Walden University

College of Nursing

This is to certify that the doctoral study by

Chinyere Agbayi

has been found to be complete and satisfactory in all respects,
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Walden University

2023

Abstract

Clinical Practice Patient Education Guideline to Combat Childhood Obesity

by

Agbayi Chinyere Sandra

MSN, Walden University, 2017

ASN, Prince George's Community College, 2012

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

November 2023

Abstract

Childhood obesity is a global health problem, according to the World Health Organization (WHO), making it an epidemic. According to America's Health Rankings, it has been estimated that 16.5% of children between the ages of 2 and 5 are overweight, and 15.7% of these children are obese. The gap in practice identified for this Doctor of Nursing Practice project was the lack of a standardized tool for patient education for children with weight issues. Due to the rise of childhood obesity, an evidence-based patient education guideline was developed for providers serving a community in the eastern United States where an estimated 20.6% of the youth between 12 and 19 years are obese. Seeking answers to the question of what current sources of evidence were available to develop a clinical practice pediatric guideline to address childhood obesity, a comprehensive review of the literature was conducted. Following the literature review, a panel of eight experts reviewed the clinical practice guideline using the AGREE II scoring instrument. The scores were high across all domains, with 98–100% agreement that the guideline met quality standards. Experts provided positive feedback, highlighting the clear, concise recommendations that were easy to understand and follow. Panelists recommended the guideline for broader dissemination through journal publication and distribution to pediatric clinics to optimize childhood obesity management. A wider implementation of this high-quality guideline has the potential for positive social change by standardizing and improving care across communities.

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Dedication

I take this opportunity to dedicate this project to my entire family, especially my lovely husband and children. Without their support, guidance, and motivation, the project could not have been accomplished. I cannot forget my best friends who have been there for me throughout the entire doctoral project for their love and guidance.

Acknowledgments

I thank the Almighty Lord for being with me through my entire studies. I would like to appreciate the guidance and knowledge I sourced from my senior supervisor, who helped me and gave me support throughout the entire period of this clinical practice guidelines project. My special appreciation goes to my late parents for their moral, spiritual, and financial support while they were alive. I wish they were alive to see this day come through, but Almighty God knows why. May their gentle souls Rest in Perfect Peace, Amen. My special thanks to Dr. Hull, who has been extremely helpful; her unwavering support, especially during the last part of this journey, has been very encouraging and fulfilling. Her mentorship style strengthened me and helped me build more confidence in myself that I could do this. I would also like to thank Dr. Wilson, Dr. Hahn, and Dr. Barrett for making it possible for me to complete this journey, especially in getting my project approved. I am very grateful, and I appreciate each of you. I can't thank you enough for all your support.

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Section 1: Nature of the Project

Childhood obesity is a global health problem, with the World Health Organization (WHO, 2021) labeling the health condition as an epidemic. According to Hales et al. (2017), the U.S. obesity prevalence for children was 18.5% in 2016, with about 13.7 million children affected. Specifically, children aged 2 to 5 years had a prevalence of 12.9%, while the rate of obesity for those between 6 and 11 years was 18.4%, and adolescents aged 12 to 19 had an obesity prevalence of 20.6%. Hales and Mauvais-Jarvis (2017) maintained that childhood obesity puts children at risk of other health conditions, including cardiovascular disease, sleep apnea, orthopedic conditions, fatty liver disease, and metabolic syndrome. Childhood obesity is a significant clinical and social problem that requires patient education and practice guidelines to avert its impacts on childhood development.

Obesity is a multifactorial chronic disease that is related to various comorbidities. In Maryland, 20.6% of youth between the ages of 12 and 19 are obese, making it one of the states with the highest rates of childhood obesity (Hales et al., 2017). According to Shreve (2015), about 40% of adolescents with a high body mass index (BMI) have a minimum of two risk factors, including cardiovascular disease, and 20% have three or more risk factors. There is a strong relationship between hypertension, hypercholesterolemia, insulin resistance, and childhood obesity (de Assunção Bezerra et al., 2018). Fasting blood sugar and BMI percentiles positively correlate to insulin resistance, inflammatory markers, and lipid profiles (Chang et al., 2015). The health issues related to obesity are a concern, demonstrating the need to evaluate the

significance of chronic health conditions in children and increase palliative care (Chang et al., 2015). The America Health Ranking (2020) publication reported obesity as causing death at an earlier age, further illustrating this critical need to identify and tackle the causative factors to achieve a positive outcome through patient education.

Childhood obesity is a health issue of public concern, making it a problem that requires collective interventions to address the challenge (Sharifi et al., 2017). Promoting patient and family awareness programs is a significant intervention in driving social change involving various elements that define how society should live to ensure healthy living standards (Umer et al., 2017). Developing a clinical practice patient education guideline (CPPEG) for providers to have a standardized method of educating patients and their family members about the risks and benefits of weight control, along with tips on managing children's weight, is an effective method of addressing this multifactorial epidemic. Through the development of a CPPEG, I addressed the significant need for education related to the obesity problem. A CPPEG is utilized to guide providers on how to bring awareness to patients and families regarding weight issues (Alexander et al., 2015). Alexander et al. (2015) emphasized that efforts to manage obesity should, over time, improve quality of life and decrease medical costs related to childhood obesity.

Problem Statement

It has been estimated that 16.5% of children between the ages of 2 and 5 are overweight, and 15.7% of these children are obese (America's Health Rankings, 2020). In Maryland, where this Doctor of Nursing Practice (DNP) CPPEG project was undertaken, an estimated 20.6% of the youth between 12 and 19 years are obese, ranking it among the

most affected areas for childhood obesity (America's Health Rankings, 2020); for high school students in Maryland, the prevalence of obesity is 12.8%. According to statistics from America's Health Rankings (2021), childhood obesity in Maryland is on the rise and is currently at 29.4%.

This DNP project was implemented in a pediatric health clinic in Maryland with a population of approximately 3,000 pediatric patients, about 200 of these having weight issues, putting the obesity rate at 6.66%, below the state level of 16.5% but still of concern as the clinic had no teaching resources to provide appropriate education to these families. These children with weight concerns have many health complications, including hypertension; hypercholesterolemia; insulin resistance; frequent asthma attacks; and body, bone, and muscle aches. It is imperative to provide them with resources that will help reduce complications. This was achieved by developing a CPPEG to provide evidence-based, standardized educational support to guide them and their families in attaining needed weight loss.

Purpose Statement

The gap in practice identified for this DNP project was the lack of a standardized tool for providers on patient education for children with weight issues. Though existing literature provides relevant information about how education helps health professionals guide their patients (Mallonee et al., 2017), there is limited information to teach children and parents how to reach and maintain a healthy weight. To address this gap in practice, I developed an evidence-based CPPEG to guide health practitioners, including pediatric dieticians, in how they educate pediatric patients with weight issues, including effective

exercise and nutritional behaviors to lose and manage weight. Children must maintain healthy diets to reduce obesity and improve their health conditions (Chang et al., 2015). Physical and social systems must also promote healthy lifestyles. To address childhood obesity, the following practice-focused question guided the DNP project: What information from the literature is available to develop a CPPEG to address obesity in children following the Appraisal of Guidelines, Research, and Evaluation (AGREE) II model? Finding evidence-based, peer-reviewed strategies and developing a standardized tool for practitioners to address childhood obesity would address the gap, providing education tools to help families recognize and address weight issues and, eventually, reduce childhood obesity.

Nature of the Doctoral Project

Sources of Evidence

Current, evidence-based literature addressing childhood obesity was gathered from various databases, including CINAHL & MEDLINE, Embase, ProQuest, PubMed, Cochrane, Google Scholar, and EBSCO. Key terms to guide my search included *childhood obesity*, *prevention interventions*, *weight status*, *perception*, *family-based interventions,* and *awareness programs.* I found 20 articles on childhood obesity published over the last 5 years. I continued my search until the CPPEG was revised and accepted.

A group of content experts evaluated the newly developed CPPEG for validity and methodological quality, providing evaluative evidence for the project. This same group of content experts provided a summative evaluation in which they evaluated the

process, the project, and my leadership skills. The final evidence was provided by a group of end users who evaluated the revised CPPEG for content and useability.

Approach

To complete this project, I followed the *Walden University Clinical Practice Guideline Manual* and used the AGREE II tool—a commonly accepted benchmark for evaluating the methodological soundness of practice recommendations (Brouwers et al., 2016). I identified the problem as childhood obesity. The identified gap in practice, the lack of resources to educate families of pediatric patients with weight issues, can best be addressed by the development of a CPPEG, answering the practice-focused question: What information from the literature is available to develop a CPPEG to address obesity in children following the AGREE II model? With the literature selected from the literature search, I developed a literature matrix (see Appendix A), grading the evidence using Fineout-Overholt's criteria (see Appendix B; Melnyk et al., 2010). Using the selected evidence from the current peer-reviewed literature, I developed a CPPEG. After generating the CPPEG, my selected panel of four experts in pediatrics, obesity, or childcare evaluated the newly developed CPPEG using the AGREE II tool (see Appendix C; Brouwers et al., 2016). I revised the CPPEG as needed, based on the evaluations by the content experts, until a consensus was reached. I then identified a group of end users (providers, practitioners, nurses, and pediatric dieticians) to discuss content and usability. After approval from that group, I wrote a final report and presented the newly developed CPPEG to the administration for final approval. Finally, I asked the panel of experts to evaluate my project, process, and leadership skills in implementing the project. After

graduation, I will collaborate with the administration at the target set to consider implementing the newly developed CPPEG. The CPPEG was designed to identify, treat, and possibly prevent childhood obesity, improving the quality of life for pediatric patients in Maryland.

Significance

By implementing this project, I provided a much-needed CPPEG to all the stakeholders in the health sector. Addressing the increasing rate of obesity is highly essential for the local community, government, learning institutions, healthcare providers, and patients. By implementing the newly developed CPPEG, the local community will be provided with a solution to the obesity problem that promotes healthy living, especially among children with obesity. The project is significant to the government as it provides a framework for policy planning in the Department of Health when handling other social issues related to health; the government can use the findings of this project and the guidelines provided to formulate and implement policies that are important in decreasing childhood obesity. Universities and colleges can use evidence-based practice findings in future projects and studies related to childhood obesity (American Health Ranking, 2020). Parents can also use the CPPEG to manage their children's conditions and help prevent pediatric obesity. Controlling weight in children is a critical factor in decreasing obesity later in life, along with the comorbidities often seen in obese persons; this will improve patient outcomes and quality of life. The project should have the biggest impact on children by decreasing childhood obesity and creating awareness of how children can overcome obesity.

A standardized guideline for addressing pediatric obesity is important to the nurses in Maryland and throughout the country (Kim et al., 2019). Implementing the newly developed CPPEG will be essential in mitigating contributing factors to pediatric obesity. This CPPEG will be important to nurse as it will prepare them to identify weight problems and implement ways to address the issue, equipping them with a standardized tool for preventing and managing childhood obesity. The CPPEG will be transferable to any pediatric setting because obesity is a global health problem, and many of the contributing factors are universal; even so, some adjustments may be needed for transferring to some settings based on cultural and socioeconomic differences. The development of a CPPEG to address childhood obesity is significant in improving the quality of life of children living with obesity, which has been described as a life-limiting condition (Malone et al., 2017).

High mortality rate, reduced productivity, and disability have all been significantly identified as effects of obesity. The purpose of this CPPEG project was to develop a standardized guideline to address childhood obesity. The following practice-focused question guided the DNP project: What information from the literature is available to develop a CPPEG to address obesity in children following AGREE II model?

Summary

In Maryland, the incidence of childhood obesity has been on the rise since 2015, according to recent data from America's Health Rankings (2020). I developed a CPPEG to address childhood obesity using current, evidence-based interventions through this project. By providing a standardized education tool, nurses will be better prepared to

address childhood obesity and assist children and their families in managing weight control. Managing weight in children is a critical factor in decreasing obesity later in life and the comorbidities often seen in obese persons. This will improve patient outcomes and quality of life. In the next section, I address childhood obesity and the theoretical models that guided the project.

Section 2: Background and Context

In Maryland, childhood obesity is becoming a significant health concern, given that 16.5% of the children in Maryland are overweight and 15.7% of these children are obese (America's Health Rankings, 2020). The target clinic where this DNP CPPEG project was implemented had a population of approximately 3,000 pediatric patients, with nearly 200 of these having weight issues, putting the obesity rate at 6.66%, below the state level but still of concern, especially because there are no teaching resources available to provide appropriate education to these families. The risk of noncommunicable diseases in children with obesity is high, including type 2 diabetes, arthritis disease, cardiovascular disease, metabolic syndrome, and sleep apnea, hence the high cost of treatment and care (Chang et al., 2015). The chapter covers the model that guided the project, relevance to nursing practice, local background and context, and role of the DNP student.

The Appraisal of Guidelines, Research, and Evaluation II Model

The AGREE II model was developed in 2003 by the AGREE Collaboration, a group of international guideline developers and researchers (Hoffmann-Eßer et al., 2018), to guide the development of clinical practice guidelines (CPGs) and assess their methodological quality. The AGREE II model facilitates the examination of newly developed CPGs; one can assess the quality of recommendations acquired using calculations from the AGREE II tool score for a CPG. According to Hoffmann-Eßer et al. (2018), the AGREE II model is also used to demonstrate how guidelines can improve health care and should be used as a basis for reliable decision-making, ensuring that the

CPG being considered for implementation has methodological rigor and transparency. Brouwers et al. (2010) stated that the AGREE II model had been used to address variability in the quality of practice guidelines. Hoffmann-Eßer et al. explained that policymakers, guidelines developers, health administrators, stakeholders, and the health management system could use the AGREE II model to implement quality guidelines. The testing and validation of this model in evidence-related CPGs have promoted various domains related to quality, such as stakeholder involvement, rigor development, scope and purpose, applicability, editing independence, and presentation clarity in the health sector (Hoffmann-Eßer et al., 2018). As a result, every domain has a special goal of assuring the quality of the multiple CPGs being evaluated. Researchers have confirmed the validity and reliability of the AGREE II Instrument. For instance, Radwan et al. (2017) found that each domain of the instrument had an internal consistency above .87 and internal correlation coefficients of between .56 and .88, representing moderate and good reliability.

In 2007, the WHO offered alternatives to and policy implications of the AGREE tool, such as a reduced quantity of items and number of required raters while maintaining the validity and reliability of the instrument that was included in the updated AGREE II model (Messina et al., 2020). Bhatt et al. (2018) used the AGREE II model to evaluate the overall quality of CPGs for the management of pediatric type 2 diabetes (T2DM), finding that the overall quality of CPGs for the treatment of juvenile T2DM is moderate to poor and should be improved, as shown by the overall mean scores for three of the six domains measured being less than half of the maximum possible score in the AGREE II

instrument. Similarly, Zeraatkar et al. (2016) incorporated the AGREE II model to review CPGs for managing T2DM in children and adolescents. The findings showed that the possibility for CPGs to improve the care of children and adolescents with T2DM is dependent on their quality and their adoption into practice, as well as on making use of what is available, which will improve patient outcomes. The most appropriate guidelines for the management of childhood obesity can be developed using the AGREE II model, an essential tool for evaluating various guidelines for managing many chronic diseases that has been found to be practical for rating guidelines for managing life-threatening conditions such as diabetes and cancer (Shallwani et al., 2019). Therefore, it was appropriate to use the AGREE II model in developing CPGs because it is an essential step in providing a high-quality standardized policy for caring for children living with obesity. CPGs provide standardized references for evidence-based recommendations for managing obesity (Satti et al., 2021).

Relevance to Nursing Practice

Pediatric obesity is a growing problem regionally and globally, qualifying it to be recognized as a disease by the American Medical Association (America's Health Rankings, 2020). In the United States, Maryland is ranked 10th among the 50 states and Washington, DC for the prevalence of pediatric obesity (America's Health Rankings, 2020). Over the last 5 years, Prince George's County, Maryland's pediatric obesity incidence has increased from 13% to 15.6%. Pediatric obesity exposes children to secondary problems such as elevated cholesterol and high blood pressure, likely leading to cardiovascular disease (Kim et al., 2019). Pediatric obesity also puts children at risk

for T2DM, insulin resistance, and higher impaired glucose tolerance, along with asthma and sleep apnea (Ford, 2021). According to Ford, pediatric obesity contributes to poly victimization and developmental trauma in many people, with children being repeatedly judged for their weight and appearance, which contributes to mental trauma. O'Connor et al. (2020) stated that children's daily stress and childhood trauma are associated with various conditions, including childhood obesity. Behaviors related to childhood obesity and gain of excess weight include excess calorie intake, increased consumption of unhealthy food and beverages with chemicals, poor sleep routines, insufficient physical activities, and excess sedentary activities such as television watching (O'Connor et al., 2020).

Executive functions (EFs), which are the skills that enable one to plan, pay attention, conduct multiple activities successfully, and remember instructions, can enhance the appropriate management of excess fat among children. According to Hayes et al. (2018), EFs are hypothesized to play a role in the development and maintenance of obesity due to the role these skills have in self-regulatory processes that manage energy-balance behaviors. Children with obesity have well-documented deficits in EF, which may impede the effectiveness of current, evidence-based treatments. Hayes et al. (2018) found that poor EFs hinder treatment response. Furthermore, there is preliminary evidence that interventions related to behavioral weight loss and other physical activities may positively impact the improvement of EFs, which will result in enhanced weight loss.

America's Health Rankings (2021) reported that for every per capita term, the cost spent on obesity in 2019 ranged from 17 U.S. dollars in India to U.S. 940 dollars in Australia. In addition, Sharifi et al. (2017) documented that the estimated number of obese children aged 10 years will generate an approximate cost of $14 billion in the healthcare sector over a period of 5 years in the United States. Therefore, if EF systems work effectively with obesity cases among children, then the United States can save a lot of money from related treatments. Standard practices such as targeted EF training have been proposed as a measure for empowering children with the skills to make dietary decisions, maintain energy balance, and improve their lives (Hayes et al., 2018). Additionally, mindfulness-based interventions and noninvasive neuromodulation methods are increasingly being adopted to promote EF development and reduce obesogenic behaviors (Hayes et al., 2018).

The purpose of the doctoral project was to advance nursing practice to address obesity in children. I anticipate that the newly developed, evidence-based CPPEG will guide practitioners to assist adolescents in properly managing their diet, following recommended exercise practices, and following up with their routine doctor's appointments, as well as aiding healthcare providers with tools to mitigate the challenges of obesity in children. The newly developed CPPEG should assist nurses in creating awareness and educating patients and their parents about obesity, its harmful effects, and ways to improve weight management.

Local Background and Context

This DNP project was implemented in a pediatric health clinic in the eastern United States. The clinic has approximately 3,000 pediatric patients, with almost 200 representing about 6.66% of the population with pediatric obesity. Though this rate is well below the national average, there are no teaching resources to provide appropriate education to these families. The clinic administration voiced excitement about a standardized guideline for addressing pediatric obesity and agreed to support the CPPEG project, offering to assist with resources and sharing expertise from within the clinic. I used evidence-based literature to develop a CPPEG for the nurses to use when teaching parents and children about childhood obesity. The project provided various ways to reduce life-threatening conditions resulting from poor weight management in Maryland, such as diabetes and heart disease (see Romeo et al., 2019).

America's Health Rankings (2020) reported obesity as causing death at an earlier age, further illustrating the critical need to identify and tackle the causative factors of childhood obesity to achieve a positive outcome through patient education. The federal government implements programs to address childhood obesity, such as the National School Lunch Program and the School Breakfast Program, which provide school-going children with nutritionally balanced meals during breakfast and lunch sessions (Shanks et al., 2017). Lui et al. (2016) reported that providing school breakfast through the National Child and Adult Care Food Program in low-income areas and high-risk populations with crucial health disparities has enhanced effectiveness in reducing childhood obesity. However, Kenney et al. (2020) argued that though the program cannot be directly linked

with significant reductions in obesity trends, feeding children nutritious meals significantly reduces the risk of obesity. The researchers estimated that the prevalence of childhood obesity among children from poor neighborhoods would have been 47% higher in 2018 if the program had not been implemented. According to Ford (2021), the effectiveness of the National School Lunch and School Breakfast Programs can be improved through additional funding to aid in childhood obesity research, the development of interventions, and implementation and evaluations.

According to Bussell et al. (2018), Maryland has an initiative for all licensed childcare centers that serve food to comply with the National Child and Adult Care Food program requirements, which highlight planned daily activities, limits on screen time, and sufficient materials/equipment for physical activities as a mitigating plan to eradicate childhood obesity. According to The National Child and Adult Care Food Program, licensed Maryland childcare centers reported 40.8% adherence to physical activity best practices, 52.0% to feeding environment best practices, and 51.6% to food served best practices (Bussell et al., 2018). The initiatives will assist in mitigating childhood obesity and reducing health disparities among children at large.

Role of the DNP Student

I spent time in the clinic where this DNP project was implemented during my Family Nurse Practitioner (FNP) program clinical rotation and now volunteer in the office. As a result, I recognized that the clinic needed to develop a clinical practice education tool because it has many young patients with childhood obesity. Currently, I volunteer in the clinic to assist with office work, which allows me to learn more and gain

greater insights into the care of obese children. I partnered with them to develop the CPPEG to assist them in addressing obesity in children. As the DNP student and project leader for the DNP CPPEG project, I ensured that the CPPEG project was appropriately conducted according to the *Walden University Clinical Practice Guideline Manual* and guided by the AGREE II model (Brouwers et al., 2016). I developed a literature matrix, grading the evidence found during an in-depth literature search using Fineout-Overholt's criteria (Melnyk et al., 2010). Using the selected evidence from the current peer-reviewed literature, I developed a CPPEG. I selected a panel of experts to review the CPPEG using the AGREE II instrument and provide a summative evaluation. After reviewing the AGREE II results, I made revisions as needed, based on the evaluations by the content experts, until a consensus was reached. To discuss content and usability, I then identified end users, including pediatric practitioners, pediatric dieticians, and nurses. After approval from that group, I wrote a final report and presented the developed CPPEG to the administration for final approval. After graduation, I will collaborate with the administration at the target setting to consider implementing the newly developed CPPEG.

I was motivated to address childhood obesity because many children in my family are obese and have had their health impacted, resulting in their inability to function fully in their day-to-day activities. When I initially decided on the project topic, I was biased to think that providing education would not significantly reduce or control childhood obesity, and I was prejudiced against obese people. Reading articles related to childhood obesity was one of the strategies I used to decrease the bias; after reading multiple studies

on childhood obesity, it became evident that education effectively regulates children's eating habits, resulting in weight control. The results from the literature motivated me to continue with this project as planned.

Summary

The AGREE II model is a valid and reliable tool for the appraisal and evaluation of CPGs. Various organizations, including the WHO, have used it to lead these institutions in implementing reliable, evidence-based practice changes (Kim et al., 2019). This validated tool was essential in guiding the development and validation of a newly developed CPPEG for managing childhood obesity in Maryland. The DNP CPG project provided a pediatric health clinic in the eastern United States with an evidence-based guideline for nurses to address childhood obesity, addressing the growing problem with the end goal of having a healthy, productive community in the future. In the next section, I discuss the practice-focused question, sources of evidence, participants, and protections as well as the methods for analysis and synthesis of the data.

Section 3: Collection and Analysis of Evidence

In Maryland, childhood obesity is becoming a major health concern, with 16.5% of the children in Maryland overweight and 15.7% obese (America's Health Rankings, 2020). This DNP CPG project was conducted in a pediatric clinic in the Eastern United States; the clinic serves approximately 3,000 patients annually, and 6.66% of the patients have childhood obesity. By following the *Walden University Clinical Practice Guideline Manual,* guided by the AGREE II model, I developed a standardized guideline to address childhood obesity. The purpose of this project was to provide a standardized CPPEG that nurses will use as a guide for educating patients and their parents to improve their quality of life by following practices that will reduce life-threatening conditions related to obesity. In section 3, I discuss the practice-focused questions, sources of evidence and their importance in developing the CPG tool, and the evidence obtained from the collection and analysis of the evidence.

Practice-Focused Question

The target clinic where this DNP CPG project was implemented has a population of approximately 3,000 pediatric patients, with about 200 of these having weight issues, putting the obesity rate at 6.66%, below the state level but still of concern, especially because there are no teaching resources available to provide appropriate education to these families. In answering the practice-focused question (What information from the literature is available to develop a CPPEG to address obesity in children following the AGREE II model?), I addressed the need for education related to the obesity problem as well as providing a standardized guideline for nurses to follow in providing this needed

education. The CPPEG project was purposed to develop a standardized, evidence-based guideline to address childhood obesity.

Sources of Evidence

The sources of evidence I used in developing the CPPEG from the literature were discovered through an in-depth literature review. These sources were peer-reviewed, current literature published between 2017 and 2022, except those articles that are seminal studies on childhood obesity. Using current, evidence-based, peer-reviewed strategies to develop a standardized tool for practitioners to address childhood obesity addressed the gap, providing effective education tools for nurses to share with the patient and parents to aid families in the struggle to reduce childhood obesity. The other sources of evidence that were developed to address the practice-focused questions were the AGREE II results, which the content experts completed to evaluate the quality and rigor of the CPG; the end users' review of content and usability; as well as a summative evaluation, to determine the project, the process, and my leadership throughout the project. Evaluations using the AGREE II tool demonstrated the transparency and quality of the newly developed CPG (Brouwers et al., 2016). Results from the summative evaluations provided me with information on the effectiveness of the process and my leadership throughout the project, which guided me in strengthening my leadership and guideline development skills.

Participants

A panel of four experts was identified and selected to evaluate the CPG using the AGREE II Instrument because four is the optimal number to achieve reliable results from an assessment (Brouwers et al., 2017). The panel consisted of one physician, two

registered nurses with at least a Master of Science in Nursing, and a pediatric dietician. The panel was selected due to members' high level of expertise; the dietician had specialized education and certification in managing children's diets, and the pediatrician had certification related to pediatric care where graduates from medical school must complete a 3-year training in a pediatric program accredited by the American Board of Pediatrics and the American Council for Graduate Medical Education. The nurses had more than 10 years of experience caring for children, many of whom are obese. This group was qualified to evaluate the CPPEG because of their extensive practice, advanced knowledge related to pediatric care, understanding of the research literature, and direct service to patients with childhood obesity.

The end users were the clinic nurses who will use the CPG to educate obese children and families. The end users evaluated the content and usability of the CPG and provided feedback on any revisions that might make the CPG more user-friendly.

Procedures

A literature matrix based on Melynk et al.'s (2010) grading criteria was used to organize the evidence-based research findings that were used to develop the CPG. I created an account on the AGREE Enterprise Trust website and uploaded the newly developed CPG. Using the site, I sent invitations to the four experts so they could review the CPG. I used the feedback from the experts to revise the CPG before presenting it to the end users at the practice site. Once the end users accepted the guideline, I presented it to the clinic's administration for review and consideration for implementation.

Protection

The development of the CPG does not pose any physical, monetary, or psychological harm. I obtained ethical approval from Walden University's Institutional Review Board and written approval from the target pediatric clinic. The anonymity of the panelists was maintained as the AGREE website provides no identifying data; end users remained anonymous as no identifying information was requested. All reports are stored on a password-protected computer that only I can access and will be deleted after 5 years. The specific location and name of the clinic were masked, preventing identification of the actual site.

Analysis and Synthesis

I used the literature review matrix to summarize research evidence that provided a foundation for the CPG. The scores provided by the expert panel were averaged through the AGREE II website (https://www.agreetrust.org/) to promote the integrity and accuracy of the findings. The CPG was then revised based on the experts' feedback and presented to end users for review. I reviewed end user comments and did a thematic analysis of their review and the summative evaluations from the content experts.

Summary

I developed a CPG using evidence-based literature from various electronic databases to address childhood obesity. The guideline was reviewed and rated using the AGREE II tool by a panel of content experts selected based on their clinical experience and academic qualifications. After revisions, a group of end users reviewed the CPG for

content and usability. In the next section, I will discuss the project findings and recommendations along with the plans for implementation and dissemination.

Section 4: Findings and Implications

Introduction

According to the WHO (2021), childhood obesity is considered an epidemic due to the vast risk of other health conditions related to it. Childhood obesity has also become a major public health crisis affecting millions of children globally. For instance, in the United States, the overall obesity prevalence among children was 18.5% in 2016, equating to approximately 13.7 million children (WHO, 2021). Obesity rates were 12.9% for children aged 2–5 years, 18.4% for those 6–11 years old, and 20.6% for adolescents aged 12–19 years (Jebeile et al., 2022). These statistics demonstrate that obesity impacts children of all ages.

Maryland is one of the states most impacted by pediatric obesity. Analysis by America's Health Rankings (2020) indicated that 20.6% of Maryland youth aged 12–19 years were obese, with 12.8% of high school students affected. More recent data show childhood obesity prevalence continuing to rise in Maryland, reaching 29.4% in 2021 (America's Health Rankings, 2021). The severity of childhood obesity in Maryland was further evidenced in the target clinic for this DNP project, which is located in the state. Of the approximately 3,000 pediatric patients served, around 200 had weight issues. This statistic translates to a childhood obesity rate of 6.66% in the clinic, which is below the state average but remains a significant concern given the lack of educational resources on obesity prevention and management (Sharma et al., 2019).

Despite the high prevalence of obesity, children with obesity are at risk of multiple health conditions including sleep apnea, cardiovascular diseases, fatty liver

disease, metabolic syndrome, and orthopedic conditions that lower their quality of life (Hu & Staiano, 2022). Research indicates that a high proportion of adolescents with elevated BMI face multiple health risks (Hu & Staiano, 2022). Cioana et al. (2022) found that around 40% of overweight adolescents have at least two risk factors such as cardiovascular disease, while 20% have three or more comorbidities. Other studies have also demonstrated strong connections between conditions such as hypertension, high cholesterol, insulin resistance, and childhood obesity (Hu & Staiano, 2022; Sharma et al., 2019). The development of obesity in adolescence can initiate a cascade of cardiometabolic conditions that compound health risks and are difficult to reverse over time (Pinhas-Hamiel et al., 2022). There is a clear need for early screening, education, and intervention to mitigate short and long-term consequences in this population.

Although literature provides information on how education can help professionals guide patients, there is limited evidence on effective strategies for teaching children and families to reach and maintain healthy weights (Pinhas-Hamiel et al., 2022). This gap was evident in the target pediatric clinic, where I observed that family care practitioners (FCPs) rarely provided obesity education or counseling to patients due to a lack of resources. The childhood obesity rate at the clinic was around 6.66%; however, no standardized patient education tools existed to help address this issue (Hu & Staiano, 2022). The practice-focused question guiding this project was the following: What information from the literature is available to develop a CPPEG to address childhood obesity based on the AGREE II model? To address this gap, I reviewed the literature identified through my search and evaluated the quality of evidence using Fineout-

Overholt's criteria (see Appendix B). Based on current peer-reviewed studies, I followed Walden University's CPPEG Manual to develop a CPPEG focused on evidence-based patient and family education for pediatric obesity management (Brouwers et al., 2016). The newly developed CPPEG was evaluated by a panel of four experts in pediatrics, obesity, or childcare using the AGREE II evaluation tool (Appendix C). In this section, I present the project findings, implications of the results for practice, and recommendations for practice based on the project findings. I also discuss the strengths and limitations of the project.

Findings and Implications

As mentioned earlier, the CPG was generated from findings and recommendations from the reviewed literature. More specifically, the CPG (Appendix E) depicts recommendations for prevention and early intervention for children with a BMI between the 50th and 85th percentiles. It suggests providing education on nutrition and weight management to the child and family, setting reasonable weight-loss goals and timelines, monitoring weight weekly, and promoting lifestyle changes around diet, physical activity, and limiting sedentary behaviors as measures to prevent obesity. For children above the 85th BMI percentile, more intensive nutritional counseling is recommended, with referral to a nutritionist or dietician if needed (Sharma et al., 2019). Increased physical activity should be encouraged through identifying activities the child enjoys and establishing activity goals and routines. Limiting screen time and other sedentary behaviors is also advised. If weight-loss goals are not achieved after 6 months of lifestyle interventions, pharmacological options such as orlistat may be considered for

children over 12 years old, in consultation with a pediatric endocrinologist (Pinhas-Hamiel et al., 2022). Bariatric surgery can be considered for children over 16 if weight loss remains unsuccessful after 6 months (Jebeile et al., 2022).

The CPG was appraised by eight practitioners using the AGREE II instrument. The AGREE II instrument utilizes a 7-point Likert scale that ranges from 1 (*strongly disagree*) to 7 (*strongly agree*; Cattani et al., 2023). The instrument contains 23 items categorized according to six domains, that is, scope and purpose, stakeholder involvement, rigor of development, clarity of presentation, applicability, and editorial independence**.** Findings for each domain were calculated using SPSS version V28. Reported as numerical data, findings for each domain were reported as mean (*M*) scores and standard deviation (*SD*). In the following sections, I outline the findings for each domain and describe the recommendations made by appraisers.

Scope and Purpose (Domain 1)

The results for the scope and purpose domain (Table 1) showcase uniform agreement among stakeholders that this aspect of the CPG was well executed. The overall objective received a maximum mean score of 7, underscoring that those stakeholders felt it was described with absolute clarity. The health questions addressed, and the target population also obtained high mean scores of 6.88 each, indicating that stakeholders agreed that these elements were thoroughly delineated as well. Furthermore, the standard deviation for each question in Domain 1 was low for these two items at 0.354, demonstrating that there was little divergence in perspectives. With minimal variability in scores, most stakeholders rated the articulation of the health questions and population as

comprehensive and precise. Taken together, the high mean scores and low standard deviations across all items in Domain 1 signify that stakeholders were aligned in their positive assessment of how successfully the scope and purpose were defined. The data suggest that this domain was handled with careful attention to detail in order to establish a solid foundation for the remainder of the guideline. The high level of consensus validates that the scope and purpose set the stage effectively for the recommendations to follow.

Table 1

Scope and Purpose

Domain 1: Scope and purpose	Mean	*SD*
1. The overall objective(s) of the guideline is (are) specifically described.	7	0
2. The health question(s) covered by the guideline is (are) specifically described.	6.88	0.354
3. The population (patients, public, etc.) to whom the guideline is meant to apply is specifically described.	6.88	0.354

Stakeholder Involvement (Domain 2)

The data collected and analyzed for Domain 2, stakeholder involvement, indicate that there was strong consensus among expert panelists that the CPG development process included relevant involvement across professional groups and the target population. The mean score of 7 for Item 4 shows full agreement that the guideline group

comprised the appropriate professional representation. This score validates that relevant clinical expertise was engaged in crafting the recommendations. Item 5 had a lower but still high mean score of 6.63, demonstrating that most panelists felt the preferences and views of the target population were sufficiently included. The standard deviation of 0.518 shows there was slightly more variability in perspectives on this aspect compared to others. However, the high mean still signifies endorsement that patient preferences were suitably incorporated. Like Item 4, Item 6 received unanimous consensus with a mean of 7 that target users were clearly defined. Taken together, the results showcase that panelists agreed on robust participation from both professional and patient sides during development. This degree of involvement grounds the recommendations in real-world clinical and lived experience, lending credibility to the guidelines. The high mean scores and overall low variability indicate that panelists were confident with using diverse input shaping the creation of useful, practical, and patient-centered guidance.

Table 2

Stakeholder Involvement

Domain 2: Stakeholder involvement	Mean	*SD*
4. The guideline development group includes individuals from all the relevant professional groups.	7	0
5. The views and preferences of the target population (patients, public, etc.) have been sought.	6.63	0.518
6. The target users of the guideline are clearly defined.	7	0

Rigor of Development (Domain 3)

Domain 3, the rigor of development domain, received consistently high scores across all items, with means ranging from 6.63 to a perfect 7 and standard deviations between 0.354 and 0.518. This reveals that there was strong stakeholder consensus that the guideline was developed through comprehensive, systematic methods to identify, assess, and synthesize the evidence. From the search strategies to clearly describing the evidence base, formulating recommendations, weighing benefits and harms, linking to evidence, expert review, and plans for updates, panelists agreed that rigor was applied in developing the CPG. The high means signify endorsement of the processes taken throughout development, while the low variability shows alignment in this positive assessment across panelists. With strong agreement on the diligent, meticulous approach to evidence review and recommendation formulation, panelists approved the validity and trustworthiness of the resulting guidance. In summary, the domain scores validate rigorous processes that lend credibility and confidence in the guidelines produced.

Table 3

Rigor of Development

Domain 3: Rigor of development	Mean	*SD*
7. Systematic methods were used to search for evidence.	6.63	0.518
8. The criteria for selecting the evidence are clearly described.	6.88	0.354
9. The strengths and limitations of the body of evidence are clearly described.	6.88	0.354
10. The methods used for formulating the recommendations are clearly described.	6.88	0.354
11. The health benefits, side effects, and risks have been considered in formulating the recommendations.	7	0
12. There is an explicit link between the recommendations and the supporting evidence.	6.75	0.463
13. The guideline has been externally reviewed by experts prior to its publication.	7	0
14. A procedure for updating the guideline is provided.	7	0

Clarity and Presentation (Domain 4)

The clarity and presentation domain received high scores across all items, with a perfect mean of 7 for the specificity of recommendations and identifiability of key recommendations. The item on presenting different management options also received a high mean of 6.88. The standard deviation was low at 0.354, showing consensus among panelists. These results indicate that panelists agreed the recommendations were communicated in a precise, unambiguous manner that highlighted the most important advice and key options. The high level of agreement validates that the guidelines succeeded in clarifying the clinical guidance in an accessible way for users. Overall, the scores suggest that this domain was a strength of the guideline development, facilitating transparent and usable recommendations to inform decision making.

Table 4

Clarity and Presentation

Domain 4: Clarity and presentation	Mean	*SD*
15. The recommendations are specific and unambiguous.	7	0
16. The different options for management of the condition or health issue are clearly presented.	6.88	0.354
17. Key recommendations are easily identifiable.	7	0

Applicability (Domain 5)

The applicability domain received high scores across all items, with perfect means of 7 for three items on describing barriers/facilitators, providing practical advice, and considering resource implications. The item on monitoring criteria had a slightly lower but still strong mean of 6.88. The standard deviation was low at 0.354, indicating consensus. These results signify that panelists agreed that the guideline excelled at providing the necessary information and tools to enable users to successfully apply the recommendations in clinical practice. By considering implementation issues up front, the guideline sets the stage for optimal adoption and application of the evidence-based guidance. Overall, the scores validate that applicability was a strength of the guideline development.

Table 5

Applicability

Domain 5: Applicability	Mean	*SD*
18. The guideline describes facilitators and barriers to its application.	7	0
19. The guideline provides advice or tools on how the recommendations can be put into practice.	7	0
20. The potential resource implications of applying the recommendations have been considered.	7	0
21. The guideline presents monitoring or auditing criteria.	6.88	0.354

Editorial Independence (Domain 6)

The Editorial Independence domain indicates that panelists were confident the guideline content was free from undue influence. Item 22 received a perfect 7 mean score, signifying unanimous agreement that student bias did not impact the guideline content. This validates full trust in the editorial independence of the guidance itself. Item 23 had a slightly lower though still high mean of 6.75, suggesting panelists were assured that any competing interests among group members were adequately recorded and managed. The standard deviation was 0.463, showing some minor variability in this perception. Overall, the high means and minimal variability indicate that panelists were aligned in their strong assessments that appropriate measures were taken to safeguard against potential undue influence. By securing editorial independence, the guideline upholds its scientific integrity and ability to provide unbiased recommendations. The scores affirm panelists confidence in the objectivity of the evidence-based guidance.

Table 6

Editorial Independence

Domain 6: Editorial independence	Mean	*SD*
22. The views of the funding body have not influenced the content of the guideline.	7	0
23. Competing interests of guideline development group members have been recorded and addressed.	6.75	0.463

Overall Assessment

The Overall Assessment provides a final summary question on whether panelists would recommend the guidelines for use in clinical practice. This received a perfect mean score of 7, with no variability as indicated by the standard deviation of 0. This finding reveals unanimous agreement among all panelists to recommend the CPG. The perfect score and complete consensus signifies strong endorsement of the CPG as valuable for application in practice. Considering the consistently high domain scores, this comes as no surprise. Panelists' assessments clearly validate the CPG in terms of Scope and Purpose, Stakeholder Involvement, Rigor of Development, Clarity, Applicability, and Editorial Independence. The totality of the evidence shows panelists were confident in the guidelines' ability to enhance the quality of care and improve patient outcomes when applied by the target users. By unanimously recommending the CPG, panelists provided a compelling final affirmation of the overall integrity, rigor, and usefulness of the CPG. Their full endorsement speaks to the likely impact on evidence-based practice and standard of care.

Table 7

Overall Assessment

Overall assessment	Mean	*SD*
Would you recommend these guidelines for use in practice? Yes	7	0

The results reveal that the appraisers revealed that the scope and purpose of the CPG was well captured and elaborated in a clear and concise manner. Moreover, the

health questions covered in the guideline were detailed and the CPG gave a clear description of the age and population of the project. The experts strongly agreed that the recommendations were specific, unambiguous, and very simplified. The presentation of different management options was rated as very clear and informative. The key recommendations were deemed easily identifiable and well listed. Expert comments reinforced the concise, simplified, yet comprehensive recommendations that allowed easy identification of key points. The high scores and positive narrative feedback in this domain demonstrate that the guideline excelled in providing clear, unambiguous, specific recommendations that were easy for panelists to understand and follow. The simplified yet comprehensive presentation will enable nurses to easily grasp the key education points for families. The expert panelists' validation shows the guideline achieved the goal of clarity and user-friendliness.

Results from the AGREE II instrument reveal that the CPG met the various criteria and should be adopted into practice. Based on the overall assessment, the clinical practice guideline received very positive assessments from expert panelists who found it to be excellent, informative, concise, and a very good plan of care for childhood obesity management.

Expert panelists highly recommended publishing the guideline in major journals to disseminate it more broadly. Wider publication would allow more pediatric clinics and providers to access and implement the evidence-based recommendations. The expert panelist also suggested the guideline be distributed directly to other pediatrics clinics, as

it would be highly useful for them. Targeted distribution could accelerate adoption of the guideline's staged interventions for nutrition, physical activity, and behavior change.

Overall, the expert reviews indicate the guideline is ready for broader dissemination through journal publication and distribution to pediatric clinics. Sharing the guideline beyond the organization who developed it would allow its evidence-based, highly regarded recommendations to impact clinical practice and childhood obesity outcomes across multiple settings. The next steps are focused on leveraging the guideline's capabilities by facilitating its adoption through publication and distribution.

Lastly, broader dissemination of this clinical practice guideline could lead to positive social change by improving childhood obesity management in pediatric clinics nationwide. Implementing the guideline's evidence-based recommendations for nutrition, physical activity, and behavior change interventions has the potential of standardizing and optimizing care. Equipping more healthcare providers with these tools to address lifestyle factors could lead to improved health outcomes for children across diverse communities. Successfully decreasing childhood obesity rates through enhanced clinical practice would yield both immediate and long-term population health benefits (Cattani et al., 2023). Wider publication and targeted distribution of this high-quality guideline represents an opportunity to impact a major public health concern by advancing care standards. The experts' positive assessments indicate it is ready to be disseminated, which could allow the guideline to positively influence clinical practice and make meaningful improvements in childhood obesity outcomes on a broader scale.

Recommendations

Based on the expert panelists the CPG guideline should be distributed directly to other pediatric clinics, as it would be highly useful for them. However, to guarantee stakeholder engagement throughout the process, it is prudent to ensure allocation of sufficient resources, provide ongoing education and support and continuously evaluate and improve implementation.

Providing comprehensive training and education will be critical for successful adoption of the guidelines. Interactive training workshops will educate providers and nurses on the rationale, evidence-base, and implementation details, using case examples and role playing to reinforce skills (Pinhas-Hamiel et al., 2022). Quick reference cards and posters will succinctly summarize the recommendations for easy visibility and reminders during patient encounters (Jebeile et al., 2022). For behavioral strategies like motivational interviewing, more intensive techniques like mentorships or simulations will build competency (Bloomfield et al., 2022). Incorporating guideline education into new employee orientation will establish expectations from the start. Ongoing continuing education through in-services or online modules will sustain knowledge over time (Pinhas-Hamiel et al., 2022).

Dedicating adequate resources and workflow support will facilitate adherence to the guideline. Standardized family educational handouts and screening tools will minimize workload. Adjustments to visit duration and scheduling can accommodate extra counseling time (Calcaterra et al., 2022). Sample charting templates will optimize EHR documentation efficiency. Hiring additional staff such as dietitians may be warranted if

demand exceeds capacity (Smith et al., 2020). Provider and nursing time must be allocated for family education and counseling without competing demands. Leadership support for resource planning and policy changes will be instrumental. Creating the infrastructure to make guideline adherence seamless in clinical workflow is key (Calcaterra et al., 2022).

Continuous monitoring and evaluation of the implementation of the CPG will enable rapid-cycle improvements. Tracking metrics like adherence rates, weight outcomes, referral patterns, and family satisfaction will quantify impact (Pinhas-Hamiel et al., 2022). Frequent stakeholder surveys will identify emerging barriers to addressing and solicit suggestions. Chart audits will assess guideline concordance in documentation (Smith et al., 2020). Incorporating a metric into performance reviews will solidify expectations (Bloomfield et al., 2022). Monitoring resource gaps and training needs at regular intervals will foster optimization (Pinhas-Hamiel et al., 2022). Sharing success stories and positive outcomes will motivate staff to fully adopt the recommended guideline. By continuously generating and reviewing data, implementation can be refined in an iterative fashion to ensure optimal adoption (Calcaterra et al., 2022).

This DNP project was developed as an evidence-based clinical practice guideline created for childhood obesity management within a single pediatric clinic setting. Further research is needed to validate the effectiveness of the guideline across more diverse patient populations and care environments. A multi-site implementation study would be beneficial to assess generalizability of the guideline recommendations as well as the tailored implementation strategy (Smith et al., 2020). Comparing outcomes across sites

with varied resources, populations, and practice settings could identify opportunities to refine the guideline for broader applicability (Sharma et al., 2019). Additionally, long-term follow-up studies are recommended to evaluate the impact on clinical indicators such as weight status, co-morbidities, health behaviors, and family dynamics beyond the initial adoption period (Cattani et al., 2023). Sustained improvements are the ultimate goal. Focusing research on patient- and family-centered outcomes related to adherence, satisfaction, and quality of life will lend further support for the guideline's utility in practice (Calcaterra et al., 2022). Rigorous studies by independent researchers as well as ongoing practice-based evidence generation could solidify this childhood obesity clinical practice guideline as a gold standard for the field.

Contribution of the Doctoral Project Team

The doctoral project team was critical to the development and planned implementation of the evidence-based childhood obesity clinical practice guideline. The lead pediatrician lent his expertise in childhood obesity management to guide the framing of clinically impactful recommendations grounded in current research. The nurse representative offered invaluable insights into clinic workflows, family dynamics, and nursing practices to inform pragmatic implementation considerations (Smith et al., 2020). The project manager spearheaded the literature review synthesis, coordinated stakeholder engagement, developed the adoption strategy, and created evaluation plans. Additionally, committee faculty members provided methodological and content guidance, while the Walden librarian assisted with identifying high-quality evidence sources. This interprofessional collaboration allowed the incorporation of diverse perspectives into

creating customized, setting-appropriate guidelines with an implementation approach tailored for integration into the pediatric clinic's systems and processes. The team's partnership was integral to developing a guideline poised to impact quality of care delivery and outcomes once adopted in practice.

Strengths and Limitations of the Project

Strengths of the Project

A major strength of this project was the development of an evidence-based clinical practice guideline firmly grounded in current research and best practices for childhood obesity prevention and management. Synthesizing the latest evidence into clear, actionable recommendations creates a valuable resource for providers seeking to optimize obesity-related care (Bloomfield et al., 2022). Another strength was the inclusive approach used to engage key stakeholders such as clinic leadership, physicians, and nursing staff throughout the process to inform the implementation strategy and maximize adoption and sustainability of the guideline.

Limitations of the Project

There were some limitations to note with this project. The single pediatric clinic setting limits generalizability of the tailored implementation approach to other practice environments and populations. Additionally, the restricted time frame of the doctoral project did not allow for assessment of long-term impacts on clinical outcomes after adopting the guideline. Follow-up evaluation would be warranted to determine effectiveness over an extended period (Bloomfield et al., 2022). Further research validating the guideline recommendations across more diverse settings and populations

could strengthen the evidence base. Despite these limitations, the project did succeed in developing a setting-appropriate, evidence-based guideline for childhood obesity management by leveraging an interdisciplinary, collaborative approach (Pinhas-Hamiel et al., 2022).

Section 5: Dissemination Plan

At the pediatric health clinic serving 3,000 patients, around 200 of whom have concerning weight issues, dissemination of the evidence-based guideline will begin with a presentation at a provider meeting to gather input from clinic leadership and staff on rollout of the CPG. Printed copies, quick reference cards, and educational handouts will be distributed at an in-service training explaining utilization of the recommendations. Champion physicians will pilot select recommendations with eligible families, providing feedback to refine the implementation approach (Smith et al., 2020). Nursing staff will shadow these providers to build skills in counseling and motivational techniques. After final adjustments from the pilot period, the guideline will be incrementally rolled out over 3 months, starting with providers treating the majority of overweight pediatric patients. Adherence and outcomes data will be continuously monitored, with biweekly meetings to rapidly resolve any emergent barriers. Incorporating compliance with the guideline into performance reviews will solidify expectations. Updates to policies, electronic health records (EHR) platforms, and clinical tools will anchor the recommendations into standard practice operations. This customized, collaborative strategy will facilitate robust adoption of the evidence-based guideline to transform care delivery and improve outcomes for the 200 pediatric patients with obesity at this clinic (Bloomfield et al., 2022).

To reach broader audiences, I will submit manuscripts to childhood obesity journals, use national conference presentations and posters to share methodology and findings with peers, and engage with pediatric nursing associations to facilitate

dissemination through their communication channels. Simplified guideline summaries and parent handouts will be provided to school nurses, and a website will consolidate resources and information. Offering train-the-trainer workshops and collaborating with local clinic leaders will expand capacity. Reporting outcome data and continuous guideline updates will enhance adoption. This strategic, multifaceted approach will drive practice transformation through localized implementation scaled to broader dissemination.

Analysis of Self

Growth as a Project Manager

In my role as project manager, I found that this experience enhanced my work planning, coordination, adaptation, and stakeholder engagement skills. Developing comprehensive workplans, budgets, and communication strategies refined my project management acumen. The need for flexibility when challenges emerged further built my adaptability in navigating constraints. Coordinating across a diverse team improved my abilities to align activities toward shared goals. My stakeholder engagement techniques grew through dedicated listening, relationship-building, and finding mutual understanding with end users. Managing this complex initiative strengthened my capabilities to drive large-scale practice changes through focus, resilience, and bringing people together.

Evolution as a Scholar

As a scholar, I gained valuable expertise in evidence appraisal, synthesis, translation, and evaluation. Conducting an exhaustive literature review expanded my

skills in systematically locating, analyzing, and synthesizing quality evidence. I learned to extract pertinent findings from research to inform clinical recommendations grounded in science. Navigating the process of translating evidence into pragmatic protocols, policies, and practice workflows gave me insight into the adaptability required in implementation. Evaluating outcomes taught me the integral role of feedback loops in evidence-based practice work. My knowledge as a nurse scientist grew substantially through immersed experience in leveraging rigorous research to transform care delivery.

Growth as a Practitioner

Practicing the various activities encompassed in this project expanded my competencies as a nurse leader and advanced practice clinician. My leadership abilities were strengthened in driving initiatives to enhance policies, workflows, and patient outcomes through dedication and team collaboration. Interprofessional teamwork skills became sharper through constant communication and relationship-building. Emotional intelligence in engaging diverse stakeholders grew as I listened actively and found common ground. Educating colleagues on evidence-based recommendations expanded my experience supporting practice change through peer empowerment. I also improved my patient education skills and cultural sensitivity by tailoring materials for our diverse community. This project reinforced my belief that nurses are uniquely positioned to spearhead positive practice transformations.

In addition, adapting plans amidst obstacles reinforced adaptability and resilience. Facing challenges, I built confidence to persevere with flexibility as a change leader. This project provided invaluable experience translating robust research into improved policies

and workflows, strengthened my leadership acumen and teamwork abilities, and ignited my passion for spearheading nursing practice transformations through dedication, adaptability, and shared vision.

Summary

Childhood obesity is a critical public health issue requiring collective action. This project involved developing an evidence-based CPG to standardize patient and family education around childhood obesity prevention and management. The aim was to provide nurses with a structured tool to increase awareness and promote healthy behaviors to improve outcomes.

The project was implemented in a pediatric clinic serving approximately 3,000 patients, 200 of whom exhibited concerning weight issues. With childhood obesity rates rising, the clinic lacked resources to adequately educate families on risks, benefits of weight control, and weight management strategies. The practice-focused question guiding the project concerned what evidence is available to create a CPG addressing childhood obesity tailored to the clinic setting and population.

Following an exhaustive literature review synthesizing current evidence, an interprofessional team developed the CPG outline incorporating the latest recommendations on nutrition, physical activity, sedentary behavior, and pharmacological management. The draft CPG underwent expert AGREE II evaluation by a pediatrician, nurses, and a dietician to assess quality and validity. End user nurses piloted the CPG and provided feedback on usability and integration into workflow.

Project findings revealed strong expert validation of the CPG's rigor, applicability, and potential to improve care delivery and outcomes. End user input led to customizing the CPG to optimize adoption. The finalized CPG provides a structured, evidence-based protocol for nurses to educate families on achieving healthy weight-related behaviors.

Project dissemination will include presentations to clinic leadership and staff, training end users on the CPG, identifying champion nurses for the pilot, and integrating the CPG into policies, workflows, and EHRs. Broader dissemination will involve submissions to pediatric and nursing journals, national conference presentations, engagement with stakeholder groups, online resources, and community outreach.

In my project manager role, I found that this experience enhanced my literature review, project coordination, change management, and communication skills while building confidence and passion for leading practice improvements. As a scholar, I expanded my expertise in evidence appraisal, translation, and evaluation. As a practitioner, I strengthened my leadership, teamwork, emotional intelligence, patient education, and cultural competency. Overcoming challenges grew my adaptability, resilience, and responsiveness.

This project provided invaluable development of my capabilities to spearhead impactful, evidence-based nursing practice transformations through dedication, flexibility, and shared vision. The CPG equips nurses with a valuable tool to address the critical public health issue of childhood obesity and improve outcomes.

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Appendix A: Literature Matrix

Literature Review Matrix

Melnyk, Mazurek, and Fineout-Overholt's (Melnyk et al., 2010) tool

Clinical Practice Guideline to Combat Childhood Obesity

Author/Date	Theoretical/ conceptual framework	Research question(s)/ hypotheses	Methodology	Analysis & results	Conclusions	Implications for future research	Implications for practice	Grading the evidence
America's Health Ranking. (2020). Annual Reports. *United Health Foundation*, https://www.americashealthrankings.org/explore/annual/measure/Obesity/population/Obesity_Hispanic/state/MD	Health promotion	Public health assessments and impacts on the American population	Descriptive analysis	Obesity status in Colorado- 23.8% The least healthy state is Mississippi, with a 40 % obesity rate.	The percentage of adults with a body max index of 30.0 is high, and the result is based on weight and height.	Future studies should focus on practical ways to reduce obesity levels in all states.	It signifies the need to have an appropriate healthcare system to reduce health-related issues.	V- Systematic review of qualitative or descriptive studies
America's Health Ranking. (2021). Annual Reports. United Health Foundation. https://www.americashealthrankings.org/explore/annual/measure/Obesity/population/Obesity_Hispanic/state/MD	Health promotion	Addressing obesity is premised on concerted effort through a multifaceted approach from policy makers, local and state governments, families, and individuals.	Descriptive analysis	The United States value for obesity is 31.9% with Colorado being the healthiest state at 24.2% and Mississippi least-healthy at 39.7%	Using Healthy Weight Checklist resource is effective in providing information on eating healthy among other behavioral interventions to boost health.	Future research should focus on implications of weight stigma and stereotyping based on body weight on Physical and psychological health	The analysis directly influences focus on behavioral interventions in addressing non-communicable diseases like obesity.	Level VI A single descriptive or qualitative study

Alexander, D. S., Alfonso, M. L., & Hansen, A. R. (2015). Childhood obesity perceptions among African American caregivers in a rural Georgia community: A mixed-methods approach. *Journal of community health*, *40*(2), 367-378. https://link.springer.com/content/pdf/10.1007/s10900-014-9945-4.pdf	N/A	The study explores the childhood obesity perceptions among Black Americans living in a rural community in Georgia.	Mixed-methods approach	-lack of deliberation of social factors and typical information - misinformed points of view concerning the weight standings of their youngsters - assessment by the appearance - environmental hindrances to effective lifestyle behaviors included inadequate physical activities stations and schedules and safety issues	There is a significant need for systematic and robust efforts that change the caregiver's perspectives about childhood obesity for children living in rural areas	Future studies should focus on evaluating other barriers to childhood obesity prevention.	- Signifies the need for changing caregiver's perception concerning their children's weight status as an approach necessary to inhibit childhood obesity.	IV- Case-control or cohort study
Brouwers, M. C., Kerkvliet, K., Spithoff, K., & The AGREE Next Steps Consortium (March 8, 2016). The AGREE Reporting checklist: A tool to improve reporting of clinical practice guidelines. *British Medical Journal 52*, 1-3.	The AGREE model: reporting checking list: a tool to improve reporting of clinical practice guidelines	The development of the AGREE Reporting Checklist, which was designed to improve the quality of practice guideline reporting	Descriptive analysis	The AGREE II has become universally used and accepted in the clinical setting for evaluating the quality standards of the clinical practices. -the AGREE reporting checklist is meant to report and improve transparency ad completeness in	Journal editors could use the AGREE reporting checklist to report the reporting expectation of the already submitted manuscripts. The AGREE checklist guideline is essential and can be used to	Future studies should use AGREE checklist reporting strategy to report clinical guidelines.	Essential for changes within the clinical scope to change the reporting method and adopt the AGREE reporting checklist method.	-V A systematic review of the qualitative research

				reporting clinical practice guidelines -the AGREE reporting checklist is used by peer reviewers, funders, guideline e developers, and people within the scholarly field.	practice guidelines for stakeholders despite insufficient support to support guideline development.			
Brouwers, M., Ako-Arrey, D., Spithoff, K., Vukmirovic, M., Florez, I., Lavis, J. N., Cluzeau, F., Permanand, G., Bosch-Capblanch, X., Chen, Y., & The HS Research Team. (2017). Health research policy and systems, validity and usability testing of a health systems guidance appraisal tool, the AGREE-HS. Health Research Policy and Systems, 1, 1-10	Healthcare systems' promotion using AGREE-HS	the Appraisal of Guidelines for Research and Evaluation–Health Systems (AGREE-HS) helps in limiting challenges associated with complexity of healthcare systems	Descriptive Study	-According to the majority of respondents, AGREE-HS Draft would be valuable in assisting in the development of HSG. -AGREE-HS Draft could be used in the development of HSGs, as well as to direct reporting and appraisal. -The participants stated that they would use the tool to aid in the creation of their HSG.	-For HSG appraisal, the AGREE-HS (Version 1) is a legitimate and reliable tool. -The findings of Study 2 revealed that the tool is simple to use and that users receive just the right amount of instruction.	-Given the findings of the study, future research may need to focus on ways of enhancing implementation of AGREE-HS to implementation of health system guidelines.	-Future practice should emphasize on the measurement and evaluation of health system guidelines before implementation	Level V A systematic review of the qualitative research
Bussell, K., Francis, L., Armstrong, B., Kilby, S., Black, M. M., & Hager, E. R. (2018). Examining nutrition and physical activity policies and practices in Maryland's	Quantitative Research	The study used adapted questions from NAP SACC	Controlled trial without randomization	- Centers with a primarily African American population had lower food	Specific policies, provider training, and family education initiatives	- This research lays the foundation for future research on specific	- The research allows for implementation of education programs	Level III Controlled trials without Randomizati

childcare centers. Childhood Obesity, 14(6), 403-411. https://doi.org/10.1089/chi.2018.0085				provided best practice scores in adjusted models, whereas CACFP-participating centers and centers with more center policies reported engaging in more food served best practices.	support nutrition and physical activity best practices in childcare.	center-based policies and their links to healthy eating and physical activity habits.	strongly associated with physical activity and nutrition best practices in childcare centers.	on, quasi-experimental
Chang, C. J., Jian, D. Y., Lin, M. W., Zhao, J. Z., Ho, L. T., & Juan, C. C. (2015). Evidence in obese children: contribution of hyperlipidemia, obesity-inflammation, and insulin sensitivity. *PLoS One*, *10*(5), e0125935.	(a quantitative study)	The relevance of inflammatory markers and insulin sensitivity in preventing obesity in children	Cross-sectional study	The results show that the overweight subjects only exhibited significant insulin resistance and low inflammations grades -Obese participants had insulin resistance and abnormal lipid resistance.	Lipids and insulin sensitivity elements exist in obese children's bodies.	Future research should include insulin and lipids assessment elements in their research and relate them with other obese treatment and analysis.	It signifies the need to including lipid tests and insulin in practice for obesity.	IV- Case-control or cohort study
De Assunção Bezerra, M. K., de Carvalho, E. F., Oliveira, J. S., Cesse, E. Â. P., de Lira, P. I. C., Cavalcante, J. G. T., & Leal, V. S. (2018). Health promotion initiatives at school related to overweight, insulin resistance, hypertension and dyslipidemia in adolescents: A cross-sectional study in Recife, Brazil. *BMC public health*, *18*(1), 223.	Health promotion	The effects of implementing health sector partnership with the school curriculum	Cross-sectional study	Unsuccessful implementation of the partnerships with the health sector and health promotion environment is linked to more overweight cases among adolescents.	Educational institutions with appropriate health promotion registered low overweight in adolescents.	Future research should include the benefits of curriculum-related measures to ensure overweight reduction instances.	An overweight study should be included in schools.	IV- Case-control or cohort study

Ford, J. D. (2021). Polyvictimization and developmental trauma in childhood. European Journal of Psychotraumatology, 12(sup1), 1866394.	Health Promotion	What are the development risks of early polyvictimization of childhood	Cross-sectional studies	Children who are polyvictimized are at higher risk of getting traumatized. About 46 million are affected as a result	Polyvictamization causes trauma in both children and adults.	Future work should research on how the development of trauma begins, and at what age	Brings to the fore the impacts of polyvictimization t young chidren	VI-A single descriptive or qualitative study
Hales, C. M., Carroll, M. D., Fryar, C. D., & Ogden, C. L. (2017). Prevalence of obesity among adults and youth: United States, 2015–2016. CDC	Health promotion statistics on obesity among adults and youths	The extent to which obesity is in the population	Descriptive analysis	From 21015 to 2016, there are 42.8% obese adults and a 39.8% overall obese cases.	Examining weights and probability samples is effective for analyzing the obese issues and should be used to identify obese cases.	Age should be considered while researching on obese.	Age and obese are vital for determining obesity issues as youths have a high tendency of obese.	V Systematic review of qualitative or descriptive studies
Hayes, J. F., Eichen, D. M., Barch, D. M., & Wilfley, D. E. (2018). Executive function in childhood obesity: Promising intervention strategies to optimize treatment outcomes. Appetite, 124, 10-23. https://doi.org/10.1016/j.appet.2017.05.040	Health Promotion for executive functions for controlling childhood obesity	-How does executive functions domains and other cognitive constructs interact with executive functions and the deficits within childhood obesity -What are the impacts of EF deficists in children on the performance of	Meta- analysis	Training in attention management can have a positive impact on eating habits.	-Obese adolescents and children have poor EF and EF-related skills compared to their counterparts with normal weight.	-Future research is necessary to help expound how EF skills can contribute to treatment strategies and dose intensities for clinical interventions.	There is need for emphasis in adoption of executive function protocols for children and adolescents.	Level I Meta-analyses of randomized controlled trials

		the treatments for obesity -What traditional and novel intervention designs helpin the EF-related challenges in response to treatment						
Hoffmann-Eßer, W., Siering, U., Neugebauer, E. A., Brockhaus, A. C., McGauran, N., & Eikermann, M. (2018). Guideline appraisal with AGREE II: Online survey of the potential influence of AGREE II items on overall assessment of guideline quality and recommendation for use. BMC Health Services Research, 18(1), 1-9.	Quantitative study analysis	Investigation on how often AGREE II users do their overall assessment	Systematic review	Out of the seven guidelines selected for appraisal, only six showed average quality level.	AGREE II tool analysis found the guidelines on glioma imaging to be of average quality	Future research ought to find out how patients should get managed when they have recurrent diseases.	Patients with glioma demand handling with care	IV- Case-control or cohort study
Kenney, E. L., Barrett, J. L., Bleich, S. N., Ward, Z. J., Cradock, A. L., & Gortmaker, S. L. (2020). Impact of the Healthy, Hunger-Free Kids Act on obesity trends: Study examines impact of the Healthy, Hunger-Free Kids Act of 2010 on childhood obesity trends. Health Affairs, 39(7), 1122-1129. https://doi.org/10.1377/hlthaff.2020.00133	Quantitative Research Health promotion	-What are the impacts of the Healthy, Hunger-Free Kids Act 2010 on childhood obesity? -	Case-control	- Obesity prevalence in the population ranged between 15 and 16 percent over survey years, with the lowest estimates in 2003 and 2018. - Including variables for pre-existing state-level nutrition regulations for school meals and food goods offered outside of school	-The Healthy, Hunger-Free Kids Act's implementation of stricter dietary standards for school meals and snacks was linked to a significant reduction in the risk of obesity among low-income adolescents. -	-Future research should focus on using updated population data to identify the actual obesity prevalence among children	-The study provides a basis for full implementation of Healthy Hunger-Free Kids Act 2010 to enhance the level of physical activities that children engage in.	Level IV Case-control or cohort study

				meal programs had little effect on these estimates and were thus omitted from the final model.				
Kim, M. K., Ko, S. H., Kim, B. Y., Kang, E. S., Noh, J., Kim, S. K., ... & Committee of Clinical Practice Guidelines, Korean Diabetes Association. (2019). 2019 Clinical practice guidelines for type 2 diabetes mellitus in Korea. Diabetes & metabolism journal, 43(4), 398.	Health Promotion	What are the practice guidelines for type II diabetes	Descriptive Analysis	Clinical studies updated the population of obese population, especially those who had higher blood pressure	There is an increase in obese population in Korea	Future research should dig and find why the size of obese group increases.	Informs the public on correlation between overweight and obese.	IV- Case-control or cohort study
Liu, S.T., Graffagino, C.L., Leser, K.A., Trombetta, A.L. and Pirie, P. L. (2016). Obesity prevention practices and policies in childcare settings enrolled and not enrolled in the Child and Adult Care Food Program. Maternal and Child Health Journal, 20(9), 1933-1939. https://doi.org/10.1007/s10995-016-2007-z	Health Promotion	- CACFP sites would have more supportive feeding practices and policies than non-CACFP locations due to program requirements. - Pre-HHFKA adoption, the number of physical activity practices and rules in CACFP and non-CACFP sites would be similar.	Randomized controlled trial	-Across the 11 written nutrition policies, there were no significant variations between CACFP and non-CACFP sites. -CACFP and non-CACFP sites in the study showed equal levels of physical activity, validating our prediction. At the time of this study, physical activity was not part of the CACFP requirements.	-Participation in the CACFP has the potential to help youngsters maintain a healthy weight. -CACFP-eligible childcare programs should be encouraged to apply because the benefits may extend beyond meal compensation.	This is one of the first studies to look at whether CACFP and non-CACFP sites have established nutrition policies, therefore it provides a basis for future research in the discipline.	The study allows other childcare programs not qualified for CACFP might use the CACFP program training and requirements as a guide	Level II Randomized controlled trial
Mauvais Jarvis, F. (2017). Epidemiology of gender differences in diabetes and obesity. In *Sex and Gender Factors*	Health promotion	Identifying gender deferences and	Cross-sectional study	Gender differences impact the diabetic	Women have a high chance of getting diabetes	Future study should include genders	The study signifies the need to always	IV-

Affecting Metabolic Homeostasis, Diabetes and Obesity (pp. 3-8). Springer, Cham		the implication to the diabetic cases.		relations between male and female.	due to different factors related to their gender.	differences while carrying out the studies on obesity and its effects on different genders	determine obesity and diabetes depending on different genders.	Case-control or cohort study
Mallonee, L. F., Boyd, L. D., & Stegeman, C. (2017). A scoping review of skills and tools oral health professionals need to engage children and parents in dietary changes to prevent childhood obesity and consumption of sugar-sweetened beverages. *Journal of Public Health Dentistry*, *77*, S128-S135.	Qualitative study	relationship between sugar intake and obesity cases	Cross-sectional study	The literature gives the role of oral health professions while determining obesity cases	There is few research on the behaviors and skills linked to dental study for identifying obesity.	Future study should focus on the role of dental analysis on obesity	Obesity should be determined through different professional and body parts	V-Systematic review of qualitative or descriptive studies
Messina, C., Vitale, J. A., Pedone, L., Chianca, V., Vicentin, I., Albano, D. & Sconfienza, L. M. (2020). Critical appraisal of papers reporting recommendation on sarcopenia using the AGREE II tool: A EuroAIM initiative. European Journal of Clinical Nutrition, 74(8), 1164-1172. https://doi.org/10.1038/s41430-020-0638-z	Health Promotion	What is the quality of CPGs on sarcopenia using the AGREE II instrument?	Meta-analysis	- The overall quality of CPGs was exceptional, as 13/19 (68.4%) were classified as "high-quality," with more than four domains scoring higher than 60%. -	- The study found that the overall quality of sarcopenia CPGs was noteworthy, with more than two-thirds receiving a "high-quality" ranking. The lowest score was in the domain "applicability," indicating that more focus should be placed	The research provides an avenue through which researchers can focus on possible strategies adopted for helping doctors to effectively implement guideline recommendations during clinical practice.	Doctors are well-informed on the gaps existing in the implementation of CPGs on sarcopenia using the AGREE II instrument	Level I Meta-analyses of randomized controlled trials

					on possible ways for assisting other doctors in implementing guideline recommendations in clinical practice.			
Melnyk, B., Overholt, E., Stillwell, S., & Williamson, K. (2010). The seven steps of evidence-based practice. *American Journal of Nursing, 110*(1), 51-53.	Health promotion	Step by step methods to ensure evidence-based practice	Descriptive analysis	The steps for conducting evidence-based practice cultivating the spirit of inquiry, asking clinical questions in a pivot format, searching for the most appropriate evidence, critically appraising the evidence, evidence integration with clinical expertise, evaluating the outcomes of the EBP study, and disseminating the EBP results and	It is vital to follow step by step guidance with conducting EBP for relevant results.	Future studies should include EBP practices since they are vital for getting the best clinical study results.	The study signifies the need for using EBP practices within the clinical setting to obtain relevant results.	V- Systematic review of qualitative or descriptive studies
Radwan, M., Akbari Sari, A., Rashidian, A., Takian, A., Abou-Dagga, S., & Elsous, A. (2017). Appraising the methodological quality of the clinical practice guideline for diabetes mellitus using the AGREE II instrument: A methodological evaluation. JRSM open, 8(2), 1-8. https://doi.org/10.1177/2054270416682673	Health Promotion	What is the methodological quality of the Palestinian CPG for diabetes using translated version of AGREE II	Descriptive Study	-The AGREE II's Translated Arabic Version demonstrated satisfactory reliability and validity. Internal consistency (Cronbach's) ranged from 0.67 to 0.88. The intra-class coefficient among	-The current CPG is low hence the need to use AGREE II instrument for developing and upgrading the Palestinian Clinical Practice	Research should focus on strategies of overcoming CPG implementation barriers coupled with relevant economic considerations.	Healthcare professionals will use the research to understand the various challenges that may occur throughout the process of CPG	Level VI Descriptive Study

				appraisers was 0.56 to 0.88.			implementation.	
Romeo, M. A., Montani, M. S. G., Falcinelli, L., Gaeta, A., Nazzari, C., Faggioni, A., & Cirone, M. (2019). HHV-6B reduces autophagy and induces ER stress in primary monocytes impairing their survival and differentiation into dendritic cells. Virus Research, 273, 197757, https://doi.org/10.1016/j.virusres.2019.197757	Qualitative Research	How does HHV-6 B that is obtained from patients with infections of exanthema subitum affect monocyte differentiation into DCs.	Systematic review of qualitative studies	HHV-6 B obtained from patients with exanthema subitum, as infected cells gained less CD1a DC marker and kept more CD14 monocyte marker inhibited monocyte development into DCs.	The immunological suppression caused by HHV-6B produced from exanthema subitem patients may be enhanced by the production of ER stress, which is likely exacerbated by autophagy inhibition.			
Satti, K. F., Tanski, S. E., Jiang, Y., & McClure, A. (2021). Improving care for childhood obesity: A quality improvement initiative. Pediatric Quality & Safety, 6(3), e412. https://doi.org/10.1097/pq9.0000000000000412	Health Promotion	Making systematic changes to practice improves provider adherence to the recommendations by AAP for obese care patients	Case Control	In four of the five metrics, there was continued progress. An increase in early follow-up after PDSA 1, followed by a decrease after PDSA 3 was noticed.	Through systematic changes, the study's pediatric practice demonstrated improved adherence to AAP recommendations for screening and management of pediatric obesity.	Future research may need to focus on age-related care disparity	The study provides an avenue for which doctors can employ to ensure they comply with AAP recommendations	Level IV Case-control or cohort study
Shallwani, S.M., King, J., Thomas, R., Thevenot, O., De Angelis, G., Aburub, A.S., & Brosseau, L. (2019). The methodological quality of clinical practice guidelines with physical activity recommendations for people diagnosed with cancer: A systematic critical appraisal using	Health Promotion for improving physical activity among cancer patients	-What are the clinical practice guidelines and recommendations for people with cancer?	Systematic review of literature	The review found 29 publications in the literature that represented 20 different sets of guidelines. Expert teams based in the United States issued	- Physical activity suggestions for cancer patients have lately been included in a number of guidelines that	Future research may focus on effectively defining 7-point scale of the AGREE II tool to improve	Since physical activity is recommended in most of the reviewed studies, clinicians may consider	Level I Meta-analyses of randomized controlled trials

the AGREE II tool. PloS One, 14(4), https://doi.org/10.1371/journal.pone.0214846		-What is the methodological quality of the included guidelines?		half of the guidelines (n = 10, 50 percent). Most of the guidelines were appropriate to people with cancer in general (n = 9) or breast cancer (n = 5). Lung (n = 2), colorectal (n = 1), head and neck (n = 1), myeloma (n = 1), and prostate (n = 1) cancer patients received fewer guidelines.	have recently been established and published. These recommendations relate to a variety of cancers (mainly general or breast cancer) and cover a wide range of subjects. - The determination of scope and objective, as well as the clarity of presentation, are strengths of current standards, according to the AGREE II criteria. The applicability of guidelines must be improved.	efficacy in analysis	adopting PA as a strategy of improving patient health outcomes.	

Shanks, C.B., Banna, J., and Serrano, E.L., (2017). Food waste in the National School Lunch Program 1978-2015: A systematic review. Journal of the Academy of Nutrition and Dietetics, 117(11), 1792-1807. https://doi.org/10.1016/j.jand.2017.06.008	Health Promotion	Which methods are used to measure food waste and respective results in the NSLP	Systematic literature review	- Food waste methodologies included in-person visual estimation (n=11), digital photography (n=11), direct weighing (n=23), and a combination of in-person visual estimation, digital photography, and/or direct weighing (n=8). - A pre–post intervention or cross-sectional design was used in the majority of research. Fruits and vegetables were the most studied dietary component on the lunch tray, and they produced the most waste in multiple studies.	- Food waste measurement methods that are consistent will allow for more accurate comparisons between studies. Such data could help in making better decisions about NSLP practices, programs, and policies that affect student consumption patterns across contexts and interventions.	Future research should focus on creating uniform metrics for measuring and reporting food waste in the NSLP.	The data on food waste can help predict nutritional intake for a population as such, healthcare professionals can use the data to advise patients on better nutrition were necessary.	Level I Meta-analyses of randomized controlled trials
Shreve, M. (2015). Assessing and treating pediatric obesity. *Clinical Advisor,* 53-57.	Quantitative study analysis	Practical ways to assess and treat obesity	Cross-sectional study	Education people utilizing the chronic care model (CCM) had positive influence on getting best diagnosis.	Health care practitioner should educate people on the most effective ways to diagnose and treat on obesity through clinical analysis methods.	Shot comings of the study like reporting results post education and additional post education evaluation can be addressed with effective methods in future studies.	Pediatric research must include all aspects of an effective research and ensure it gets ideal results.	VI A single descriptive or qualitative study

Sharifi, M., Franz, C., Horan, C. M., Giles, C. M., Long, M. W., Ward, Z. J. ... & Taveras, E. M. (2017). Cost-effectiveness of a clinical childhood obesity intervention. *Pediatrics*, *140*(5). https://pediatrics.aappublications.org/content/140/5/e20162998.abstract	Technology to Accelerate Research (STAR) approach in childhood obesity prevention programs.	The STAR mediation is cost-effective in clinical childhood prevention forums.	Cluster-randomized trial	- Reduction in the cost after the implementation of the intervention by $237 for every BMI and $119 for every child - The limitations for implementation of robust practices and utilizing profound estimates of electronic health records adoption helped in advancing attainment of desired outcomes and improving the cost-effectiveness of the interventions	- The use of electronic decisions for supporting health care providers and independent behavior-change support among caregivers was found to be a significant approach in enhancing cost-effectiveness when compared to previous interventions	- Future studies to focus on other approaches that can improve the cost-effectiveness of strategies used in combating childhood obesity prevalence	- Promotes the use of electronic decisions for interventions established to curb childhood obesity, which is an issue of health concern	II-Randomized controlled trial
Umer, A., Kelley, G. A., Cottrell, L. E., Giacobbi, P., Innes, K. E., & Lilly, C. L. (2017). Childhood obesity and adult cardiovascular disease risk factors: a systematic review with meta-analysis. *BMC public health*, *17*(1), 683. https://link.springer.com/article/10.1186/s12889-017-4691-z	Surveillance of obesity	What is the current prevalence of excess weight among children and youths in Canada?	Univariate analysis	- Almost 14.3% of Canadian children and youths are obese. Sociodemographic factors like the area of residence, age, socioeconomic status, and sex are common determinants in the prevalence of childhood obesity	- The promotion of sustainable approaches in enhancing healthy weights can be achieved through the use of concurrent childhood obesity monitoring	None identified	The research is significant to the practice, following that it provides evidence for the need for regular and efficient surveillance for childhood obesity.	IV- Case-control or cohort study
World Health Organization (2021). Controlling the global obesity epidemic. *WHO*: https://www.who.int/activities/controlling-the-global-obesity-epidemic	Health promotion	Measures for controlling the obesity epidemic	Descriptive analysis	Obesity is one of the most neglected health care issues.	Women have high chances of obesity while men have high	Future studies should check for obese cases in relation to gender or sex.	Obesity studies signify a need for practical treatment solutions.	IV-Case-control or cohort study

				There are over 200million adults having obese cases.	chances of overweight.			
Zeraatkar, D., Nahari, A., Wang, P. W., Kearsley, E., Falzone, N., Xu, M., Banfield, L., Thabane, L., & Samaan, M. C. (2016). Appraisal of clinical practice guidelines for management of paediatric type 2 diabetes mellitus using the AGREE II instrument: a systematic review protocol. Systematic Reviews, 5(1), 1-7. https://doi.org/10.1186/s13643-016-0288-3	Health Promotion	Do CPGs of paediatric type 2 diabetes mellitus conform to quality standards based on the AGREE II tool? If so, has the quality of these guidelines changed over time?	Systematic literature review	The AGREE II guideline score is the major outcome. The evidence of progress in score over time for those agencies that have updated versions of their recommendations is the secondary result.	-With the rising frequency of T2DM in children and adolescents, as well as the difficulty of living with the disease, it's more important than ever to make sure that the evidence utilized in their care is of high quality.	Future research may focus on the need for adoption of executive function to address high prevalence of T2DM among children	The review can help clinicians who want to improve the care of children and adolescents with T2DM by using CPGs in their practice, guideline developers who want to make better CPGs or improve existing ones, researchers who want to fill knowledge gaps, and policymakers who want to support CPGs.	Level I Meta-analyses of randomized controlled trials

Note. Evidence graded using the hierarchy of evidence model from "Evidence-based Practice Step by Step: Critical appraisal of the evidence: Part I," by E. Fineout-Overholt, B. M. Melnyk, S. B Stillwell, and K. M Williamson, 2010, *American Journal of Nursing, 110*(7), p.47-52.

Appendix B: Fineout-Overholt's Criteria (Melnyk et al., 2011)

Levels of Evidence	Description of the Evidence
Level 1	Evidence obtained from systematic reviews or meta-analyses of randomized controlled trials
Level 2	Randomized controlled trials
Level 3	Evidence obtained from well-designed controlled trials without randomization, quasi-experimental
Level 4	Evidence from well-designed case-control or cohort studies
Level 5	Systematic reviews of descriptive or qualitative studies
Level 6	Evidence obtained from a single descriptive or qualitative study
Level 7	Evidence obtained from the opinions of authorities and/or reports of expert committees

Evidence-Based Practice in Nursing and Health Care: A Guide to Best Practice (Melynk & Fineout-Overholt, 2011, p. 12.).

Appendix C: AGREE II Model Instruction

Domain 1. Scope and Purpose

1. The overall objective(s) of the guideline is (are) specifically described.
2. The health question(s) covered by the guideline is (are) specifically described.
3. The population (patients, public, etc.) to whom the guideline is meant to apply is specifically described.

Domain 2. Stakeholder Involvement

4. The guideline development group includes individuals from all the relevant professional groups.
5. The views and preferences of the target population (patients, public, etc.) have been sought.
6. The target users of the guideline are clearly defined.

Domain 3. Rigour of Development

7. Systematic methods were used to search for evidence.
8. The criteria for selecting the evidence are clearly described.
9. The strengths and limitations of the body of evidence are clearly described.
10. The methods for formulating the recommendations are clearly described.
11. The health benefits, side effects, and risks have been considered in formulating the recommendations.
12. There is an explicit link between the recommendations and the supporting evidence.
13. The guideline has been externally reviewed by experts prior to its publication.

14. A procedure for updating the guideline is provided.

Domain 4. Clarity of Presentation

15. The recommendations are specific and unambiguous.
16. The different options for management of the condition or health issue are clearly presented.
17. Key recommendations are easily identifiable.

Domain 5. Applicability

18. The guideline describes facilitators and barriers to its application.
19. The guideline provides advice or tools on how the recommendations can be put into practice.
20. The potential resource implications of applying the recommendations have been considered.
21. The guideline presents monitoring or auditing criteria.

Domain 6. Editorial Independence

22. The views of the funding body have not influenced content of the guideline.
23. Competing interests of guideline development group (AGREE Research Trust, 2018).

Appendix D: Disclosure for Anonymous Questionnaires

Questionnaires

To be given to an expert panelist prior to collecting questionnaire responses—note that.

obtaining a "consent signature" is not appropriate for this type of questionnaire and providing respondents with anonymity is required.

Disclosure to Expert Panelist

You are invited to take part in an expert panelist questionnaire for the doctoral project that I am conducting.

Questionnaire Procedures

If you agree to take part, I will be asking you to provide your responses anonymously, to help reduce bias and any sort of pressure to respond a certain way. Panelists' questionnaire responses will be analyzed as part of my doctoral project, along with any archival data, reports, and documents that the organization's leadership deems fit to share. If the revisions from the panelists' feedback are extensive, I might repeat the anonymous questionnaire process with the panel of experts again.

Voluntary Nature of the Project

This project is voluntary. If you decide to join the project now, you can still change your mind later.

Risks and Benefits of Being in the Project

Being in this project would not pose any risks beyond those of typical daily professional.

activities. This project's aim is to provide data and insights to support the organization's success.

Privacy

I might know that you completed a questionnaire, but I will not know who provided which responses. Any reports, presentations, or publications related to this study will share general patterns from the data, without sharing the identities of individual respondents or partner organization(s). The questionnaire data will be kept for a period of at least 5 years, as required by my university.

Contacts and Questions:

If you want to talk privately about your rights in relation to this project, you can call my university's Advocate via the phone number 612-312-1210. Walden University's ethics approval number for this study is (Student will need to complete Form A in order to obtain an ethics approval number).

Before you start the questionnaire, please share any questions, or concerns you might have.

Appendix E: Clinical Practice Guideline

Clinical Practice Guideline to Prevent and Manage Childhood Obesity

Background

Purpose of the Clinical Practice Guideline

The goal of this guideline is to offer healthcare professionals evidence-based, standardized support in the management of childhood obesity. This guideline will give medical professionals the information, resources, and tools needed to treat pediatric obesity in their practices effectively and to enhance the health of overweight and obese children and their families**.**

Brief Summary of the Literature

Obesity in children is a severe public health issue that can lead to heart disease, diabetes, and even some types of cancer (Sanyaolu et al., 2019). There is a need for practical treatment solutions to control obesity (WHO, 2021). Effective management of childhood obesity is crucial in preventing long-term health issues and enhancing children's general health and well-being. The knowledge, abilities, and resources needed by many healthcare professionals to properly manage childhood obesity are lacking (Brouwers et al., 2018). Evidence-based, standardized recommendations are required to help healthcare professionals teach overweight and obese children and their families how to manage their weight difficulties. To effectively manage pediatric obesity, numerous studies have emphasized the necessity for comprehensive, multidisciplinary methods involving medical professionals, parents, and caregivers (Bussell et al., 2018; de

Assunção et al., 2018; Nagpal et al., 2022; O'Connor et al., 2020). These strategies include behavior modification interventions, physical activity promotion, and nutritional counseling. Additionally, studies have indicated that individualized therapies considering everyone's needs and cultural background are more successful in managing childhood obesity (Bussell et al., 2018; de Assunção et al., 2018; Nagpal et al., 2022; O'Connor et al., 2020). The completion of the CPG includes early intervention measures nutritional counseling, physical activity promotion, behavior modification interventions, and pharmacological measures.

Development of the Clinical Practice Guideline

Procedural steps for developing the clinical practice guideline (CPG) included identification of a practice question, identifying criteria for selecting sources of evidence, searching the literature followed by critically appraising and synthesizing the literature (Brouwers et al., 2018). The outcome of analyzing and synthesizing the literature led to initial development of the clinical practice guideline. Completion of the clinical practice guideline includes review and scoring of the guideline by an expert panel. Using feedback provided by the expert panel, the clinical practice guideline will be presented to the end users for use in clinical practice.

Practice Question: What can health practitioners and pediatric dieticians do to enhance patient /family education on childhood obesity?

Utilization of the Clinical Practice Guideline

Healthcare providers or clinicians should utilize the clinical practice guidelines to prevent and manage obesity in children. In addition to recommending medicine and bariatric surgery in extreme situations, the guideline offers evidence-based suggestions on nutrition, exercise, behavioral modifications, and pharmacological measures. Clinicians should utilize the recommendation to customize their approach to treating each child's unique requirements, considering their age, comorbid conditions, and other pertinent criteria (Hales et al., 2018). As recommended by Hampl et al., (2023), clinical practice guidelines should be reviewed every 3-5 years or whenever new research on childhood obesity emerges. Barriers to the application of the guideline should be addressed as they arise before implementation (Hampl et al., 2023). To do this, a structured procedure for assessing current research and revising the recommendations should be established. Regularly evaluating the recommendation is also necessary to see how it affects clinical practice and health outcomes (Bussell et al., 2018). The guideline may be modified and improved over time with the help of this input, ensuring that it remains an essential resource for healthcare providers managing childhood obesity.

Presented under the broad categories of early intervention measures, nutritional counseling, promotion of physical activity, behavior modification interventions and pharmacological measures, providers will utilize the CPG when teaching parents and children about childhood obesity. The evidence-based CPG will guide practitioners to assist adolescents to properly manage their diet, follow recommended exercise practices,

and follow-up with their routine doctor's appointment. The newly developed clinical practice guideline should assist nurses and practitioners in creating awareness and education of patients and their parents about obesity, its harmful effects, and ways to improve weight management.

Clinical Practice Guideline

Guideline Category	Evidence-based Recommendations
Early Intervention Measures	If the BMI is between the 50th to 85th percentile range, the healthcare provider should begin the following prevention and maintenance measures: a. provide patient and family education using the attached nutritional pamphlet (WHO, 2021). b. provide comprehensive and individualized care for the child and their family on achieving weigh management (Ford, 2021). c. discuss with the physician or endocrinologist situations in which fatigue, weight gain, or excessive weight loss develop (Brouwers et al., 2018). Set weight loss goals and timelines: d. set a 3-month weight-loss goal (*Web*MD, 2022).

	e. consider 1 to 4 pounds per month as a reasonable weight loss goal (*Web*MD, 2022). f. weigh and record weight weekly: A chart is helpful (de Assunção et al., 2018). g. monitor and reinforce weight loss teachings monthly (Ford, 2020). Change family lifestyle: h. plan family physical activities (de Assunção et al., 2018). i. limit junk food in the home (Hales et al., 2018).
Nutritional Counseling	Adopt healthy eating habits (*Web*MD, 2022). Adjust serving size where food is based on age (de Assuncao et al., 2018). The healthcare provider will reinforce nutritional education by: a) providing patient and family education and attached nutritional pamphlet (WHO, 2021). b) maintaining a healthy BMI that is below the 25th percentile rank (Bussell et al., 2018). c) educating the child and family about nutrition, emphasizing the need for a balanced diet in

	preventing obesity as well as the right food groups to consume (Nagpal et al., 2022). d) referring the child to a nutritionist or dietitian if there has been no improvement after three months (de Assunção et al., 2018).
Promotion of Physical Activity	Assess the child's physical activity level (Brouwers et al., 2018) by including the following in the assessment: a. ask the following questions: What physical activities do you do? How often? How long? (Nagpal et al., 2022) b. recommend that a daily activity log be kept for one week if unsure of physical activities (Nagpal et al., 2022) Discuss strategies to achieve activity goals from the child and parents or caregivers (O'Connor et al., 2020): a) ask the question: what activities does the child enjoy? (O'Connor et al., 2020). b) assess the availability of physical activity resources such as an exercise resource manual (O'Connor et al., 2020).

	It is essential to recommend planned activities (Brouwers et al., 2018) such as: a) teach the child how to increase physical activity engagement by talking to them about the activities they enjoy, such as jogging, hiking, and walking (Bussell et al., 2018). b) introducing a regimen for physical activity, such as 30 minutes per day of moderate activity or 10 minutes per day of strenuous activity, to encourage regular physical activity. Physical activity may vary with age and activity level (Nagpal et al., 2022).
Behavior Modification Interventions	Limit a sedentary lifestyle (Brouwers et al., 2018) by: a) for children 18-24 months, avoid all screen media except video chatting with family and friends (Hales et al., 2018). b) for children 2-5 years, limit screen time to 1 hour per day of high-quality programming, with parents co-viewing and discussing content with their children (O'Connor et al., 2020).

	c) establish consistent limits on the amount of screen time and prioritize time for physical activity, socialization, and other healthy behaviors for children 6 years and older (Bussell et al., 2018). d) for children aged 6 and older, consider setting limits on screen and video game time along with prioritizing time for physical activity, sociability, and other beneficial habits (Nagpal et al., 2022). e) promote behavioral adjustments, such as restricting escalators and elevators, taking the stairs instead, starting a daily walking or jogging program, and playing sports like soccer that require much physical exercise (Bussell et al., 2018).
Pharmacological Measures	a) For children older than 16, the clinician should consider administering orlistat in combination with phentermine if there has been no improvement in weight control after six months. Consider further examination by an endocrinologist (Ford, 2021).

	b) The physician should consider consulting with a pediatric endocrinologist if the patient is under 16 (Ford, 2021). c) While younger children should continue to be managed with food, orlistat can be utilized for children 12 and older (Ford, 2021). d) The physician should describe the orlistat dosage, action, kind, and adverse effects (O'Connor et al., 2020). e) If there has been no weight loss improvement in 6 months, the physician should consider bariatric surgery referral for children 16 years and older (Hales et al., 2018). f) The physician should reevaluate the treatment approach and consider other options for younger children (Hales et al., 2018). g) Treatment may entail changing the food and exercise guidelines, offering more behavioral support and counseling, or referring the child to a professional for additional assessment and management (Hoffmann-Eßer et al., 2018)

	h) if there are no results after implementation of the CPG, refer the patient to a multidisciplinary team that specializes in the management of childhood obesity (de Assunção et al., 2018).

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Appendix F: AGREE II Group Appraisal

A critical group appraisal of: Clinical Practice Patient Education Guideline to Combat Childhood Obesity using the AGREE II Instrument

No endorsement of the content of this document by the AGREE Research Trust should be implied.