design and implement a staff education program to raise the staffs' awareness on the problem of obesity and its management guidelines; (c) educate the health care personnel in that regard, and (d) to discern whether

the staff's knowledge on obesity would increase through pre-and post-test evaluation. The project also sought to determine if the checklist would be feasible for use in the clinical setting based on the staff's feedback. The checklist will serve as a reminder to clinicians to consider and adhere to these guidelines in a busy primary care setting. Therefore, this project relied on scientific evidence to help promote best practices in the treatment of obese clients. The setting to deliver the educational activity and obtain feedback was a primary care clinic that primarily serves Black and Hispanic clients. This section will review the project's practice-focused questions and reiterate the sources of evidence that point to the need for such a project with an analysis and synthesis of the literature. In conclusion, a summary of the project's role in contributing to improving population health and promoting social change will be presented.

## Practice-Focused Question

The initial step in writing a clinical question is the identification of a knowledge gap (Ravindra & Kestle, 2019). Often, the driving force behind the question is the current frustrations with clinical management and or outcomes (Ravindra & Kestle, 2019). A practice-focused question provides guidance and focuses on any project that seeks to improve clinical practice. In a local suburban clinic that serves primarily African American and Hispanic clientele the problem of overweight and obesity was prevalent. Nevertheless, the management of these clients who are overweight and obese was not always consistent with the current established guidelines. Hence this project aimed to address this gap in practice.

The practice-focused questions to be answered in this project were whether staff education on obesity and an evidence-based checklist to manage obesity will increase the staff's knowledge on the problem of obesity and promote the staff's support for the use of the checklist in the clinical setting. Therefore, the purpose of this project was twofold. It involved the design of a checklist to aid in the improved management of obesity in the clinical setting. In addition, it sought to educate the staff of a pediatric clinic on obesity and the use of the checklist, and to gain feedback on the feasibility of its use to promote best practices in the care of individuals with abnormal weight status.

## Sources of Evidence

The practice-focused questions addressed the problem of obesity among youths. Evidence points to a high prevalence of obesity in that population. Recent global statistics revealed that in 2016, 50 million girls and 74 million boys were obese (Abarca-Gomez et al., 2017). In the United States, between 2017-2018, the prevalence of obesity in children aged 2 to19 years was 19.3% which amounts to 14.4 million children and adolescents (CDC, 2021). In addition, prevalence rates of 13.4 % in 2-to 5-year-olds, 20.3% in the 6-to-11-year category, and 21.2 % in youths 12 to 19 years of age has also been documented (CDC, 2021). Moreover, there is a large body of evidence that points to the adverse effects of obesity in youths. Researchers have indicated that obese children report a lower quality of life (Morrison et al., 2015; Powell et al., 2018); are victims of bullying (van Geel et al., 2014) and are more likely to be depressed (Rao et al., 2020). The above-mentioned evidence lends credence to the fact that pediatric obesity is a recurrent

problem, and the need to decrease the prevalence rates among youths is necessary. Additionally, even though primary care providers are in an ideal position to treat this condition, improvement in the management of obesity is warranted due to a lack of consistent adherence to management guidelines (Fitzpatrick et al., 2016; & Hite et al., 2019). Therefore, this evidence on the magnitude of the problem of obesity among youths was the driving force to explore the above practice questions.

In order to execute this project, the plan was to design and implement an educational program on obesity to the staff of the clinic, and to design a one-page checklist that incorporates obesity management guidelines for use by staff who care for obese clients in this primary care setting. The checklist was designed after a careful review of the literature on obesity management guidelines. After the completion of the checklist, it was presented to a panel of experts to be examined for content validity and readability. A brief educational activity (EA) to educate the staff on obesity, its management guidelines and the purpose and use of the checklist was developed and presented to the staff. The DNP staff education manual was used as a resource for the development of the staff education program. The EA was a 15-minute in-service delivered as a lunch-and-learn activity.

The staff of a suburban primary care setting that demonstrates inconsistencies in the management of obese clients were the participants in this project. The staff consisted of all individuals who were working at the facility and were involved in the provision of services to the clients who seek primary care at the facility. The staff was approached for

participation in this project and informed consent for participation was obtained. After receiving informed consent, a pretest aimed to determine the staffs' knowledge on obesity facts and management guidelines, and to obtain demographic information was distributed and collected prior to the EA. After completion of the EA, a posttest with the same questions as the pretest along with staff feedback on the feasibility of the use of the checklist at the practice was obtained. The potential for an increase in revenue through pay-per-performance if all performance metrics in terms of obesity management are met in the care of the facility's obesity clients was used as buy-in to promote support for the use of the checklist in practice. The recommendations and feedback from the staff was considered and staff suggestions for the program are noted in the recommendations section of this paper. The procedural approach for this project was aligned with the practice-focused questions as it delivered an EA on obesity management, educated the staff on the use of a checklist to promote the use of the established guidelines in practice, evaluated the staffs' knowledge gained through a pre and post-test design, and determined the feasibility of the checklist's use in practice through staff feedback based on a post program evaluation.

This project involved interaction with human participants. Respect for persons is a fundamental ethical principle that ensures autonomy. Hence, it was vital to ensure that participants who were recruited to partake in this project did so willingly, without coercion. Therefore, the individual rights of those participating in the EA and pre and post-test were protected by obtaining consent for participation in the project after the

project's purpose and procedural activities were explained to them. The participants were also assured confidentiality for the site was masked, and questionnaires and testing forms did not require the participants to include their names in order to maintain anonymity.

## Analysis and Synthesis

After the checklist was designed and the educational program was developed, they were distributed to professionals who are experts in primary care, obesity management, clinical care, linguistics, and education to be reviewed for content validity and readability. A slight adjustment to the program evaluation questionnaire was made based on the recommendations of the experts which can be viewed in Appendix B. Descriptive statistics were used to analyze and report the participants' demographics. The pre-and post-tests scores were analyzed and interpreted by using a paired t-test to compare the means of the two samples; and individual participants pre-and post-test scores were evaluated for an improvement in scores after staff education. The staffs' feedback on the feasibility of using the checklist in the clinical setting was elicited by using a Likert-scale questionnaire, with an option to make additional comments based on participants' responses. If the checklist is deemed appropriate for use in the clinical setting, the next step will be to pilot its use and assess its potential for improving the care of obese clients at the site in the future.

## Summary

The evidence presented above is supportive of the global need to decrease the incidence of obesity. Improvement in the management of the obese client is one approach

to progress towards this goal. This project proposed a checklist to foster a more consistent and evidence-based approach to the management of obese clients in primary care through staff education. The execution of this project was an effort to improve the quality of care provided to obese clients; and can be an initial step towards halting this pandemic. It is hoped that with improved management, obesity rates will decline and healthier societies and nations will prevail. The findings from this project holds promise for a possible improvement in the management of obese clients at the clinic, thereby fostering health promotion and positive social change. The ensuing section presents the project's findings, implications, recommendations, strengths and limitations.

Section 4: Findings and Recommendations

## Introduction

The local problem addressed in this project was the noticeable high incidence of obesity among youths of a northeastern pediatric clinic that serves primarily Black and Hispanic clientele. The evidence points to disparities in the prevalence of obesity in relation to ethnicity. Data analyzed from 2018 showed an overall increase in obesity among adolescents, with predominant increases in non-Hispanic Black and Mexican American youths (Ogden et al., 2020). Obesity continues to be a recurrent and global problem. As of 2019, 38.3 million children under the age of five years were overweight or obese (Mihrshahi et al., 2021). Furthermore, recent reports indicated that between 2017-2018 approximately 40% of adults over age 20 in the United States were obese (Gupta et al., 2021). These statistics inform on the magnitude of the problem. As a result, efforts to improve obesity prevalence rates in the global population should be a high priority. Childhood obesity is a strong predictor of obesity in adulthood, and the consequences of persistent obesity among individuals have been well documented. The risk of morbidity and mortality increases significantly with a diagnosis of obesity as it is linked to a myriad of noncommunicable chronic diseases, primarily cardiovascular diseases, kidney and liver diseases, cancers, depression and arthritic conditions (Gupta et al., 2021). These facts are a constant reminder that obesity is a problem that needs urgent attention. Global efforts to address this problem has been ongoing. However, obesity rates remain high. Despite measures established for obesity management in clinical

practice, consistent adherence to these guidelines remains challenging in a fast-paced clinical environment. Time, lack of knowledge, and discomfort with dealing with the problem by clinicians have been cited as possible reasons for poor adherence to management guidelines (Mazza et al., 2019; Roberts et al., 2015). This project aimed to address this gap in practice by addressing the deterrents to effective obesity management in practice. The design of a checklist to remind clinicians to address the problem, and an educational program delivered to the staff who cares for obese clients were the focus of this project. The aim was to raise the staffs' awareness of the problem of obesity and introduce the staff to the checklist that could serve as a reminder to adhere to obesity management guidelines as the staff delivered care under rigid time constraints. Hence, the practice-focused questions sought to determine the impact of an educational program on the staffs' knowledge of obesity, and the staffs' willingness to trial the use of the checklist in practice. The program and checklist were developed after a careful review of the evidence on the topic.

The evidence for this project was obtained by utilizing search engines such as Pub Med, Med Line, CINAHL, EBSCO, Google Scholar, the CDC and USDHHS websites, and various textbooks. An extensive and comprehensive literature review was undertaken using keywords that included the terms "Pediatric Obesity", "Childhood Obesity" , "Obesity", "Research", "Nursing Research", "Obesity Management", "Guidelines", "Interventions", "Dietary Counseling", "Physical Activity", "Adolescents", "School-Age and a combination of these terms. Systematic reviews, meta-analyses and randomized

and non-randomized clinical trials were the primary sources analyzed for the development and execution of this project. The checklist was developed after the established guidelines in obesity management was perused from the literature and some of the key guideline suggestions were incorporated into the checklist. After the checklist was developed, it was presented for review by three experts for readability and content validity. The panel consisted of a medical doctor certified in obesity medicine, a PhD prepared educator, and a language specialist with over 20 years of experience. The panel verified the appropriateness of the checklist in terms of content and readability for its intended use. The staff education program was developed by compiling data extracted from literature relating to the problem of obesity. The educational program, pre and post-test and the program evaluation questionnaire were also presented to the educator and language specialist for review. The program evaluation was designed using a Likert scale format from 1 to 5, with 5 indicating “strongly agree”, 4 being equivalent to “agree”, 3 representing “neither agree or disagree”, 2 denoting “disagree” and 1 implying “strongly disagree”. A minor adjustment was made in the program evaluation questionnaire based on feedback from the language specialist. It was suggested that a table format as opposed to the original draft of the questionnaire would improve readability. Therefore, this approach was utilized. The draft and final evaluation questionnaire and the pre-and post-test are presented in Appendix B, and the staff education program PowerPoint can be reviewed in Appendix C.

The staff education program and checklist were presented to the staff of a private pediatric clinic in late October 2021.The participants were a convenience sample of eleven staff members that were recruited after obtaining approval from Walden University's IRB, with the approval #08-16-21-0992709. Three visits to the site on different days in September to recruit program participants were made. At the time of recruitment, the purpose of the project was explained to prospective participants. Once informed consent was established, the participations were given a folder that included a labeled pre and post-test (labeled from A to K to preserve anonymity during data evaluation), Walden University's Form B, and a program evaluation form. The staff was asked to complete the pretest and all pretest were collected during the first week of October. The staff's initial and post-program knowledge on the problem of obesity was assessed as they were asked to complete the same test before and after the presentation of the educational program. The program was evaluated with respect to program, presenter and outcome effectiveness and the participants were encouraged to list the strengths and limitations of the program and to make suggestions for program improvement. The eligibility criteria for participating in the program included the ability to read and understand the English Language, the involvement in administrative or clinical work at the clinical site for at least four weeks, and interaction with clients who visited the clinic.

## Statistical Methods

The demographic parameters of the sample were analyzed using frequency and descriptive statistics, and medians and interquartile ranges were used to interpret the

Likert scale evaluation items. The knowledge test scores for the pre-intervention and post-intervention observations were calculated and checked for statistical assumption of normality using skewness and kurtosis statistics. Since statistical assumption of normality was met for the two observations of the knowledge test (pre-post intervention), repeated-measures *t*-tests were used to test for significant change in knowledge test scores across time. All analyses were performed using SPSS Version 26 (Armonk, Ny: IBM Corp) and statistical significance was assumed at an alpha value of 0.05. The ensuing discussion will outline the project findings and implications.

## Findings and Implications

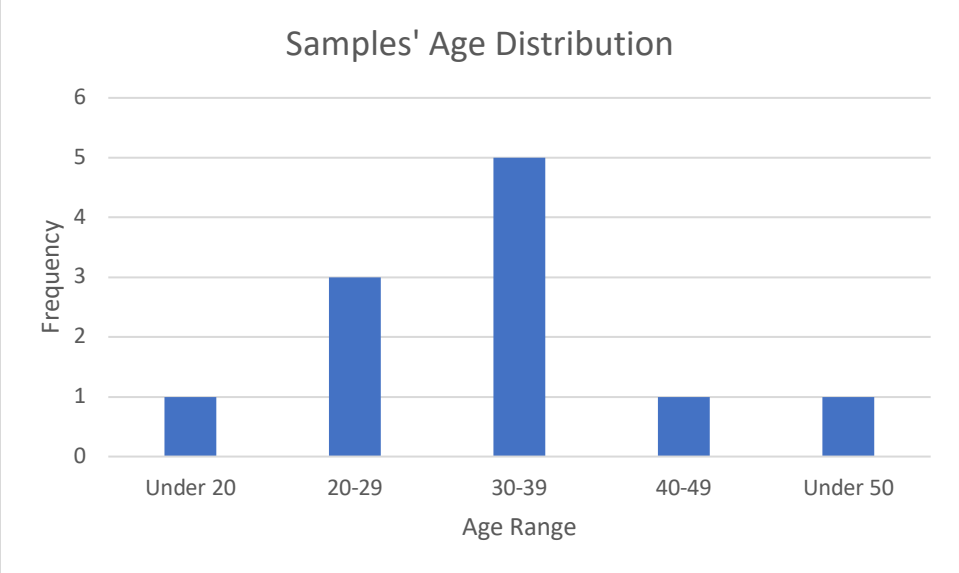
### Results

The demographic characteristics of the sample are outlined in Table D1, which is presented in Appendix D. Age is reported as a mean and standard deviation (one asterisk), and the other demographic characteristics are reported as frequency and percentages (two asterisks). A total of 11 individuals participated in the program. Most of the participants (eight) were Hispanics, (72.7%), while (three) participants (27.3%) were African Americans. There were nine (81.8%) females and two (18.2%) males. Only one participant was married, and more than half of the participants were high school graduates (63.6%). Eight participants listed their primary language as English. The sample consisted of four Medical Assistants, two receptionists, one Registered Nurse, one office manager, one Physician, and two students. The mean sample age was 33.6 years with at standard deviation of 14.3. The age range for the sample was 18 to 67 with the

highest number of individuals falling within the 30 to 39 age range. This data on the sample's age range is presented graphically in Figure 1 below.

**Figure 1**

*Samples Age Distribution*




The raw scores of the pre-test ranged from 20 to 70 percent points out of a possible total score of 100, with a mean score of 39.09, standard deviation (SD) 20.72 and standard error of the mean (SEM) 6.25. Post-test scores ranged from 20 to 80 percent points out of a possible total score of 100, with a mean score of 57.27, SD 24.12 and SEM 7.27. There was no change in test scores for one individual. However, repeated measures t-test revealed a statistically significant increase in knowledge test scores overall from pre-to post-intervention, $t$ (10) = -3.03, $p$ = 0.13. The means and standard deviations for the t-test analysis are outlined in Table D2, which can be found in

Appendix D. The results of the paired sample statistics and paired samples test are presented below in Tables 1 and 2 respectively.

**Table 1**

*Paired Samples Statistics*

| | | Mean | *N* | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Pair 1 | Pre-score | 39.09 | 11 | 20.715 | 6.246 |
| | Post-score | 57.27 | 11 | 24.121 | 7.273 |

**Table 2**

*Paired Samples Test*

| | | *t* | *df* | Sig. (2-tailed) |
|---|---|---|---|---|
| Pair 1 | Pre-score - Post-score | -3.029 | 10 | .013 |

The post program evaluation questionnaire is presented in Appendix B. The values range from 1 to 5 on a Likert scale with 5 indicating “strongly agree” and 1 denoting “strongly disagree”. The participants’ responses to the evaluation questions were analyzed in terms of median scores and interquartile ranges. Table D3, which can be found in Appendix D, outlines the median and interquartile ranges for each evaluation question. All participants completed the evaluation questionnaire. The median value for all but one of the evaluation questions was 5, (9=5; 1=4) with different respective interquartile ranges (3 = 4-5; 3 = 4.8-5; 4 = 5-5) for each question as reported in Table D3. One participant indicated that the program could be improved by “computerizing the program”, while two participants felt that “a longer program” would have been

beneficial. Another participant indicated that the program was “very educational” and one reported that the program helped them to “become more knowledgeable about obesity”. As evidenced from the evaluation scores, the participants were generally satisfied with the staff education program and were willing to trial the checklist in practice.

**Implications**

One unanticipated outcome of the project was the low pre-intervention scores as the mean score was a mere 39.09. Additionally, there was no improvement in test scores in one out of the eleven individuals who participated in the EA. Although the findings indicated a statistically significant increase in knowledge scores over time, the mean pre and post intervention scores were only 39.09 and 57.27 respectively. This indicates that the positive findings should be interpreted with caution. The results suggest a need for educational programs that address the problem of obesity in that population. It also supported literature reports that a significant barrier to addressing the problem of obesity is a lack of knowledge. In addition, the issue of a limited ability to understand the test questions must be considered. Over 70% of the sample were Hispanics and 27.3% reported that Spanish was their primary language. Therefore, the possibility of a language barrier during test taking could account for the low mean test scores. Moreover, a brief educational program on the topic elicited favorable results in terms of increase in knowledge. Therefore, the introduction of obesity educational programs in schools, community events and health care institutions must be considered in the future to raise

awareness of the problem of obesity. Raising awareness on the problem and its adverse effects is a crucial step in tackling this persistent and debilitating health care problem.

This project highlighted the lack of knowledge on obesity among Black and Hispanic staff of a pediatric clinic and demonstrated that a brief educational program on the topic yielded favorable results in terms of knowledge increase over time. The literature confirms that Blacks and Hispanics are disproportionately affected by the problem of obesity (Nelson et al., 2018). This indicates that this population requires assistance in addressing the problem. The results of this project has identified a need to educate staff who care for obese clients in the clinical setting. Although it is a pilot study, it is a springboard for replication studies that would solidify the need to fund educational programs addressing obesity. Consistent national and global efforts to educate individuals and communities on obesity could ultimately lead to improvement in obesity management and individual behavior change in terms of diet and exercise to manage weight. Once these actions are embraced, positive social change in relation to a decrease in the incidence and prevalence of obesity could be an attainable goal.

## Recommendations

The staff education program presented to the staff significantly increased the staffs' knowledge on the topic. The staff also reported interest in using the checklist in practice. Based on these findings it is recommended that education on the topic should be presented to the staff on an annual basis. This could be presented as a computerized module that the staff can access individually and at their own pace. The clinic can adopt a

policy making the annual review of this module a mandatory requirement for all employees. This will ensure ongoing awareness of the problem with the hope that the staff will make managing the problem in clinical practice a priority. The program was a 15-minute lunch-and-learn activity outlined in Appendix C, but based on feedback, expanding the program to a 30 to 60 minutes information session on obesity could be considered. This could be done by outlining some of the dietary and physical activity behaviors that can improve weight status, presenting some of the past approaches and programs utilized to address the problem, and citing research that have addressed the program of obesity with successful results. In addition, since a substantial proportion of the staff and the population that the clinic serves is Hispanic, efforts to have the module translated into Spanish to ensure that all staff adequately comprehended the information presented should also be considered.

## Contribution of the Doctoral Project Team

The project's team was the staff who consented to participate in the education program. The team was very cooperative in making the project a reality. The team willingly completed the pre and post-test as well as the evaluation questionnaire in a timely manner. The teams' feedback helped in suggesting the recommendations of a computerized and longer program. The trial of the checklist in practice to determine if it could contribute to improvement in the management of obese clients is a prospective project in the future. With the permission of the clinic administrators, a review of the current management of obesity, the introduction of the checklist as a reminder to embrace

management guidelines, and an evaluation 3 to 6 months post checklist use could be undertaken to determine if the checklist is effective in improving adherence to obesity management guidelines in practice.

## Strengths and Limitations of the Project

The strengths of this project include the fact that the practice focused questions were clearly stated and that the project was guided by the middle range theory of weight management. Middle range theories are more suited for use in practice areas because they are less abstract and more specific than grand theories, and focus on process and implementation (Gray et al., 2017). Therefore, the theory of weight management was an appropriate theory to guide a project designed to be tested in the clinical setting. In addition, there was no withdrawal of participants so attrition was not an issue; and appropriate statistical methods to evaluate the findings were used. However, the project was not without limitations. When participants are enrolled in a study because they fit the study's criteria, the sampling method is referred to as a convenience or accidental sampling (Gray et al., 2017; Wall Emerson, 2021). The method of sampling chosen for this project was convenience sampling as the individuals were selected for participation in the project simply because they were part of the staff at a designated clinical site and met the eligibility criteria for the project. There was no random selection of the participations, a sampling method that denotes strong representation of the target population (Gray et al., 2017). Convenience sampling is most often used in nursing research based on the fact that specific populations or disease states are the variables that are studied (Gray et al., 2017)

Convenience sampling, albeit accessible and inexpensive is a weak form of sampling. This is because it provides very little opportunity to control for biases (Gray et al., 2017). Therefore, a major drawback of this form of sampling is the inability to generalize study findings due to selection bias (Wall Emerson, 2021). Thus, the findings of the project were applicable only to the population studied.

Another limitation of the study relates to the sample size. The sample size consisted of only eleven participants, a characteristic that further limits the ability to generalize study findings. In addition, the one group pretest-posttest design was used in this project. This approach is commonly used for quasi-experimental nursing research (Gray et al., 2017). However, this design is weak in that there is no control over effects of extraneous variables, making it difficult to attribute results findings solely to the intervention (Gray et al., 2017; Terry, 2018). Lastly, although the tools used in the project was tested for readability by experts, the use of a computerized program using a readability formula would have increased the validity and reliability of the tools (Gray et al., 2017). Replication studies should consider these limitations and incorporate measures to improve on the sample representativeness and the ability to generalize findings. Future research should focus on a more diverse and cross-sectional sample that includes staff from different sites, a larger sample size, and a more rigorous method of sampling and research design. Furthermore, testing the instrument used for testing and evaluation for internal consistency and reliability would add more validity to the study findings.

## Summary

The findings of this project indicated that an educational program was effective in increasing the staff's knowledge on the problem of obesity. Despite the limitations of the project these results lend support to the effectiveness of educational programs in increasing awareness on the problem of obesity. The fact that the staff reported a willingness to trial the reminder checklist in practice was promising, for it can be tested in the future to determine its potential for improving the management of obese clients.

# Section 5: Dissemination Plan

## Introduction

Dissemination is an integral and important part of the research process. It is through the sharing of one's work that new evidence to guide practice, opportunities for further research, and an increase in the knowledge base of nursing is secured (Oermann & Hays, 2019). Therefore, it will be prudent to share the project findings with the participants as well as the broader nursing profession. The plans to disseminate this project is thus discussed further below.

## Dissemination Plan

Another site visit to share the results of the project with the participants will be made. A brief flyer outlining the results and recommendations will be distributed to all participants. Due to the small sample size, demographic information will be omitted when disseminating findings and only the mean pre and postintervention scores will be reported to protect against participant identification. The potential for further research by testing the checklist will be presented to the administrators of the site. The practice-focused questions queried whether an educational program would increase staff's knowledge on the problem of obesity and garner support for the use of a reminder checklist in practice. The evaluation of the findings indicated an increase in participation's knowledge after the presentation, and a reported willingness to trial the checklist in practice.

The problem addressed was obesity in the pediatric population. Based on the nature of the project, appropriate audiences for dissemination will be academic students who are aspiring to do work on the problem of obesity, the providers of pediatric clinics, and nurse educators especially those working at schools and in public health. Another venue would be an oral presentation at a community outreach center during a health fair. By publishing this work in ProQuest after approval by Walden University Center for Research Quality, it will be readily available for review and analysis by students who are contemplating work on the problem of obesity. Consequently, it can encourage improved replication studies that will increase generalizability of findings and expand the knowledge base of the nursing profession. Disseminating the results to other providers of clinics, will help to raise awareness of the problem of obesity, realize the need to foster staff education on the topic, and spark interest in adhering to obesity management guidelines in practice. Informing nurse educators, public health providers, and the public of the results can be influential in terms of developing educational programs in schools and communities to raise awareness of the problem of obesity. Lastly, efforts to publish the result in a journal such as “Pediatric Obesity” or “Pediatric Nursing” would also disseminate the findings to the broader nursing profession. Obesity has been a longstanding health problem for decades. In light of the devastating effects of obesity, efforts to ease the health burden of the problem is definitely warranted. Building awareness of a health problem is the first step towards managing and overcoming the problem.

## Analysis of Self

This educational experience has allowed me to grow in terms of a scholar, practitioner, and a project manager. As a scholar, it has allowed me to improve on my writing, analytical and critical thinking skills. I have become more comfortable with the steps in the research process, and is now more adept in conducting literature reviews, analyzing and critiquing research, data collection and analysis, and planning and implementing an educational program. Moreover, through the preparation and completion of my prospectus and proposal for this project I was able to refine my ability to think critically and write clearly and effectively. Having the desire to conduct research and publish in the future, this project has been beneficial in preparing me for these future roles.

As a practitioner the project has allowed me to critically examine a clinical problem, identify gaps in practice and to devise a plan to improve the problem. Since I will continue to work as a nurse practitioner in the future my commitment to the provision of standards-based care is a high priority. My goal as a clinician is to promote health and wellness and to provide my clients with the best care possible. This project explored ways to improve obesity care and has heightened my desire to work towards the provision of the highest quality of care for my clients.

I have always believed in the adage “learning is lifelong.” Therefore, my future goals involve continued learning as an educator and mentor. This project experience has also prepared me for these roles. Throughout this experience I assumed the roles of

project manager, educator, and program planner. I was able to develop a checklist, formulate a pre-posttest, design an evaluation questionnaire, develop an educational program, plan and implement the program through an oral presentation, and evaluate the program effectiveness. These are roles that an educator must master in order to be successful. This project has allowed me the opportunity to perform some of the tasks necessary to partake in the roles of educator and mentor.

The journey towards the completion of this project was a challenging one. I learned to be patient and persistent. I had to make several adjustments before arriving at a suitable project. I also learned the value of mentorship, because it was the devotion and encouragement of my mentor who propelled me through the challenging moments in this journey. When I was frustrated she advised me to "take a step back" and look at the task at hand, a quality improvement project as opposed to research. It was then that the idea for this project flourished as I reflected on her advice. Despite the challenges, this experience was a fulfilling one, and has made me more committed to contributing to the advancement of the nursing profession and to positive social change.

## Summary

Over the last few decades there has been global and national efforts to combat the problem of obesity in children. Despite these efforts, millions of children continue to be afflicted with the problem, predisposing them to a myriad of physical and psychological problems. It has been reported that adherence to the guidelines established for management of obesity management has been inconsistently adhered to in practice. This

has been attributed partly to knowledge deficit, discomfort with the topic, and time constraints (Imoisil et al., 2019; Mazza et al., 2019). This project was a staff education program aimed at increasing staff awareness on the problem of obesity. It also highlighted a reminder checklist designed to promote adherence to obesity management guidelines in practice. This approach was adapted with the hope that increasing staff awareness of the problem will translate to a willingness to address the problem in the clinical setting. Furthermore, by suggesting the use of a checklist designed to remind clinicians to address the problem during office visits, this project presented a creative and innovative way to improve the quality of care provided to obese clients.

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Appendix A: Obesity Management Checklist

Developed by Veronica B Nelson
January, 2020

# OBESITY MANAGEMENT CHECKLIST

## REMINDERS FOR THE MEDICAL ASSISTANT

- ☐ Ensure patients height and weight is documented in EHR.
- ☐ Determine obesity status (BMI > 30 for adults; BMI > 95$^{th}$ for children based on age.
- ☐ If screens positive for obesity, flag chart to alert MD/APN/PA on need to address obesity status.

## REMINDERS FOR THE EXAMINING PROVIDER

- ☐ Review patient's chart and confirm obesity status.
- ☐ Inform patient of weight status/diagnosis.
- ☐ Provide brief counseling on benefits of maintaining appropriate weight.
- ☐ Provide brief counseling on diet and exercise for weight management.
- ☐ Establish a plan for obesity management with at least one behaviour modification goal set by patient.
- ☐ Order appropriate tests as needed (lipid profile, comprehensive metabolic profile, EKG, thyroid profile etc).
- ☐ Refer to dietitian and encourage participation in a physical activity (PA) program.
- ☐ Plan for adjunctive medication therapy as indicated (BMI >40), and review patient goals and plan of care.
- ☐ Establish plan for follow up care.

## AFTER VISIT REMINDERS FOR THE HEALTHCARE TEAM

- ☐ Schedule follow up appointment in 1 month for weight check and evaluation of progress.
- ☐ Review pertinent blood work/ tests as needed.
- ☐ Offer praise with small achievements in weight loss or goal achievement.
- ☐ Provide information for referral to dietitian and PA program.

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# Appendix B: Post-program Evaluation

## Draft Post-program Evaluation.

Developed by Veronica B Nelson

Thank you for participating in this educational activity. Please take a moment to provide feedback on the program so that we can improve on future programs and presentations.

Please answer the questions using the following scale:

1-Strongly Disagree: 2-Disagree: 3-Neither Agree nor Disagree: 4-Agree: 5-Strongly Agree

### Program Evaluation

1. The objectives of the program were clearly outlined
2. The content of the program was aligned with the program objectives
3. The topics were presented in a clear and orderly manner

### Presenter Evaluation

The presentation was clear and easy to follow.

The presenter demonstrated adequate knowledge of the topic.

Instructions on how to use the checklist in practice was provided

### Outcome evaluation

I feel that the objectives of the program were met

The program increased my awareness on the problem of obesity

The program allowed me to improve my knowledge base on the management of obesity

I am willing to trial the checklist presented to help improve obesity management in the office

Open-ended Questions:

What did you like most about the program?

How could this program be improved?

Final Program Evaluation

Thank you for participating in this educational activity. Please take a moment to provide feedback so that we can improve on future programs. Please answer the questions below using the scale provided.

| Scale | Strongly agree (5) | Agree (4) | Neither agree nor disagree (3) | Disagree (2) | Strongly disagree (1) |
|---|---|---|---|---|---|
| **Program Evaluation** | | | | | |
| The program objectives were clearly outlined | | | | | |
| The program content addressed the stated objectives | | | | | |
| The program topics were clear and easy to follow | | | | | |
| **Presenter Evaluation** | | | | | |
| The presentation was clear and easy to understand | | | | | |
| The presenter demonstrated adequate knowledge of the topic | | | | | |
| Instructions on how to use the checklist was provided | | | | | |

| **Outcome Evaluation** | | | | | |
|---|---|---|---|---|---|
| The program objectives were met | | | | | |
| Scale | Strongly agree (5) | Agree (4) | Neither agree nor disagree (3) | Disagree (2) | Strongly disagree (1) |
| The program increased my awareness of the problem of obesity | | | | | |
| The program increased my knowledge on obesity management | | | | | |
| I am willing to trial the checklist in practice | | | | | |

**Open ended Questions:**

What did you like most about the program ?

How could this program be improved?

Pre - Post Test

Please provide the following demographic information before completing the test.

Age___ Marital Status____ Highest Educational Degree Attained_____

Primary Language_____ Race/ Ethnicity_____ Occupation _____ Sex____

Please circle the letter below that provides the best description for the questions asked.

1. When defining obesity certain factors must be considered.

    a. The basal metabolic rate (BMI) is used to determine both pediatric and adult obesity
    b. The measures for defining pediatric obesity is the same.
    c. Obesity in adults occurs when the BMI is above 25.
    d. None of the above.

2. A pediatric client will be classified as having an abnormal weight if:

    a. He/she consumes a large amount of sugary foods
    b. He/she falls below the 5$^{th}$ percentile for height and weight on the CDC chart
    c. Has a BMI of 40 or higher
    d. Both B &C.

3. Children who are obese often develop many physical problems. Common physical problems associated with obesity include.

    a. Diarrhea, skin problems, and high blood pressure
    b. Joint problems, diabetes and sleep apnea.
    c. Worsening symptoms asthma, sore throat, and high cholesterol.
    d. All of the above

4. Obesity is a serious problem worldwide. According to United States obesity statistics, as of 2018:

    a. The percentage of 2-5 years who were obese was a mere 2%
    b. 10 million children were obese.
    c. 18% of children 2-5 years were obese
    d. Infants and toddlers showed no signs of obesity.

5. Obesity also poses social and psychological problems for individuals. An obese child is more likely to suffer from:

   a. Anxiety, depression, and extroversion.
   b. Depression, social isolation and bullying
   c. low self-esteem, low quality of life & body image disturbance
   d. Both A & C
   e. Both B &C

6. Worldwide, the percentage of boys and girls that were obese in 2016 were:

   a. 10 million girls and 20 million boys
   b. 35 million girls and 50 million boys
   c. 50 million girls and 74 million boys
   d. None of the above

7. Guidelines to manage obesity have been established by many healthcare organizations. The guidelines suggest that:

   a. The BMI should be used to diagnose obesity
   b. Screening for obesity should be done only during the well visit.
   c. Providers should screen, counsel, and refer obese clients to help improve their weight status.
   d. Comprehensive, intensive, behavioral interventions are recommended to improve weight status
   e. A, C, D only.
   f. C & D only.

8. Research has shown that clinical providers often forget to screen patients for obesity. Some of the reasons for this omission include:

   a. Insufficient time and knowledge.
   b. No time, discomfort with the topic.
   c. Lack of knowledge, lack of time, discomfort with topic, poor reimbursement
   d. Knowledge deficit, time constraints, uncomfortable discussing with patient.

9. It is possible to improve the problem of obesity by:

a. Reviewing and following established guidelines
b. Trying innovative approaches such as structured reminders to address the problem.
c. Involving the patient and family in the plan of care
d. Decreasing the fee for office visits
e A, B, C only.

10. If the problem of obesity is not addressed, The estimated number of individuals worldwide that could be obese by 2030 will be:

a. 5.8 Million
b. 2.5 Million
c. 2.5 Billion
d. 1.12 Billion

Appendix C: PowerPoint Slides

# Program Title:

• Obesity Management: Why, When and How ?

By Veronica B Nelson RN; MSN; FNP-C

At the end of this program, the participants will be able to:

Objectives

1. Define obesity as it relates to the pediatric and adult population
2. Differentiate between normal and abnormal weight status
3. List the adverse effects of obesity in children and adults
4. Relate the incidence and prevalence of obesity in the pediatric population nationally and globally
5. Identify established guidelines in the management of obesity
6. Demonstrate how to use a checklist designed to remind staff to use established guidelines in managing obesity in the practice setting.
7. Discuss the feasibility of the checklist use in practice
8. Offer support for the use of the checklist in practice

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## Introduction:

- A normal weight status is important for individuals to remain healthy.
- Sometimes, individuals may present to the office or clinic with an abnormal weight status (AWS)
- It is our responsibility as health care providers to address the problem of abnormal weight so that our patients have the best chance of remaining healthy throughout their lifespan
- This program will address why, when and how we should address the problem of abnormal weight status.

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## Persons with AWS may be:

- Underweight:
- Overweight:
- Obese:
- Severely Obese:
- Extremely or Morbidly Obese:

This presentation will focus on the problem of being obese

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## Calculating AWS

An easy way to determine if your patient's weight is abnormal is by calculating the body mass Index or (BMI)

- BMI= Weight (lbs)/height (ins)/height (ins) x 703
- Most EMR's automatically computes the BMI once height & weight is entered
- Underweight : BMI < 18.5
- Normal weight: BMI 18.5- 24.9
- Overweight: 25- 29.9
- Obesity: 30-34.9
- Severe Obesity 35-39.9
- Extreme or Morbid Obesity : 40 or more

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Defining Obesity:

**Pediatric Obesity:**

| Percentile Range | |
|---|---|
| Underweight | Less than the 5th percentile |
| Healthy Weight | 5th percentile to less than the 85th percentile |
| Overweight | 85th to less than the 95th percentile |
| Obesity | 95th percentile or greater |

**> or = 2 years ----------A BMI at or above the 95th percentile for age and gender as per the CDC charts**

**< 2 ..... weight for length > or equal to 97.7% as per the WHO growth standards (Styne et al., 2017**

**Adult Obesity:**

**> or =18 years ..... BMI 30 and above (CDC)**

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## Why Manage Obesity?

- **It is a recurrent health problem that affects millions of individuals**

In the US:

- 13.7 million children are obese (Lucas et al., 2018; Imoisil et al., 2019)
- In 2016,the prevalence of obesity in 2-19 years was 19.3% (14.4 million ) (CDC, 2021)
- I8.1 % of infants and toddlers had a high weight for length in 2012 (Resende Camargos et al., 2016)
- 18 % of children age 2-5 are obese (Busch et al., 2018)



## Why Manage Obesity? Globally:

- Recent statistics indicate that 42 million children under age 5 were overweight and obese (Koren et al., 2019)
- In 2016, 50 million girls and 74 million boys were obese (Abarca-Gomez et al., 2017)
- It is projected that 1.12 billion individuals will be obese by 2030 if the problem is not addressed ( (Mazloomy-Mahmoodabad et al., 2017)

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Why Manage Obesity?


**Physical Problems:**

- **Development of Asthma/ Worsening Asthma Symptoms (Lucas et al., 2018)**
- **Sleep Apnea**
- **Joint and Skin Problems ( Smith et al., 2020)**
- **Puberty Problems ( PCOS, hyperandrogenemia) (Styne et al., 2017)**
- **Prehypertension & Hypertension, Dyslipidemia, Type 2 diabetes , NAFLD, and later in life Cardiovascular disease and premature death (Styne et al., 2017)**

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Why Manage Obesity?


**Psychosocial problems:**

- **Major Depressive disorders (Rao et al., 2020)**
- **Social isolation and stigmatization (Smith et al., 2020)**
- **Low self esteem and quality of life related to being teased and or bullied (Militello et al., 2018)**

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## Obesity Management Guidelines:


**Many organizations have collaborated to develop guidelines for Obesity Management in children:**

**Among them are the AAP; USPSTF; The Endocrine Society, The Obesity Society, AHA, ACCC among others.**

**Among the recommendations are :**

**a) Screening of all children age 6 and older for obesity (Imoisili et al., 2019)**

**b) If Obese- Referral for comprehensive , intensive behavioral interventions to improve weight (Imoisili et al., 2019)**



## Obesity Management Guidelines

**Other Recommendations Include:**

**a) The use of BMI to diagnose overweight and obesity in children 2 years and older**

**b) Obesity DX = BMI 97.7 in child < 2.**

**b) Plotting / reviewing of child's weight at least annually during well and or sick visits.**

**c) The promotion of healthy eating habits by clinicians**

**d) Encouraging PA at least 20 minutes but preferably 60 minutes of vigorous PA 5 days per week**

**d) Limiting screen time 1-2 hours per day. (5-2-1-0 pneumonic)**

**e) Encouraging adequate rest (at least 8 hours per night)**

**g) Family involvement in plan to prevent obesity**

**i) School based programs for obesity prevention**

**k) Encouraging breastfeeding (Styne et al., 2017)**

Obesity Management Guidelines:

**What is comprehensive, intensive, Behavioral interventions?**

**a) Supporting/ Prescribing Healthy Eating .**


**b) Encouraging PA Programs for Child and Family Members**

**c) Encouraging Behavioral Goal Setting**





Obesity Management Guidelines

**d) Educating Families on Healthy Food and Exercise habits**



**e) Offering medications and surgical options only after a failed intensive lifestyle modification**

## A Checklist to Guide Obesity Management

**In a busy office environment Primary Care Providers do not always use obesity guidelines in practice.**

**Some reasons for this are:**

- **Lack of time**
- **Lack of Knowledge**
- **Discomfort with dealing with the problem**

**(Imoisil et al., 2019; Roberts et al., 2015)**

**A checklist to remind providers to address the problem is a simple tool to assist in dealing with the problem.**

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## A Checklist to Guide Obesity Management

**I developed this checklist to help manage obesity in the clinical setting**

**It consists of:**

- **Reminders for the Medical Assistants**
- **Reminders for the Providers**
- **Reminders for the team**

**By using this checklist, the office can improve on compliance in managing obesity, and increase revenue by getting full Insurance payment for the management of the problem of obesity.**

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## OBESITY MANAGEMENT CHECKLIST

### REMINDERS FOR THE MEDICAL ASSISTANT

- ☐ Ensure patients height and weight is documented in EHR.
- ☐ Determine obesity status (BMI > 30 for adults; BMI > 95th for children based on age.
- ☐ If screens positive for obesity, flag chart to alert MD/APN/PA on need to address obesity status.

### REMINDERS FOR THE EXAMINING PROVIDER

- ☐ Review patient's chart and confirm obesity status.
- ☐ Inform patient of weight status/diagnosis.
- ☐ Provide brief counseling on benefits of maintaining appropriate weight.
- ☐ Provide brief counseling on diet and exercise for weight management.
- ☐ Establish a plan for obesity management with at least one behaviour modification goal set by patient.
- ☐ Order appropriate tests as needed (lipid profile, comprehensive metabolic profile, EKG, thyroid profile etc).
- ☐ Refer to dietitian and encourage participation in a physical activity (PA) program.
- ☐ Plan for adjunctive medication therapy as indicated (BMI >40), and review patient goals and plan of care.
- ☐ Establish plan for follow up care.

### AFTER VISIT REMINDERS FOR THE HEALTHCARE TEAM

- ☐ Schedule follow up appointment in 1 month for weight check and evaluation of progress.
- ☐ Review pertinent blood work/ tests as needed.
- ☐ Offer praise with small achievements in weight loss or goal achievement.
- ☐ Provide information for referral to dietitian and PA program.

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## When Should we Manage Pediatric Obesity?

- During the first and all subsequent patient care encounters
- Management should start at any age.
- Management should continue throughout the lifespan.

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How Should we Manage Pediatric Obesity?

**A: Adhere to established guidelines**


**B: Adopt innovation in Practice**


**C: Trial this reminder checklist to manage obesity**

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Questions?

**Thank You**

**The End**

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# Appendix D: Tables

Table D1.

Demographic Characteristics

| Variable | Level | *M (SD), **Frequency (%) |
|---|---|---|
| Age* | - | 33.6 (14.3) |
| Gender** | | |
| | Female | 9 (81.8%) |
| | Male | 2 (18.2%) |
| Race** | | |
| | African American | 3 (27.3%) |
| | Hispanic | 8 (72.7%) |
| Marital Status** | | |
| | Married | 1 (9.1%) |
| | Single | 10 (90.9%) |
| Highest degree** | | |
| | High school | 7 (63.6%) |
| | Some college | 2 (18.2%) |
| | College graduate | 1 (9.1%) |
| | Doctorate | 1 (9.1%) |
| Primary language** | | |
| | English | 8 (72.7%) |
| | Spanish | 3 (27.3%) |
| Occupation** | | |
| | Medical assistant | 4 (36.4%) |
| | Receptionist | 2 (18.2%) |
| | Nurse | 1 (9.1%) |
| | Office Manager | 1 (9.1%) |
| | Physician | 1 (9.1%) |
| | Student | 1 (9.1%) |
| | Student cashier | 1 (9.1%) |

Table D2.

Repeated-measures *t*-test

| Observation | Mean (SD) | *p*-value |
|---|---|---|
| Pre-intervention | 39.1 (20.7) | |
| Post-intervention | 57.3 (24.1) | 0.013 |

Table D3.

Evaluation Analysis

| Question | Median (Interquartile Range) |
|---|---|
| Objectives Clearly Outlined | 5 (4-5) |
| Content Addressed the Stated Objectives | 5 (4-5) |
| Topics Clear and Easy to Follow | 5 (5-5) |
| Clear and Easy to Understand | 5 (4.8-5) |
| Adequate Knowledge of the Topic | 5 (5-5) |
| Instructions on Checklist Use Provided | 5 (5-5) |
| Program Objectives Met | 5 (4.8-5) |
| Program Increased Awareness of Obesity | 4 (4.8-5) |
| Program Increased knowledge on Obesity Management | 5 (5-5) |
| Willing to trial Checklist in Practice | 5 (4-5) |