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Impact of Obesity Sensitivity Training on Primary Care Clinic Staff and Patient Referrals

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Impact of Obesity Sensitivity Training on Primary Care Clinic Staff and Patient Referrals

A dissertation submitted in partial satisfaction of the

requirements for the degree

Doctor of Nursing Practice

by

Monina Distor-Castro

2024

ABSTRACT OF THE DISSERTATION

Impact of Obesity Sensitivity Training on Primary Care Clinic Staff and Patient Referrals

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Monina Distor-Castro

Doctor of Nursing Practice

University of California, Los Angeles, 2024

Professor Jian Li, Co-Chair

Professor Nancy Jo Bush, Co-Chair

Background: Weight stigma is pervasive in healthcare, and it discourages patients from seeking medical care, exacerbating health conditions among patients with obesity. Primary care physicians (PCPs) assess, discuss, and refer patients with obesity to weight management programs (WMP) when these are discussed during office visits. The challenge is initiating the

discussion on weight interventions without patients feeling stigmatized. As the first point of contact in screening patients, this project utilizes the primary care staff (PCS: nurses and medical assistants) to provide opportunities for patients to discuss WMPs with their PCPs. **Objectives:** This quasi-experimental project aimed to educate PCSs about obesity stigma, mitigate it, and integrate weight assessments and WMP referrals during office visits with the patients' PCPs. **Implementation:** The project compared two primary care clinics within a health maintenance organization (HMO). In the intervention clinic, 40 PCS received a 50-minute Obesity Sensitivity Training (OST) and pre-and 12 weeks post-Fat Attitude Assessment Toolkit (FAAT) with subscales on empathy, critical health, and complexity. The comparison clinic did not receive OST or FAAT. Data on WMP referrals were collected from both intervention and comparison clinics. **Analysis:** A one-sided paired t-test was used to analyze the means of pre- and post-intervention FAAT scores. For the second outcome, patient referrals from physicians from both clinics were collected, and ratios and chi-square analysis were calculated. **Outcomes:** The PCS in the intervention clinic had statistical significance in the empathy and critical health subscales (p-value .038 and .046, respectively) but not in the general complexity subscale (p-value =0.15). Referral to PCP ratio from the intervention clinic was 17.85 versus the comparison clinic 10.2; the chi-square statistic is 3.9467 with a p-value of 0.046964, significant at $p<0.05$. **Conclusion:** Primary care clinic visits are opportunities to address obesity and its related health risks and appropriate interventions. This project's outcomes highlighted the need to educate and involve the PCS in mitigating obesity stigma to help utilize the available WMP within the HMO. Future projects should explore patient-centered outcomes of WMP referrals in relation to OST.

The dissertation of Monina Distor-Castro is approved.

Ayako Janet Tomiyama

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2024

This dissertation is dedicated to my incredibly supportive family, who have been the source of my inspiration. To my husband, Mike, for your unwavering support and patience in listening to my successes and failures. To my precious and smart unico hijo, Mico, who has been my 24/7 technical support. Your computer expertise was indispensable, and your loving company, through the late-night study sessions, meant the world to me. To my mama, for your constant love and support through all my good and bad days. To my papa, with whom I shared many dreams and who believed in me. This is for you, too, beyond the heavens to where you are. And to the insightful comment from one of my patients, who inspired me to undertake this project. Though I do not remember your name, I will never forget the impact you had on me.

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VITA

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CHAPTER ONE: INTRODUCTION

Obesity has emerged as a global public health crisis, impacting millions of individuals and giving rise to significant medical and social challenges. Current data from the Centers for Disease Control and Prevention (CDC, 2022) reveals that obesity in the United States is 42%. Notably, medical professional organizations such as the American College of Cardiology, American Heart Association, The Obesity Society, and the American Association of Clinical Endocrinologists advocate healthy behavioral lifestyle, proper nutrition, adequate sleep, and regular physical activity as cornerstones of treatment for obesity (Cornier, 2022). While obesity has been classified as a disease by the American Medical Association (AMA, 2013) to enhance healthcare coverage and reimbursement in its management and treatment, individuals still underutilized available interventions and resources (Dietz et al., 2015; Turner et al., 2018). The guidelines from the United States Preventive Services Taskforce (USPSTF, 2018) emphasized the pivotal role of primary healthcare in the annual weight assessments for all individuals. Efforts to increase obesity awareness and access to weight management resources remain crucial in addressing obesity as a public health epidemic.

However, one significant barrier to patient utilization of weight management programs (WMP) is the pervasive weight stigma encountered within healthcare settings (Fruh et al., 2021; Hebl & Xu, 2001; Meidert et al., 2023; Puhl & Heuer, 2009). The implicit biases and anti-fat attitudes toward individuals with obesity among healthcare providers (HCPs: physicians, physician assistants, nurse practitioners) exacerbate the situation (Hebl & Xu, 2001; Meidert et al., 2023; Phelan et al., 2015). Lee et al. (2021) underscore the behavioral impact of obesity stigma, including disordered eating, sleep disturbances, increased alcohol consumption, and

reliance on comfort eating, leading to more weight gain. Extensive research has highlighted the detrimental effects of weight stigma on both psychological (Alimoradi et al., 2020; Puhl & Heuer, 2009) and physical health outcomes (Phelan et al., 2015; Puhl & Heuer, 2009), including all-cause mortality in two nationally representative samples (Sutin et al., 2015). This stigma can also lead individuals with obesity to delay or avoid necessary healthcare visits due to past negative experiences (Drury & Louis, 2002).

Problem Statement

Amid the prevalence of obesity, the healthcare industry exhibits weight-related stigma (Croghan et al., 2019; Falvo et al., 2018; Puhl & Heuer, 2009), posing significant barriers to care and contributing to adverse health outcomes. Weight stigma manifests as discrimination and bias against individuals perceived as overweight or with obesity, fueling negative attitudes and stereotypes based on body weight (Tomiyama, 2014). Healthcare providers often harbor weight stigmatization and anti-fat biases by exhibiting disrespectful communication and a lack of compassion compounded by inadequate training in addressing obesity (Dietz et al., 2015; Jay et al., 2008; Petrin et al., 2017; Puhl, 2023). One of the stigmatizing behaviors exhibited by HCPs is attributing health problems to a patient's weight, even when the purpose of the visit is unrelated to weight (Alberga et al., 2019). Batsis et al. (2020) reported that patients with obesity felt ashamed, stigmatized, and disconnected from their clinicians.

The result of obesity stigma, according to Puhl & Suh (2015), contributed to poor health outcomes and behaviors such as maladaptive eating behaviors and a decrease in physical activity, which lead to weight gain and physiological stress. Supporting this, Westbury et al. (2023) indicate that obesity stigma negatively impacted mental and physical health, causing dietary non-adherence and reduced motivation for health-promoting behaviors. Patients face increased risks

for cardiovascular disease, diabetes, sleep disorders, and high cholesterol, leading to poorer overall health outcomes (Powell-Wiley et al., 2021). Negative experiences with HCPs discourage patients from seeking care, delaying obesity treatment and worsening health outcomes.

While much research focused on HCP-patient interactions, there is a notable lack of studies examining the biases and attitudes of primary care staff (PCS), that include Registered Nurses (RNs), Licensed Vocational Nurses (LVNs), and Medical Assistants (MAs), and their impact on patient screening workflows. Since PCSs are often the initial point of contact, it is hypothesized that if they initiate weight discussions, patients may be more likely to address weight concerns with their HCPs (Koball et al., 2016). As with any medical diagnosis, HCPs and the PCS, particularly the nurses, have an ethical responsibility to address weight issues by asking permission, assessing readiness, initiating discussion, and providing information on appropriate and available interventions and healthy alternatives within their respective scope of practice (Coutts, 2021). This raises an important question: How can PCS create an environment that fosters sensitive discussions about obesity and its management while promoting respect and dignity?

PICOT Question

The Doctor of Nursing Practice (DNP) project aimed to address obesity and stigma by investigating the following Population-Intervention-Comparison-Outcome-Time (PICOT) question: Among primary care staff (P), what is the impact of obesity sensitivity training (OST) (I) versus no training (C) on the staff and patient referrals to weight management programs (O) in 12 weeks (T)?

CHAPTER TWO: THEORETICAL FRAMEWORK

The DNP project aligns with Bandura's Self-Efficacy Theory (SET), which emphasizes an individual's confidence in executing behaviors to achieve goals (Bandura, 1977). The SET suggests efficacy expectations impact approach behaviors and physiological responses in clinical settings (Biglan, 1987). Artino (2012) highlights SET's role in motivation and adult learning, defining it as task-specific self-confidence influencing attitudes, skills, and behaviors. This theory is crucial for understanding an individual's belief in their ability to enact behavioral changes effectively, emphasizing that knowledge and skills alone are insufficient; confidence in performing learned behaviors is also essential (Annesi & Johnson, 2014).

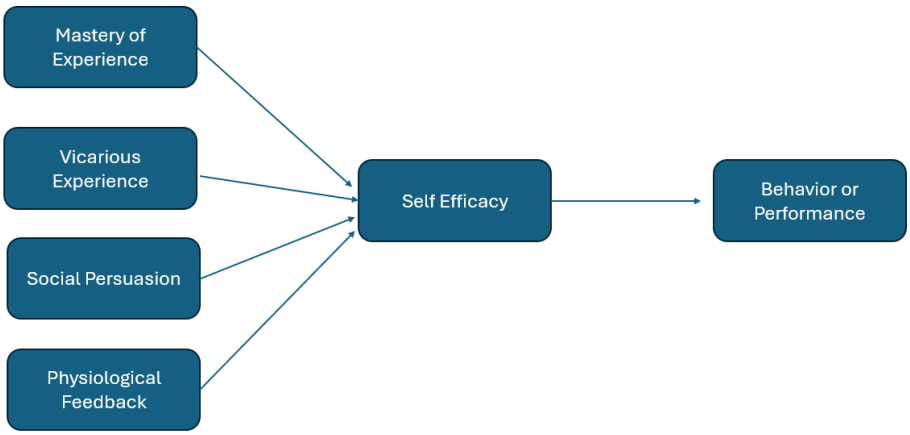
When the PCS applies what is learned during OST, the main goal is to show respect and consideration for patients with obesity and share their knowledge of the available WMP within the health maintenance organization (HMO). This, in turn, aims to help them practice and positively shape their learned behavior and attitudes towards individuals with obesity. The SET complements this effort by highlighting behavioral shifts in patient interactions.

Within the SET's framework, the PCS can define clear and attainable activity domains, such as requesting consent for weight assessments and discussions, while respecting the patient's decisions on these interventions. While it is essential for patients to be informed about available WMP, integrating SET core principles during weight assessments and in all patient interactions can help the PCS practice a greater sense of competence and confidence, which may lead to improved behavior and communication skills and effective patient engagement.

Bandura (1994) delineates four core principles influencing self-efficacy as shown in Figure 1: (1) Mastery of Experiences, (2) Vicarious Experiences, (3) Social Persuasion, and (4) Physical/Emotional Arousal. By aligning SET with the practical application of knowledge gained

from OST and engaging in consistent, everyday interactions with patients with obesity, PCS may be able to foster mastery of experience in establishing sensitive and respectful patient interactions. Additionally, observing the success of the interactions between PCS and patients in sharing WMPs may serve as impactful vicarious experiences, bolstering the PCS's beliefs in their own efficacy. Social persuasion, encouragement, and physiological feedback, in turn, play important roles in shaping behavior and performance. By witnessing successes and setbacks and looking into effective strategies for addressing obesity, the PCS can recognize, acknowledge, and mitigate weight stigma and better assist patients and their PCPs (primary care physicians) in pursuing treatments for obesity.

Figure 1: *Bandura's Self-Efficacy Theory Model*



CHAPTER THREE: REVIEW OF LITERATURE

Search Strategy

A comprehensive literature review analyzed obesity stigma, the healthcare providers' role, education, training, and weight management outcomes in primary care, utilizing the CINAHL and PubMed databases. Employing relevant search terms, Boolean operators, and Medical Subject Headings (MeSH): 'weight bias' OR 'weight stigma' OR 'obesity bias' OR 'obesity stigma' OR 'attitude to obesity,' AND 'attitude of health personnel' OR 'nurse attitudes,' OR 'experiences of health personnel' OR 'perspectives of health personnel' AND 'primary care' OR 'primary healthcare' OR 'primary health care,' AND 'weight education' OR 'obesity training' OR 'obesity sensitivity training,' 239 studies were retrieved. Limits were applied to publications from 2018 to 2023, targeting the adult population and peer-reviewed research articles conducted in English. The United States of America was selected as the geographic region to align with the Affordable Care Act (ACA), which mandates insurance coverage for obesity assessment, treatment, and management. Exclusions comprised non-US settings, inpatient settings, and non-obesity-related medical diagnoses. The Table of Evidence offers an overview of the 13 articles that met the inclusion criteria. The following are the common themes found across the 13 studies.

Literature Review Themes

Recognition of Obesity Stigmatization and PCP Bias

The term "obesity" carries both stigma and medical recognition, as it is classified as a disease by health insurers. This dual nature relates to the importance of the PCPs' approach to the topic of obesity. In a qualitative semi-structured 2020 study by Batsis et al., perceptions of "obesity" were explored among 29 older adults (ages 69 to 76), seven PCPs, and four community

leaders in a rural area. Findings revealed the PCPs' use of sensitive language and older adults' reluctance to view obesity as a disease. This disconnect emphasizes the need for clinicians to understand the patients' perspectives. While acknowledging its medical status, patients and PCPs recognized potential benefits in insurance coverage for prevention and treatment. Limitations included the study's focus on rural, predominantly white patients of higher socioeconomic status and small sample size. The involvement of community leaders helped counter bias.

Clinical guidelines aim to assist providers in managing obesity, yet many PCPs rely on personal clinical experiences, which occasionally involve instances of stigmatization. In Bailey-Davis et al.'s (2022) qualitative study involving 33 PCPs and 31 specialists, providers' perspectives on obesity care and referrals were explored. Four key themes emerged: reliance on personal experience over guidelines, barriers in discussing weight, prevalent informal referrals to community-based programs, and the suggested need for better integration of clinical and community services through a feedback loop. The study revealed weight bias among providers, with stigmatizing remarks from PCPs who failed to acknowledge obesity as a disease. Addressing this bias and enhancing communication between PCPs and community programs was recognized. Limitations included brief interviews and potential bias in qualitative data interpretation.

Exploring PCP education on obesity, a study centered around an innovative and concise e-module training program was developed to assess and confront a heightened awareness of obesity stigma. In a study by Koran-Scholl et al. (2023), 83 family medicine physician residents participated in a 15-minute e-module training addressing obesity stigma. The module featured patient scenarios aimed to raise awareness of weight stigma and assess biases. Sixty-four percent of participants reported no prior focused education on obesity. Among the 56 participants who

completed both surveys, increased comfort levels and awareness of biases were observed. However, respondents suggested adding strategies to address real-life complexities. The study highlighted the potential of educational interventions in mitigating obesity bias among medical professionals. Limitations included a lack of prior comparison methods, limited scope in surveys, absence of validated instruments, and no assessment of the impact on patient care performance.

Cross-sectional research by Phelan et al. (2021) highlighted patients' negative experiences with PCPs, linked stigma to delayed healthcare, and sought alternative providers for more respectful treatment. The study involved 2380 primary care patients wherein stigmatizing experiences were measured using a modified Medical Subscale of Stigmatizing Situations Index. Associations between high BMI, delayed health care, and doctor shopping were examined. The results supported that higher BMI was associated with stigmatizing situations, delayed healthcare, and switching doctors. These findings stressed the need for physicians to address biases and weight stigma and enhance their communication to positively impact patients' healthcare behaviors. However, limitations included a lack of comparison with normal BMI patients, a low response rate, and a predominantly white patient group.

The Role of Education in Obesity

Primary care physicians acknowledged the necessity of enhanced education on team-based approaches to address the complex needs of patients with obesity. In a study by Oshman et al. (2023) involving 350 PCPs, respondents recognized gaps in knowledge regarding obesity management. The participants expressed the importance of additional education, team-based interventions, and policy changes to incentivize treatment. The participants also highlighted the crucial role of other HCPs in supporting obesity treatment and expressed interest in obesity medicine training and certification through the American Board of Obesity Medicine (ABOM).

Limitations included the study's focus on a single academic health system, potentially limiting generalizability, and voluntary participation in surveys and interviews, which could introduce respondent bias.

Healthcare providers showed keen interest in acquiring education to facilitate weight-related discussions. In a study by Nanda et al. (2021) involving 42 nurses and 38 PCPs, self-reported knowledge, attitudes, and training needs for obesity management were assessed within an Internal Medicine practice. Results indicated that 79% of participants expressed interest in training in obesity management, with over 48% reported prior specialty training in weight management, primarily through lectures. Limitations included the study's focus on a single healthcare department and a predominantly white population and females, with participants ages between 30 and 50.

Education about Obesity Management and Treatment

A significant barrier to PCPs addressing obesity is the lack of nutrition education in medical training. Nair and Hart (2018) surveyed 38 PCPs in West Virginia to explore their weight-loss nutrition counseling practices. Results revealed that two-thirds of physicians reported minimal to no nutrition training despite encountering many patients with obesity. Identified barriers included time constraints, perceived patient non-compliance, and a need for improved knowledge of nutrition and weight loss. Limitations included a small sample size and limited generalizability, primarily representing a specific group within a region with high obesity rates.

Physicians recognize the increasing relevance of bariatric surgery and express a need for additional education in this treatment. Horecki-Lopez et al. (2019) conducted a descriptive study investigating the PCPs' referral and practice patterns regarding bariatric surgery. Surveying 41

PCPs via email, the study examined demographics, referral patterns, and knowledge of bariatric surgery guidelines. Approximately half of the PCPs initiated weight management discussions, and a quarter discussed weight loss options and identified surgical candidates. However, 44% of PCPs expressed concerns about the risks outweighing the benefits of bariatric surgery when bariatric surgery is currently the most effective long-term treatment for morbid obesity as well as for type-2 diabetes mellitus (Hsu & Farrell, 2023). Barriers included uncertainty about insurance coverage and time constraints. These findings underscored the importance of educating PCPs on bariatric surgery qualifications and facilitating discussions on its safety. Limitations included the study's small sample size, which may limit generalizability and may introduce sample errors.

The referral of patients with obesity to bariatric surgery, often seen as a last resort treatment, hinges on PCPs' clinical perspectives amid barriers and confidence issues. Conaty et al. (2019) surveyed 150 PCPs to explore their perceptions of bariatric surgery in a descriptive electronic survey. Despite less than one percent of Americans with obesity undergoing bariatric surgery, the study aimed to investigate the factors that contributed to this low referral rate. Results showed that 46% of PCPs were familiar with the National Institutes of Health (NIH) criteria for bariatric surgery, and 51% held positive attitudes toward it. However, they faced significant barriers in confidently referring patients for the procedure. Addressing these barriers through educational strategies targeting concerns about surgical complications, long-term effects, and alternative weight-loss outcomes is important. Limitations of the study included responses from PCPs who came from within the same hospital system, using a non-validated questionnaire, and potential bias from focusing exclusively on primary care physicians.

Communication Skills

Tucker et al. (2018) affirmed the importance of open communication with patients in their study, where 31% of African American participants reported no weight discussions with their PCPs during post-visit interviews, despite USPSTF guidelines. Only 4.2% had weight-related discussions. While 70% perceived their PCPs as respectful, 60% expressed interest in community resources for weight management. Thirty-one percent suggested involving the doctor's staff in initial weight discussions, and 29% advocated for assessing readiness for weight loss during office visits. The study highlighted patients' awareness of health issues and their proactive nature in expressing their concerns. Limitations included potential bias in self-reported data from patient-perception surveys and sample homogeneity, with 60% of respondents identified as overweight.

Clinical recommendations on body weight prompted an inquiry into HCP's adherence to discussing weight with adult patients. Hansen et al. (2020) conducted a correlational study analyzing the HCPs' practices. Findings revealed overall improvement in addressing obesity among adults since 2015, but less than a quarter of the young adults (aged 20-34 years) with obesity received necessary attention, indicating missed opportunities. There was a noticeable increase in the trend among older adult patients that fostered open dialogue with their HCP; this intervention required more intensive efforts. Limitations included potential bias from patient self-reporting and the representation of white and insured individuals, limiting generalizability.

Patients typically consult their PCPs, with nurses often being their initial point of contact for health concerns. Many nurses felt they needed additional education to boost their confidence in addressing weight issues with patients. Croghan et al. (2019) conducted a cross-sectional study at five local clinics, surveying 82 PCPs and 137 nurses to explore their perspectives on

patient weight management. Results revealed that PCPs felt more prepared than nurses and they have received more training on obesity. However, both groups lacked confidence in initiating weight discussions and identified a need for improved communication training. The study emphasized the importance of enhancing knowledge, confidence, and effective communication in obesity management for both nurses and PCPs. Limitations included sample homogeneity, potential bias, and the Hawthorne effect.

Guidelines and algorithms aim to streamline PCPs' management of medical conditions. Gallagher et al. (2021) convened primary care and obesity specialists to develop a patient-centered guide for obesity treatment in primary care. The manual utilizes the 6As algorithm (ask, assess, advise, agree, assist, arrange) to facilitate weight-related discussions. Starting with patient permission, the guide encourages patient-led discussions on obesity risks, treatment, and lifestyle changes. The guide aims to engage patients in finding solutions to obesity. Limitations included limited empirical support for the counseling initiative and the financial support by Novo-Nordisk, a company that manufactures diabetes and obesity treatments.

Synthesis of Literature Review

The themes derived from the literature were identified and analyzed to address the PICOT question. These themes include that obesity stigma among HCPs and nurses is prevalent (Bailey-Davis et al., 2022; Batsis et al., 2020; Gallagher et al., 2021; Phelan et al., 2021) and that there is a lack of referral patterns and poor integration of weight management strategies (Bailey-Davis et al., 2022; Conaty et al., 2020; Gallagher et al., 2021; Oshman et al., 2023) in primary care. There is an identified need for collaborative relationships and effective communication between PCPs and weight management specialists (Bailey-Davis et al., 2022; Oshman et al., 2023) and respectful dialogue between HCPs and patients (Croghan et al., 2019; Hansen et al.,

2020). Studies have suggested that nurses or clinic staff should be involved in weight assessment (Croghan et al., 2019; Tucker et al., 2017).

Knowledge Gap

With the recent surge of weight-loss medications, continuing medical education for PCPs on obesity treatments and weight stigma has also increased, aligning with the international consensus on managing these issues [Obesity Medicine Association (OMA), 2023; Rubino et al., 2020]. Healthcare providers in the USA recognize the importance of addressing obesity, with OMA leading educational efforts for HCPs. While the integrated healthcare system where the DNP project was implemented already offers workshops and training opportunities for HCPs to enhance and standardize their approach to obesity management, there remains a gap in patient screening and interventions. The PCS could bridge the practice gap by initiating a workflow that includes patient weight screening, assessing patient readiness for discussion of weight, and providing information on available WMP and healthy lifestyle resources, potentially leading to referrals by PCPs. By involving the PCS in assessing and initiating weight discussions with HCPs, primary care clinics can work cohesively in addressing patient concerns about weight, thereby ensuring their needs are met and health risks related to obesity are mitigated.

CHAPTER FOUR: METHODS

Ethical Considerations/Protection of Human Rights

In adherence to ethical standards and the protection of human subjects, mandatory training was completed by the project lead through the Collaborative Institutional Training Initiative (CITI) program on Biomedical Basic Training on Human Subject Protection and the Health Insurance Portability and Accountability Act (HIPAA). Official approval from the HMO Institutional Review Board (IRB) was obtained in February 2024, confirming the project's compliance with human subject research criteria (#13817). Throughout the DNP scholarly project, strict adherence was maintained to the standards, guidelines, and requirements set forth by the HMO and the University of California, Los Angeles.

All data collection procedures involved coding with unique identification numbers to safeguard PCS participant confidentiality. Referrals obtained from the HMO Electronic Medical Records (EMR) Analytics Department were at the systems level, ensuring no patient information was shared. Furthermore, all data handling procedures strictly followed HIPAA standards with only the project lead having direct access.

Project Design

The DNP evidence-based scholarly project employed a quasi-experimental design, which included pre- and post-intervention analysis of PCS responses to the Fat Attitude Assessment Toolkit (FAAT). This outcome measurement focused on PCS within an Internal Medicine clinic where OST was administered (referred to as the intervention clinic).

The second outcome of the DNP project collected the number of patient referrals for WMP. The investigation involved collecting raw data from the intervention clinic and another

Internal Medicine clinic (referred to as the comparison clinic). The PCS in the comparison clinic did not undergo OST nor complete the FAAT.

Sample and Setting

The intervention clinic within the HMO where the OST took place has 40 primary care PCPs. Each PCP is assisted by either an LVN or an MA, with RNs in clinical supervisory roles. The intervention clinic is located within a medical center that houses various specialties, including pediatrics, obstetrics and gynecology, endocrinology, and gastroenterology. The hospital is also situated within the same campus.

A convenience sample of forty PCS voluntarily participated in the OST during the first week of February 2024. The 50-minute OST sessions were conducted in one of the intervention clinic's conference rooms during working hours in compliance with employee union regulations.

In contrast, the comparison clinic within the same HMO is nine miles from the intervention clinic and operates with a team of 21 Internal Medicine physicians. The comparison clinic also houses Pediatrics and Obstetrics/Gynecology specialties within the same building. Unlike the intervention clinic, the comparison clinic did not participate in the OST intervention. Notably, EMR Analytics collected WMP referrals exclusively from the Internal Medicine department.

Both intervention and comparison clinics utilize identical standardized patient screening workflows. These include collecting and recording vital signs, weight, height, and body mass index (BMI) in the EMR, asking patients about the reason for their visit, the duration and frequency of their weekly exercises, and reviewing their current medications. Patients are also encouraged to voice any additional concerns during the screening so that the PCPs can address them promptly.

Another department integral to the project is the Center for Healthy Living (CHL). This department collects referrals from all primary care clinics, specialty clinics, and patients who self-refer within the HMO. The CHL department processes referrals and contacts patients for enrollments in both in-person and virtual WMP appointments.

Instruments

The DNP project employed the FAAT, a validated Likert scale survey developed by Dr. Patricia Cain (2022) in collaboration with Dr. Ngaire Donague and Dr. Graeme Ditchburn. Dr. Cain authorized its use in this DNP project. The FAAT was chosen for its neutral language and efficacy in gauging contemporary attitudes toward obesity (Cain, et al., 2022). The FAAT was developed to measure the nuanced attitudes and effectiveness of interventions in reducing weight stigma. Higher Likert scores indicate more positive views on obesity and the individuals affected by it. The FAAT consists of nine robust subscales, of which three are utilized in this project: Empathy, Critical Health, and General Complexity. The FAAT used for this project is in Appendix A. The subscales were selected based on the statements in the FAAT. The first subscale, Empathy, was selected to measure how well PCS participants recognize and empathize with the negative experiences faced by patients with obesity. Given the crucial role of empathy in nursing, the Empathy subscale was particularly appropriate for PCS. The Critical Health subscale gauges the extent to which the PCS agrees with the critiques concerning health and obesity, calling for reflective consideration of their relationship. The General Complexity subscale assesses beliefs about the causes of obesity, including whether it is within an individual’s control or not. Critical Health and General Complexity subscales were utilized to leverage the staff's clinical knowledge and experiences. These subscales were chosen to reflect the staff's understanding of obesity and health, as well as their subsequent interactions and

communications with patients based on this knowledge. Overall, the pre-and post-FAAT assessments measured perception shifts among the participating PCS.

Collection of Referral Data

The HMO's EMR Analytics Department ensured referral data collection without any patient-identifiable information. Only raw referrals meeting specific inclusion criteria were selected. A copy of the Data Extraction File is presented in Table 1.

The inclusion criteria encompassed adult patients with a BMI ≥25, diagnosed with overweight, obesity, or morbid obesity, and referred to CHL for WMP by PCPs from both intervention and comparison clinics. Referrals to WMP categories included dietitian consultations, obesity and metabolic clinic consultations, Healthy Balance, pre-bariatric preparatory programs, weight management overview workshops, wellness coaching by phone, and plant-based nutrition classes for weight loss. These programs were selected based on the program's specific goals, with curricula focused on weight management, weight loss, bariatric surgery, nutrition and lifestyle, and dietary modifications for achieving healthy weight. All WMP referrals were consolidated for analysis.

Exclusion criteria included pediatric and pregnant patients, adults with a normal or low BMI, referrals from other primary care and specialty clinics, and referrals unrelated to weight management or weight loss. Data collection spanned from the initiation of OST up to 12 weeks thereafter.

Table 1. *Data Extraction File*

	Variables
1.	BMI ≥25
2.	Referring clinic: Internal Med Downey
3.	Referring clinic: Internal Med Cerritos
4.	Adult patients ≥18 y/o
5.	Referrals to the Center for Healthy Living
6.	Options pre-bariatrics referral
7.	Weight management overview referral
8.	Dietitian nutrition consult referral
9.	Healthy Balance referral
10.	Wellness coaching by phone referral
11.	Obesity/Metabolic physician consult referral
12.	Diagnosis: Obesity and/or overweight and/or morbid obesity
13.	Medication-assisted weight management referral
14.	Patient-provider encounters from February 5, 2024, to April 29, 2024

Intervention

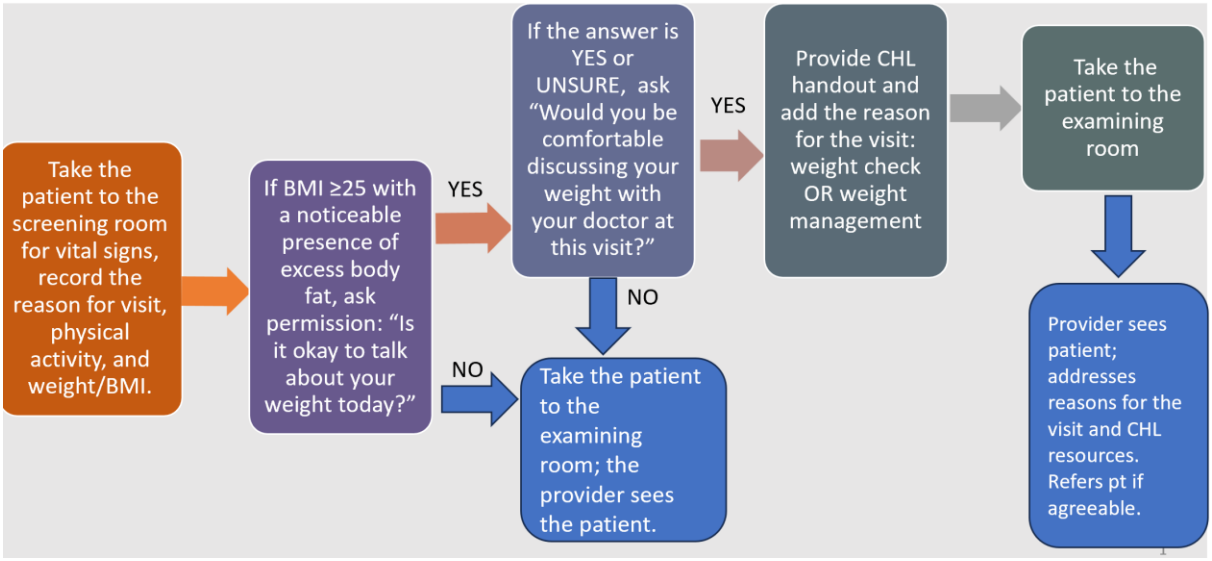
Before the intervention, the department administrator of the intervention clinic announced the OST during team huddles and department meetings. The Obesity Sensitivity Training Information Sheet (Appendix B) was also disseminated to encourage staff participation. The enrollment process employed PCS, who expressed interest, availability, and willingness to participate in the project. A sample of 40 PCS from the intervention clinic enrolled in OST.

Before initiating the OST presentation, a signed consent form and FAAT from each participant were collected. The OST was delivered in person utilizing a PowerPoint presentation (Appendix C) that covered discussions about obesity, the impact of weight stigma, proposed weight assessment workflow, and available WMP within the HMO.

Implementation of Proposed Workflow

Following OST, the PCS participants in the intervention clinic returned to their workstations and continued with the standard of screening patients, which included taking vital signs, weight, height, and BMI. To add to the practice screening standard, the proposed workflow (Figure 2) was implemented, wherein upon screening, if the PCS recognized that a patient's BMI was ≥25, which indicated overweight or obesity, the PCS asked if patients desired to discuss their weight during the current visit with their PCPs. If the response was no, no further steps were taken. If patients answered yes, "weight management" or "weight check" was added to the reason for the office visit. The PCPs will discuss various options and treatments, adhering to their standard of care, and send appropriate referrals to CHL. If the patient only sought information, they were provided details on available weight management resources within the HMO. Patients who were referred to CHL WMP received contact numbers and pertinent information to follow up on the referrals provided.

Figure 2. *Proposed Screening Workflow*



Meanwhile, the comparison clinic proceeded with the standard practice of screening patients. The OST was not implemented, and the PCS did not fill out the FAAT. The proposed workflow for weight assessment was also not implemented.

Data Collection

Forty PCS completed the pre-OST FAAT. After 12 weeks, 30 PCS from the initial group completed the post-intervention FAAT, resulting in a 75% response rate. The EMR Analytics Department utilized the Data Extraction File to collect 12 weeks of WMP referrals from the intervention and comparison clinics.

Statistical Analysis

The DNP investigation encompassed an analysis of PCS' baseline characteristics, including occupation, age, gender, years of experience, and obesity/overweight status. These demographics provided crucial insights into the composition of the OST participants. Demographic characteristics were summarized using absolute values and percentages for categorical variables. The data also collected FAAT responses on three thematic subscales: Empathy, Critical Health, and General Complexity. For continuous variables, means and standard deviations were calculated. In this project, one-sided paired t-test was employed to evaluate the direction of FAAT subscales scores pre- versus post-OST intervention, positing that the intervention would improve FAAT subscale scores from baseline to 12 weeks within the same participants. This directional hypothesis focused on detecting any improvements in the mean scores, which aligned with the intervention's objectives.

For the second outcome, raw numbers of WMP referrals sent to CHL were collected. These consolidated referrals included those made by PCPs and self-referred by patients from both the intervention and comparison Clinics. The ratio of patient referrals to the number of

physicians from both clinics was calculated and compared using the chi-square statistic. IBM SPSS Statistics v29 was employed for the data analysis in this scholarly project.

CHAPTER FIVE: RESULTS

Demographic Characteristics of the PCS

The PCS OST participants are predominantly females (92%). Among the PCS, 23 individuals (57%) held positions in the LVN role;14 (35%) were MAs, and three (7.5%) were RNs. The average age of the participating PCS was 41 (SD=8.5) years, with an average of 11 (SD=8) years of clinical experience. Notably, a substantial number, 26 (65%) of the PCS considered themselves either overweight or having obesity. Table 2 shows the demographics of the PCS participants.

Table 2. *Demographics of PCS (N=40)*

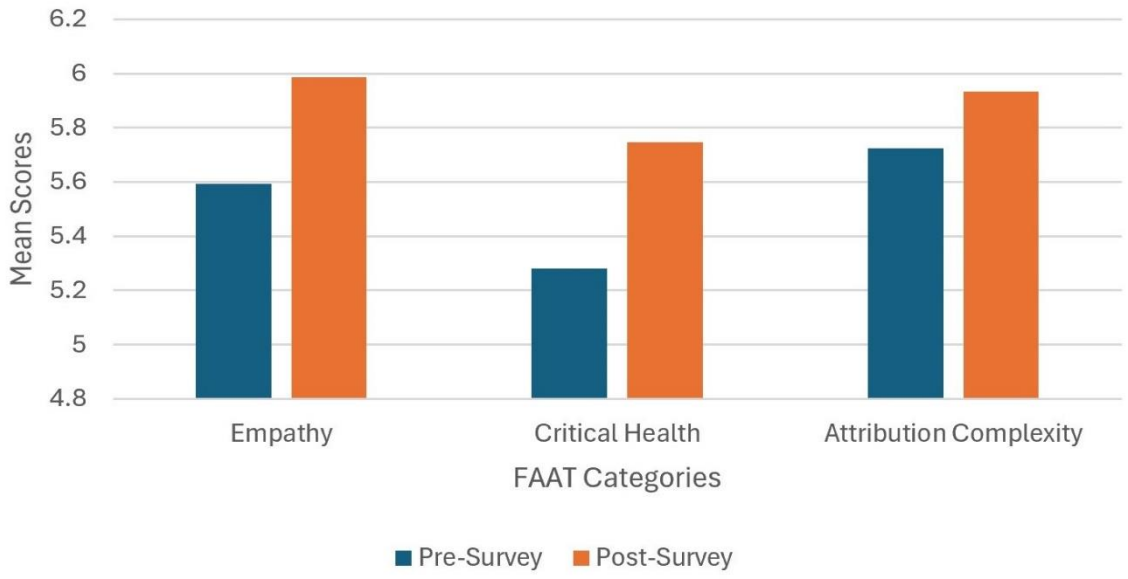
Characteristics			**N (%)**
Occupation		RN	3 (7.5)
		LVN	23(57.5)
		MA	14(35)
Gender		Male	3(7.5)
		Female	37(92.5)
Have Obesity/ Are Overweight?		No	8(20)
		Yes	26(65)
		Unsure	5(12.5)
		Missing	1(2.5)
Age	Mean (SD)	41(8.5)	
Years of Experience	Mean (SD)	11.3(8.0)	

Outcomes of the FAAT Survey

The mean score for empathy increased from pre-intervention (M = 5.592, SD=1.059) to post-intervention (M = 5.980, SD =.06259), t= -.18, one-sided p = 0.038. Similarly, the mean score for critical health increased from pre-intervention (M = 5.286, SD=1.3211) to post-intervention (M = 5.747, SD=.7999), t= -1.7, one-sided p = 0.046.

For general attribution complexity, while the mean scores increased from pre-intervention (M = 5.725, SD=.9241) to post-intervention (M = 5.933, SD=.6746), t= -1.0, one-sided p = 0.150, the change was not statistically significant. The bar graphs of the pre-and post-FAAT results are in Figure 3.

Figure 3. *FAAT Mean Scores Pre & Post Results*



Outcomes of Patient Referrals to Weight Management Programs

The total number of WMP referrals received from the intervention and comparison primary care clinics was N=930. The intervention clinic contributed 714 WMP referrals, while the comparison clinic contributed 216 WMP referrals. It is important to note that the intervention group comprised 40 PCPs, whereas the comparison group had 21 PCPs. Consequently, the

average number of referrals per physician was 17.85 for the intervention clinic and 10.29 for the comparison clinic. Table 3 displays the number of patient referrals, the number of physicians from both clinics and the ratios of referrals per physician. A chi-square statistic was conducted to compare the two ratios, resulting in the chi-square statistic of 3.9467 and a p-value of 0.046963, which is significant at $p< 0.05$.

Table 3. *Weight Management Referrals from PCPs*

	Intervention Clinic	Comparison Clinic
Number of Patient Referrals	714	216
Number of physicians	40	61
Ratio (Referrals/physicians)	17.85	10.29

CHAPTER SIX: DISCUSSION

The DNP project investigated the effects of OST on the PCS and subsequent WMP referrals following the weight assessment workflow. Using FAAT subscales on empathy and critical health, the project showed statistically significant results. The first statements on the Empathy subscale gauged the understanding of how PCS interactions are influenced by weight stigma and their awareness of it. The subscale comprised seven statements that assessed acknowledgment and empathy toward the challenges faced by individuals with obesity (Cain et al., 2022). Sample statements on this subscale include: "Fat people face discrimination in many areas of life" and "Health professionals should be aware of the negative impact of weight stigma."

The second subscale, critical health, has statements such as: "Body weights are not a reliable indicator of health" and "Healthy bodies come in all shapes and sizes" (Cain et al., 2022). This subscale entails agreeing with critiques regarding health and weight as it delves into the nuanced and complex attitudes toward individuals with obesity and their health. Given the PCS's 11 average years of healthcare experience and understanding of the association between obesity and health risks, their mean score in this subscale suggests acknowledgment that body weight, high BMI, or larger body shapes do not necessarily equate to poor health.

The last subscale of the FAAT, the general complexity, is designed to evaluate the attributions of obesity to factors suggesting that fatness is beyond individual control. Examples of the statements under this subcategory include genetic and environmental influences (e.g., "There are genetic factors that cause people to be fat" and "There are factors outside personal control that contribute to high body weight"). The lack of statistical significance on the general complexity subscale highlights the need for further education emphasizing the responsibility that

obesity does not solely lie on the patient. Enhancing the PCS' understanding of the complex obesity-related factors is essential for better patient support.

In summary, the OST intervention had an adequate impact on the empathy and critical health subscales. However, it did not yield significant changes in general complexity. These findings, combined with the prevalence of overweight and/or obesity among PCS participants, suggest a changed level of empathy and understanding concerning obesity and health status. Such awareness likely stems from personal experiences or self-identification with being overweight or having obesity (Gujral et al., 2011), as many participants identified as such. These findings offer valuable insights into the intervention's influence on specific dimensions of the PCS' attitudes and perceptions.

Post-intervention, the data on referrals collected from both the intervention and comparison clinics indicated that the intervention clinic had a higher number of referrals to WMPs. This may suggest that the PCS who attended the OST and PCPs who sent WMP referrals effectively implemented the proposed workflow.

Implications for Practice

While earlier studies predominantly focused on PCPs and HCPs, the FAAT results from the PCS reaffirm the nature of obesity stigma across diverse healthcare roles. These findings emphasize the crucial importance of ongoing education and training for all healthcare professionals on obesity, weight stigma, and appropriate and comprehensive weight management interventions.

The increased empathy and critical health observed at the intervention clinic's PCS FAAT feedback suggests a potential link between fostering a stigma-free culture that accepts diverse patient sizes and shapes, recognizing weight stigma, and being mindful of

communication and behavior around patients with obesity. However, further understanding of obesity attributions and how many factors contribute to obesity beyond personal control is needed. These findings highlight the importance of all healthcare professionals' commitment to education on obesity to help mitigate stigma and its potential impact on patient care.

The DNP project aligns with the international commitment (Rubino, et. al, 2020) to combat obesity stigma by collaborating with PCPs in treating and managing obesity, ensuring patients are involved in decisions about their care. It is important to emphasize the integration of respectful dialogue about weight management in all healthcare settings with the patient's active involvement and direction. Since primary care settings often serve as patients' initial point of contact for diverse health concerns, these encounters should be patient-led and facilitated by both the PCS and PCP. Leveraging primary care encounters in this manner presents a valuable opportunity to address the health risks associated with obesity.

The OST has the potential to offer educational opportunities for primary care clinics within the HMO. Given the high prevalence of overweight and obesity and the availability of healthy lifestyle education and obesity treatments within the HMO, this clinical project impacts staff education. It enhances PCS recognition of obesity stigma and addresses patient healthcare needs related to weight management. It highlights the partnership with the PCPs in meeting these needs. Additionally, the OST initiative could potentially expand and further develop to encompass the entire integrated healthcare system and can be utilized by other specialties due to its scalability.

Limitations and Future Research

While this project suggests the positive effects of the OST program, it does not establish a direct causal link between improved PCS attitudes and obesity knowledge, PCP and patient

engagement, and patient referrals. Future research employing randomization could allow for causal inference and provide stronger evidence for these relationships. Project sustainability can include crucial outcomes related to patient follow-up, such as appointment attendance, treatments received, patient weight loss, reduction in health risks, and completed consultations. The lack of comprehensive outcome measurements emphasizes the need for future projects to incorporate patient-focused follow-up, facilitating a deeper exploration and understanding of the intervention's direct impact.

It is important to note that the DNP project was conducted within an integrated healthcare system that boasts a comprehensive range of human resources and educational programs dedicated to its members. It is acknowledged that not all healthcare systems and insurance providers possess the same resources and capabilities. Also, the potential for additional referral costs may vary in different healthcare settings, which could influence patient outcomes and experiences. For future research and projects, there is a need to examine the different healthcare systems that are available to patients with obesity and to explore the cost and all options for weight management referrals.

Notably, the WMP referrals only represent the raw number of referrals from both intervention and comparison clinics. The data does not account for the total number of patients seen in each clinic or patients with obesity who either declined weight discussion or declined referrals, limiting a comprehensive evaluation of the OST intervention’s effect. Future opportunities could include a longitudinal study tracking outcomes of detailed follow-up on PCS, PCPs, and patients that may help identify effective workflow implementation and identify barriers.

Lastly, the 12-week collection period limits obtaining long-term insights. Extending this timeframe could yield a more thorough understanding of the intervention's impact across diverse healthcare settings. Broader participation in primary care and specialty clinics could enhance awareness of obesity stigma and promote the adoption of sensitive and respectful communication practices. While this project sheds light on weight stigma among first-line PCS, addressing these limitations in future studies and projects is important to evaluate the intervention's effectiveness and applicability across various healthcare staff and settings.

Clinical Significance of the DNP Project

Despite the project's limitations, it is important to recognize the clinical significance of the findings, in line with the American Association of Colleges of Nursing's (AACN, 2015) emphasis. From a research perspective, Carpenter et al. (2021) highlight that DNP projects frequently lack sufficient statistical power, often resulting in statistical outcomes that are non-significant but still clinically relevant. The AACN (2015), the accrediting organization of the DNP program, stresses that the clinical significance or clinical change is to the DNP project, what the level of statistical significance is to research. Consequently, it is crucial to emphasize the clinical significance of the DNP findings due to their real-world impact on patients and healthcare practices.

The OST intervention potentially impacted the PCS and increased organizational awareness in addressing obesity, not only from the PCP perspective but also across the primary care team. The PCS, who communicate directly with patients, may need to update and receive the OST training to develop self-efficacy and confidence in obesity care. The other outcome, the number of referrals to WMP, strongly highlights the potential influence of the OST intervention, PCS weight assessments, and PCP discussions during medical office visits. This may suggest

that in the absence of comprehensive data, observable trends exist that could further guide the impact of OST on PCS's approach to mitigating weight stigma.

CHAPTER SEVEN: CONCLUSION

Addressing the issue of weight stigma requires comprehensive education about obesity, its prevalence, causes, and the challenges faced by patients. It is crucial for all healthcare providers and staff to acknowledge the effects of obesity stigma and commit to mitigating it through teamwork, continuous training, and unwavering professional and ethical dedication to treat all patients with respect and dignity, regardless of their size and shape.

APPENDICES

Appendix A. FAAT Survey

Section 1. Demographic Information

Unique Identifying Code _____	**Age:** _____
Occupation: RN LVN MA _____	**Gender:** M F non-Binary
Length of Employment: _____ **years**	

Section 2. FAAT survey

Please answer the following questions from (1) Strongly Disagree to (7) Strongly Agree. Please do not leave any questions blank.

	Strongly Disagree	Disagree	Mildly disagree	Neither agree nor disagree	Mildly Agree	Agree	Strongly Agree
Empathy							
Fat people face discrimination in many areas of life.							
It is hard to accept your body if it differs from what the media represents as normal.							
Negative beliefs about body weight lead to negative assumptions about fat people.							
Health professionals should be aware of the negative impact of weight stigma.							
Fat People are treated badly because of the way society depicts fat bodies.							
Weight-based discrimination negatively impacts well-being.							
Concern for health is used as an excuse to judge fat people.							

	Strongly Disagree	Disagree	Mildly disagree	Neither agree nor disagree	Mildly Agree	Agree	Strongly Agree
Critical Health							
Body weight is not a reliable indicator of health.							
Health is not predicted solely by body weight.							
Fat people are not necessarily unhealthy.							
Body mass index (BMI) is a poor indicator of health.							
Healthy Bodies come in all shapes and sizes.							
Attribution Complexity							
There are genetic factors that cause people to be fat.							
There are biological factors that result in being fat.							
There are medical factors that cause people to be fat.							
There are factors outside of personal control that contribute to high body weight.							
There are many factors that cause people to be fat.							
There are environmental factors that contribute to people being fat.							
Self-report							
Do you consider yourself overweight/obese?	YES	NO	UNSURE				

Appendix B. DNP Project Information Sheet

Project: Obesity Sensitivity Information Sheet

Join us in this training as we tackle obesity and weight stigma. The Obesity Sensitivity Training (OST) aims to help recognize and address any stigmatizing behaviors toward our members dealing with weight issues. In this information session, we will also share valuable Kaiser Permanente resources to better support our members and ensure they receive the care they need. We will also discuss the importance of sensitive and understanding communication.

Why am I being invited to take part in this project?
Your participation in the OST is highly valued as it aims to address obesity and weight stigma. By participating, we hope you will gain valuable knowledge and skills that will enable you to engage in open, confident, and sensitive discussions about weight with our members. This is essential for providing holistic care and fostering trust among our members. Your involvement will also contribute to disseminating vital information, ultimately improving patient outcomes. Together, we can make a meaningful difference in our patients' lives by promoting a healthier, stigma-free environment.

What should I know about my participation in this scholarly project?

1. This information sheet explains the project to you.
2. It is up to you whether you want to participate.
3. You can decline to take part.
4. You can agree to take part, and you can also change your mind.
5. Whatever your decision is, it will not be held against you.
6. You are encouraged to ask any questions before, during, and after you decide to participate.

The project includes a 50-minute training session that covers discussions about obesity, stigma, and its effects on people, as well as Center for Healthy Living (CHL) programs. You will have a pre-survey that will take 3-4 minutes to complete. This process is entirely confidential, and your identification is not traceable. Subsequently, a second survey after 12 weeks will be sent to you for completion.

Why is this project being done?

The project is driven by the need to address the negative impact of obesity stigma on our members' well-being. Our primary objective is to identify and rectify stigmatizing behaviors, with the ultimate goal of providing compassionate, non-judgmental support to individuals and empowering them to tackle weight-related challenges. By forging strong partnerships with our healthcare providers, we intend to establish a more robust support network for our members' journey toward health. Our heightened awareness of the specific needs of these individuals may uncover opportunities to connect them with valuable CHL resources they may not have previously known about. Ultimately, this project aims to optimize the utilization of Kaiser Permanente health services.

How long will this project last?

The project commences with a 50-minute presentation on OST. We will conduct surveys before the OST and at the 12-week mark, from February 2024 to April 2024.

What happens if I say yes?

You will be asked to sign an informed consent form before the OST. The process involves a pre-and post-survey. The OST discussion covers obesity, stigma, and existing CHL programs. Screening questions with verbiage/script and workflow will also be discussed. The script will be relayed to members with BMI >25 kg/m2. If the member agrees to weight discussion, *weight management* will be added to the *Reason for the Visit*, prompting the provider to initiate the appropriate referrals during the visit encounter. A Center for Healthy Living handout that contains weight management and healthy lifestyle information may also be given if the member allows it. The workflow will continue for 12 weeks, followed by a final survey to evaluate your progress. No further steps are needed if a member disagrees with the weight discussion.

What happens if I say yes but I change my mind later?

You can leave the OST anytime, and this will not be held against you. Not participating will not affect your job security, performance evaluation, or any benefits you are already entitled to. If you change your mind in the middle of the OST, the data and information you have already provided will remain as part of the data analysis without your personal information.

What happens if I do not want to participate?

Participation is entirely voluntary, and you can decide whether to participate or not. Not participating will not affect your yearly work evaluation or job security.

How many people will be participating?

We expect about 40-60 nurses/medical assistants.

Are there any risks in participating in this project?

Participating in this project carries potential psychological risks, mainly if you have encountered obesity stigma. If the intervention is uncomfortable, you can withdraw from the project without consequences.

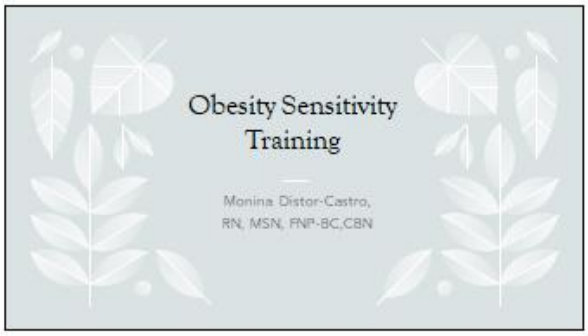
Your privacy is a top priority in this project. To maintain confidentiality:

1. Unique Code Identifiers: Personal information will be linked to a unique code, ensuring your responses remain confidential and de-identified.
2. Secure Storage: The names of participants on the consent forms will be securely stored, and all identification codes will be removed after the study.

We strictly adhere to ethical guidelines, with IRB oversight, and follow data retention policies to protect your information.

If you decide to join the project after reviewing this information sheet, please complete the consent form and survey before attending the OST.

Appendix C. Obesity Sensitivity Training PowerPoint



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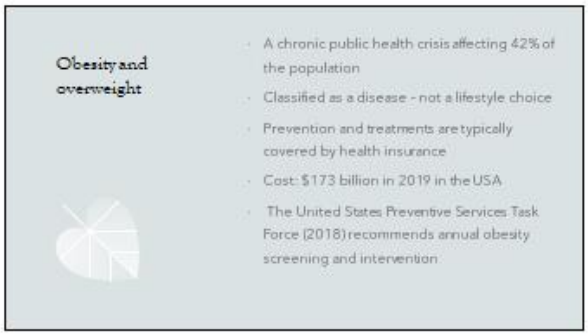
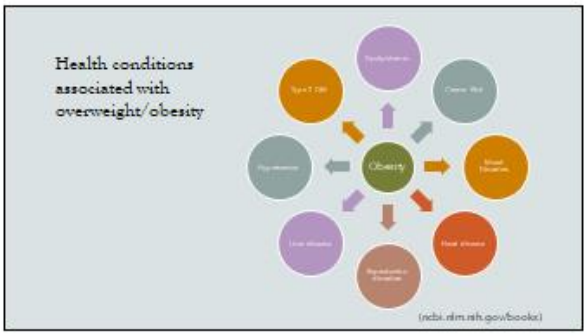


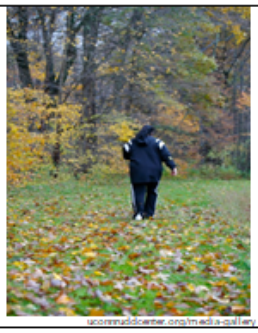
5



6

Overweight and Obesity

What do you think are the general causes of obesity?



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7

Causes of Obesity

- Disordered eating
- Age-related changes
- Epigenetic & genetic factors
- Smoking cessation
- Gut Micro-biota
- Sleep deficits
- Physical disabilities
- Maternal and paternal obesity
- Increased sedentary lifestyle
- Trauma, stress

8

But all in all.....

THERE ARE STRONG BIOLOGICAL AND ENVIRONMENTAL FORCES THAT OPPOSE WEIGHT LOSS AND FOSTER WEIGHT REGAIN.

9

Treatment strategies for Obesity

- Lifestyle and behavioral
- Devices
- Pharmacotherapy
- Surgery

10

Weight Stigma, Bias and Prejudice

11

Obesity Stigma

A form of discrimination and bias. A social devaluation of people because of their body weight/size.

12

Weight Based Stereotypes

Lazy, irresponsible
Lack willpower
Lack self-disciplened
Unmotivated
Unattractive and undesirable
Not very smart
Exhibit poor hygiene
Less capable to succeed in life
Should be blamed for their weight

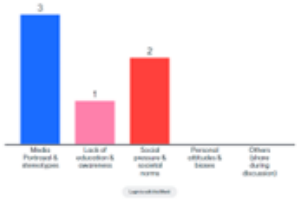
13

Have you encountered instances of weight stigma, either in your role as a nurse or as an individual? If so, could you share your experiences and insights?

14

Which of the following factors do you think play the most significant role in weight stigma?

Mentimeter



15

Obesity stigma in healthcare leads to

- Delayed treatments
- Avoidance of healthcare
- Misdiagnoses
- Low self esteem/body image
- Worsening health outcomes
- Social isolation/depression
- Weight gain
- Adverse health outcomes

16

Tackling Stigma

HEALTHCARE EDUCATION

- Obesity sensitivity
- Be an advocate
- Show kindness
- Acknowledge biases and recognize actions
- Patient-centered care
- Collaboration

POPULATION EDUCATION/ COMMUNICATION

- People first language
- Challenge common misconceptions
- Speak to your government representatives
- Show compassion
- Celebrate diversity

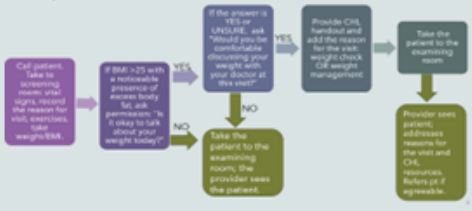
IMAGERY AND MEDIA

- Fair portrayal of people with obesity in online and print stories
- Diverse representation
- Advocacy
- Highlight positive stories

17

What can we do as clinical support staff?

Weight Assessment Workflow



18

19

Overview of the Center for Healthy Living Programs in KP

- Healthy Balance – Weight Management and Diabetes Prevention Program
- Options – Metabolic and Bariatric Surgery Preparation and Support
- Very Low-Calorie Diet (VLCD) – medically supervised meal replacement program
- Wellness Coaching by Phone
- Weight Loss Medications

20

Overview of the Center for Healthy Living Programs in KP

- Plants for Life – Introduction to Plant-Based Nutrition
- Nutrition for Health and Weight Loss – Introduction to Healthy Eating
- Making peace with Food – Help with Emotional Eating
- Living well after Bariatric Surgery
- Weight Management Support Group

21

Summary Actions

Care	Give them support
Provide	Provide them with our phone number: 562-622-4106
Empower	Empower them to speak with their primary care doctor or healthcare professionals
Educate	Educate for our patients regarding their health concerns
Know	Know that we have resources for them!

22

Take-aways

Be cognizant of our own biases and how these lead to our own actions.

Empower and support all our patients.

Weight Stigma serves no constructive purpose.

Be kind and compassionate.

23

Thank you

Monina Distor-Castro, RN

Monina.X.Distor-Castro@kp.org

562-622-4106

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TABLE OF EVIDENCE

CITATION	PURPOSE	SAMPLE/ SETTING	METHODS (Design, Interventions, Measures)	RESULTS	DISCUSSION, INTERPRETATION, LIMITATION OF FINDINGS
Bailey-Davis, L., Pinto, A., Hanna, D. J., Rethorst, C. D., Still, C. D., & Foster, G. D. (2022). Qualitative inquiry with primary care providers and specialists about adult weight management care and referrals. *Translational Behavioral Medicine*, *12*(4), 576–584. https://doi.org/10.1093/tbm/ibac006	To explore and evaluate the perspectives of PCPs and specialists regarding weight management, care, and referrals to community program settings: Weight Waters, Jeny Craig, Nutrisystem, Diabetes Prevention Program, and some to in-network dietitians.	N=33 PCPs (mean age 54), N=31 specialists (cardiology, gynecology, endocrinology, orthopedics, mean age 62) USA	Qualitative design. Convenience, purposive sample: an existing panel of PCP in rural, urban, and suburban settings. Qualtrics survey then they are interviewed via telephone, audio recorded, transcribed verbatim. Inductive analysis was performed with a comparative method.	* Observed weight bias among providers via offensive statements. * Provider experience influences obesity care rather than scientific guidelines. PCPs' awareness of guidelines varied. Specialists are aware of guidelines within their professional board. Informal referrals are made for weight management in the community. * In interviews, physicians discuss that the main barrier to weight management is patients' lack of motivation. Permission to discuss weight is not practiced, and proposed standards need to be implemented among providers. Weight	Discussion: Providers perceived and acknowledged the reasons of patients' lack of motivation as a barrier to weight management. They rely on patient requests for referrals but need a streamlined process. Strengths: This was the first study to address insights into crucial weight bias among providers and the need to focus on comprehensive obesity education, management, & utilization of community resources. Limitations: Brief interviews and potential bias in qualitative data interpretation. Future research is needed to study the knowledge gaps and scientific efficacy of community programs.

CITATION	PURPOSE	SAMPLE/ SETTING	METHODS (Design, Interventions, Measures)	RESULTS	DISCUSSION, INTERPRETATION, LIMITATION OF FINDINGS
				management is discussed in the context of health risk factor assessment.	
Batsis, J. A., Zagaria, A. B., Brooks, E., Clark, M. M., Phelan, S., Lopez-Jimenez, F., Bartels, S. J., Rotenberg, S., & Carpenter-Song, E. (2020). The use and meaning of the term obesity in rural older adults: A qualitative study. *Journal of Applied Gerontology*, *40*(4), 423–432. https://doi.org/10.1177/0733464820903253	To explore the use of the term "obesity" by clinicians and how it affects rural older adults with its use.	7 PCPs, 29 rural older adults with obesity, and 4 community leaders. New Hampshire	Qualitative study, with 8 individual semi-structured interviews using purposive and snowballing sampling	Theme 1. It is necessary to document the diagnosis of obesity in medical records. Theme 2: Obesity as a disease. Some older adults were averse to this labeling; others accept it as a disease as it may lessen societal stigma. Theme 3: Prioritizing obesity treatment, although some older adults do not associate obesity as a serious condition. Theme 4: Stigma with the word "obesity" The term obesity engendered feelings of negativity and otherness among the patients. Sampled clinicians need to find ways to discuss weight to intervene. Patients reject the label "obese" in favor of more	Discussion: Focusing on the use of sensitive terminology and care processes may potentially reduce the stigma related to obesity. There are competing paradigms between patients and PCPs, so there is a need to reconcile definitional differences to help the patient-clinician partnerships & mitigate weight stigma. Strengths: The study highlighted the older adults and their impression of the word "obese" or "obesity" and found the support needed to identify language that is non-stigmatizing and accepting, although the medical diagnosis of obesity is mandated to allow for payment of services. Limitations: Rural, all White patients, with a small sample of patients &

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				nuanced language as a "risk factor."	PCP, generalizability, patients of higher socioeconomic class.
Conaty, E. A., Denham, W., Haggerty, S. P., Linn, J. G., Joehl, R. J., & Ujiki, M. B. (2020). Primary care physicians' perceptions of bariatric surgery and major barriers to referral. *Obesity Surgery*, *30*(2), 521–526. https://doi.org/10.1007/s11695-019-04204-9	To analyze PCP's clinical perceptions regarding bariatric surgery and identify barriers to referral, to inform implementation of a future educational strategy to address bariatric surgery utilization.	150 PCPs surveyed. Illinois	Non-experimental electronic survey - contains 11 questions: efficacy and value of bariatric surgery, familiarity with bariatric surgical options, familiarity with the NIH eligibility criteria for bariatric surgery, long-term care and willingness to refer patients to a bariatric surgeon	*72% consult a bariatric surgeon for extreme obesity cases. *51% comfortable with patients undergoing bariatric surgery, *29.5% neutral, & 19.5% - negative feelings on bariatric surgery. *46.7% are familiar with the eligibility criteria for surgery, 35.3% are not, & 18% -neutral. * 59.5% are comfortable in long-term care of post-op bariatric patients, 21.6% neutral, & 18.9% are not. * 86% believe having a BMI >40 is a greater risk than having bariatric surgery. Some reported disagreement with bariatric surgery, preferred plant-based food & exercise.	Discussion: The majority have positive attitudes toward bariatric surgery but have concerns about surgical complications. Barriers to referral include a lack of knowledge about surgery and potential side effects. There is a need for more education on surgery options, complication rates, and weight loss statistics. Strengths: The study explored and identified PCPs' concerns about bariatric surgery and its long-term effects on their patients. Limitations: Low response rate, questionnaire not validated, potential bias as study investigators developed the survey, and only limited to PCPs.

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Croghan, I. T., Ebbert, J. O., Njeru, J. W., Rajjo, T. I., Lynch, B. A., DeJesus, R. S., Jensen, M. D., Fischer, K. M., Phelan, S., Kaufman, T. K., Schroeder, D. R., Rutten, L., Crane, S. J., & Tulledge-Scheitel, S. M. (2019). Identifying opportunities for advancing weight management in primary care. *Journal of Primary Care & Community Health, 10*, 215013271987087. https://doi.org/10.1177/2150132719870879	To assess the perspectives of PCPs and nurses toward weight management & identify possible areas of growth: focused on opportunities, practices, knowledge, confidence, attitudes and beliefs.	Convenience sample: 137 nurses, 82 PCPs who work at 5 different local clinics. 85% females, 93.6% white non-Hispanic Minnesota	A cross-sectional survey, Likert scale, 20 questions, sent via email, voluntary, anonymous. Questions address weight management, focusing on opportunities, practices, knowledge, confidence, attitudes, and beliefs.	50% of PCPs feel more equipped to address weight management, vs 17.6% of nurses. Both stated need more training on obesity (73.8% versus 79.4%, respectively) PCPs state they lacked time to discuss weight. *5% of providers indicated they were irritated when treating obese-overweight patients. And over 10% think that obese, overweight patients lack motivation for lifestyle changes. Neither group seemed confident with the weight discussion. *Respondents do not endorse negative attitudes about patients who are overweight or obese. *Both groups showed evidence of some unconscious bias: 7.3% among nurses and 17.3% among PCPs.	Discussion: Identified areas for growth in obesity management include the need for additional training of both PCPs and nurses. Nurses expressed a higher level of discomfort in initiating a discussion about obesity and they are underutilized in clinical practice. Strengths: There is a consistent theme of the benefit of having well-structured training on weight management among PCPs and nurses, Limitations: limited to one healthcare system, a small sample which limits generalizability, possible bias, predominantly non-Hispanic white and female. Hawthorne effect.

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Gallagher, C., Corl, A., & Dietz, W. H. (2021). Weight can't wait: A guide to discussing obesity and organizing treatment in the primary care setting. *Obesity*, *29*(5), 821–824. https://doi.org/10.1002/oby.23154	To develop a simple, practical guide for discussing and managing obesity in primary care clinics.	Novo Nordisk Obesity Specialty and 12 Primary Care Association Advisory Board, including primary care and obesity organizations roundtable discussion. USA	Qualitative study – a roundtable discussion of PCPs who developed a guide that is short, easy, practical, and informative when opening a discussion about weight and weight management.	Roundtable discussions revealed prevailing themes, including obtaining permission, scripted on addressing weight bias, providing a diagnosis, and emphasizing shared decision-making. The framework "Ask, Assess, Advise, Agree, Assist, & Arrange" is deemed suitable for weight management.	Discussion: PCPs are a unique opportunity to address obesity with their patients but find that they are lacking knowledge and are challenged on treatment guidelines. Strength: The study has helped develop a guide for the PCP's use, and the expectation is that it will increase the number of patients treated for obesity in primary care. The guide received endorsement from 11 medical organizations that open discussion, endorsement, and dialogue among primary care organizations: Limitations: There is limited empirical support that organizes the counseling approach; the roundtable was supported by Novo-Nordisk, a drug company that manufactures and markets treatments for diabetes and obesity.
Hansen, A. R., Rustin, C., Opoku, S. T., Shevatekar, G., Jones, J., & Zhang, J. (2020).	To describe the trend among clinician's adherence to clinical	Adults 20 years and older. A total of 41,343 participants were	A correlational study using survey data was released every two years from 1999 –	A 4% increasing trend of notification in adults with overweight and obesity. Among	Discussion: Patient weight information is improving. However, there are still opportunities to prevent

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Trends in us adults with overweight and obesity reporting being notified by doctors about body weight status, 1999–2016. *Nutrition, Metabolism and Cardiovascular Diseases*, *30*(4), 608–615. https://doi.org/10.1016/j.numecd.2020.01.002	recommendations regarding body weight discussion among adults with obesity, overweight	interviewed from 1999 – 2016 Georgia	2016. Answer to the question, "Has a doctor or other health professional ever told you that you are overweight?"	adults aged 20-34, it has the least notification trend. 80% of patients aged 50-64 were notified more in the last year of 2016. Adjust biennial percentage ratio showed an increasing trend (=1.05)	patients who are overweight from increasing weight in early adulthood. Strengths: The study's strengths in terms of the effectiveness of communication with patients opened a dialogue about patient self-awareness and provider compliance with clinical guidelines. Limitations: Self-report done by patients who may have disagreed with their PCPs, resulting in bias. The sample is an overwhelming White and insured population.
Horecki Lopez, E., Helm, M. C., Gould, J. C., & Lak, K. L. (2019). Primary care providers' attitudes and knowledge of bariatric surgery. *Surgical Endoscopy*, *34*(5), 2273–2278. https://doi.org/10.1007/s00464-019-07018-z	* To investigate the referral & practice behaviors of PCPs in managing patients with obesity. * To gain insight into obstacles affecting treatment approaches & referral to bariatric surgery.	41 surveys were received out of 121 community physicians in academic institutions. PCPs from Family Practice, Internal medicine & advanced practice providers. Wisconsin	Non-experimental descriptive survey responses by PCPs were collected anonymously. 39-question Qualtrics electronic survey emailed.	90.2% of responders reported >15% of patients were obese; 14.6% reported >15% were morbidly obese. All older providers state >15% of their patients were overweight. *51% initiated weight discussions. Male providers more likely to initiate conversations than	Discussion: Patients initiate discussions about weight management than PCPs. Provider comfort is a factor in initiating conversations. Reasons for not referring patients to bariatric surgery align with other provider studies: need for more education and streamlining strategies to initiate weight discussion to minimize

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				females (76.5% vs. 37.5%). The top three reasons are insurance coverage uncertainty (24%), patient qualification uncertainty (19.5%), & insufficient knowledge to educate patients on treatment options (17.1%). *29.3% have not referred patients to bariatric surgery; 43.9% felt that the risks of surgery outweighed benefits.	treatments and referral gaps. Strengths: The insight into the PCP's challenges and perceived barriers toward patients' referrals is valuable, indicating acknowledgment that they are open to identifying practice gaps and referral disparity through educational opportunities. Limitation: Small sample size (n=41) that limits generalizability and may contribute to sample error.
Koran-Scholl, J., Geske, J., Khandalavala, K. R., & Khandalavala, B. (2023). Teaching module for obesity bias education: Incorporating comprehensive competencies and innovative techniques. *BMC Medical Education*, *23*(1). https://doi.org/10.1186/s12909-023-04310-4	To describe the innovative web-based e-module on obesity bias & discuss its impact on family medicine residents.	83 family medicine residents viewed the e-module, 56 completed the pre- and post-survey Minnesota	Descriptive statistics; quantitative data analysis. Participants watch a 15-minute e-module on obesity bias with pre and post-tests.	Significant improvement in residents' comfort working with patients with obesity & understanding their own biases. The comfort level in working with patients with obesity increased from mean 3.0 on (4.0 scale) to 3.30 (SD=0.6; p=0.001). Respondents' scores on understanding their own biases increased from a mean of 2.77	Discussion: Education through a 15-minute e-module enabled the residents to recognize & learn to mitigate obesity bias, increase awareness of personal biases, and comfort in discussing treatments. Recommended its use to other physicians Strengths: The first study to use e-modules first-person video for medical residents to learn about obesity bias. This perspective allows learners

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				(on a 4.0 scale) to a mean of 3.48 (SD=0.5; p<0.001). Qualitative analysis found the e-module engaging.	to see a patient's point of view. Limitations: There is no precedent for a similar method, a small sample, and a limited pre- and post-survey scope. There are no validated instruments to assess obesity bias among HCPs and no objective measure of its impact on patient care performance.
Nair, D., & Hart, A. (2018). Family physicians' perspectives on their weight loss nutrition counseling in a high obesity prevalence area. *The Journal of the American Board of Family Medicine*, *31*(4), 522–528. https://doi.org/10.3122/jabfm.2018.04.170467	To examine physician weight loss nutrition counseling among family physicians in West Virginia with high obesity prevalence	N=38 completed the surveys Family Practice physicians Age group: 35-55 (55% of respondents) Men: 53% Females: 47% West Virginia	Non- experimental descriptive surveys. Anonymous online survey with 13 questions for all FP physicians in ambulatory practice.	* 68% of providers did not receive nutrition education in school. 47% find nutrition education relevant. * 63% counsel patients about nutrition. *84% have tried to lose weight, and 60% read nutrition labels. * 55% received nutrition education after medical school. * 74% refer patients to dietitians and 89% provide nutritional information to patients using web or app resources. Barriers to counseling are time constraints, patient disinterest, lack of	Discussion: PCPs acknowledge the lack of nutrition education in their curricula, with 2/3 obtaining it after medical school. The perceived barriers identified were limited time, patient compliance, and low self-efficacy. Strengths: Physicians in this particular setting with the highest prevalence of obesity in the US are more frequently engaged with patients regarding weight and nutrition. The study focused on the need to add Nutrition to medical school curricula and address practice barriers.

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				reimbursement, and inadequate knowledge about nutrition.	Limitations: The study had a small sample size and limited generalizability. The representation of primary care in the region was from a small group. Future studies should include a more diverse group. Bias may be present due to physician self-reporting.
Nanda, S., Adusumalli, J., Hurt, R. T., Ghosh, K., Fischer, K. M., Hagenbrock, M. C., Ganesh, R., Ratrout, B. M., Raslau, D., Schroeder, D. R., Wight, E. C., Kuhle, C. L., Thicke, L. A., Lazik, N., & Croghan, I. T. (2021). Obesity management education needs among general internists: A survey. *Journal of Primary Care & Community Health*, *12*, 215013272110132. https://doi.org/10.1177/21501327211013292	To determine self-reported knowledge, attitudes, prior experience, and perceived needs regarding weight management in patients with obesity.	N=80 healthcare workers (38 PCPs and 42 nurses) working in Internal Medicine. White: 74.7% female: 74.7% Most in the age group 30s (30%) and 50s (30%) Minnesota	Cross-sectional survey conducted via email with 60 questions on: demographics, training, beliefs and opinions, knowledge, attitudes, practices, and perceived needs using a Likert scale. Histograms to check the distribution. Wilcoxon rank was used for group comparisons. Reliability is calculated using Cronbach alpha with mean, standard deviation, median, and upper and lower quartiles.	Obesity was learned through lectures by 36% of participants. A majority (79%) expressed interest in weight management conversations. PCPs were more likely to implement treatment strategies, provide intervention and referrals, and offer education while also reviewing BMI, compared to nurses. Both nurses and PCPs strongly believed that obesity is a serious problem, but PCPs scored higher on knowledge and confidence levels	Discussion: Healthcare providers recognize the need for additional training in managing overweight and obesity, regardless of previous training. PCPs exhibit more knowledge about obesity compared to nurses. Strengths: PCPs and nurses were given equal study participation to share thoughts/opinions on the need for more obesity training. Limitations: Lack of generalizability, study focuses on one department within a healthcare system. The respondents were mostly white, female aged between 30 and 50 years,

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					which could impact the broader representation. The survey had a response rate of only 41% using a convenience sample, potentially influenced by nonresponse bias.
Oshman, L., Othman, A., Furst, W., Heisler, M., Kraftson, A., Zouani, Y., Hershey, C., Cho, T.-C., Guetterman, T., Piatt, G., & Griauzde, D. H. (2023). Primary care providers' perceived barriers to obesity treatment and opportunities for improvement: A mixed methods study. *PLOS ONE*, *18*(4), e0284474. https://doi.org/10.1371/journal.pone.0284474	To: 1. Explore PCP's current obesity treatment practice patterns 2. Assess PCP's perceived barriers to obesity treatment.	PCPs N=350 N-107 Survey respondents Willingness to be interviewed: N=41 females: 73% Family Medicine: 56% More than ten years of practice: 48.6% Work part-time in clinical practice: 54.2% Michigan	An explanatory sequential mixed methods study with survey data using Stata, version 15: An explanatory sequential mixed method with online 5-point Likert scale survey and qualitative interviews. Topics: initiation of weight loss discussions, treatment recommendations, resources used, and referral to additional support providers.	In the survey of 107 respondents, only 10% of PCPs used evidence-based guidelines for obesity treatment. PCPs identified the need for education on treatment resources (73%), 83% referred to community resources such as Weight Watchers, dietary counseling (63%), and self-help resources (75%). Expressed the need for enhanced team-based care support, including peers trained in obesity medicine (44%) and dietitians (54%). Weight management discussions occurred in less than 1/3 of cases, despite over half of the patients estimated to have	PCPs acknowledge that obesity treatment is a priority, and there is a need for additional education, team-based care models and policy changes to incentivize obesity treatment. Acknowledged the need for team-based collaborative care and recognized that multidisciplinary professionals also need to support obesity treatment. PCPs are interested in learning about obesity medicine. Strengths: The study is consistent with other studies that recognize inconsistencies in obesity treatment practice patterns among primary care providers. It also recognizes the need to address the problem, which requires a team-based

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				obesity. Barriers to treatment: urgent health concerns (88%) and limited visit time (83%). PCPs recognized the importance of additional training, systems-level support, policy changes, training reimbursement, and incentivizing obesity treatment.	approach. This is the first study to recognize PCPs' interest in ABOM training. Limitations: Completed in a single academic health system, may not be generalizable. Surveys and interviews are entirely voluntary, self-reported responses so it is subject to respondent bias.
Phelan, S. M., Bauer, K. W., Bradley, D., Bradley, S. M., Haller, I. V., Mundi, M. S., Finney Rutten, L. J., Schroeder, D. R., Fischer, K., & Croghan, I. (2021). A model of weight-based stigma in health care and utilization outcomes: Evidence from the learning health systems network. *Obesity Science & Practice*, *8*(2), 139–146. https://doi.org/10.1002/osp4.553	Test the indirect effects of negative experiences as a variable between obesity, care avoidance and utilization, and switching of PCPs	2,380 adult patients with BMI >25 kg/m2. The majority (91.6%) are white, 61% identified as females, average age is 59. Average BMI is 35.1 kg/m2 Minnesota	Summary descriptive statistics/cross-sectional design. Measures using scales assessing stigmatizing experiences, perceived patient-centered communication, perceived respect, delayed needed care and doctor shopping. All have different items on the Likert scale.	Delaying needed care (27.5%) and doctor shopping (13.7%) were reported. High BMI associated with stigma (b=0.03, p<0.001) and more likely to delay care (OR=1.06, p<0.001) and switch or attempt to change PCPs (OR=1.02, p=0.04), less patient-centered communication (b=0.002) and more frequent stigmatizing experiences (b=0.01).	Discussion: Patients with obesity may avoid care or switch doctors due to stigmatizing situations and poor communication with PCPs. The outcomes may contribute to increased morbidity and care delay/avoidance, worsening existing health problems. Results showed consistent evidence that patients with obesity are more likely to feel judged and discriminated against by HCPs; less building of rapport, less respect, less education and less time resulting in avoidance of care and seeking new PCP, having poor healthcare

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					experiences and identity threat due to perceived stigmatization. Strengths: Findings are consistent with evidence that HCPs discriminate against patients with high BMI. Offers useful design intervention strategies to improve care utilization and reduce stigmatizing experiences. Limitations: There is no comparison of available patients with normal BMI. There is a low response rate. The patient respondents are mostly white.
Tucker, C. M., Williams, J. L., Wippold, G. M., Bilello, L. A., Morrissette, T. A., Good, A. J., Shah, N. R., & Rowland, N. E. (2018). Views of diverse primary care patients on the roles of healthcare providers and staff and the influence of other variables in their weight management. *Clinical*	To describe racially diverse, low-income patients about: 1. Degree that providers talk to them about weight and lifestyle behaviors. 2. Level of respect they perceive from their providers re: weight 3. Their providers	N=529 adults from 7 Patient-Centered Medical Homes affiliated with academic medical centers. Mean Age: 52.17 years 42.7% African Americans 44.6% of White Americans 9.1% of other racial	A purposive quantitative study, 18-item modified survey on provider respectfulness, weight management discussions and survey assessment: health/health behaviors, primary care and health behavior change, community weight management resources	Statistical data analyzed: descriptive analyses (frequencies) and binary logistic regressions. * 61.4% self-identified as overweight. Men more likely to discuss weight, diet and exercise, especially patients aged>65. * 60% of referred patients follow up with	Discussions: Providers need to improve communication about weight discussion and management. Low-income patients are interested in community resources but face barriers (cost, time, transportation) so programs and initiatives may need to be factored in among clinic administration or community leaders. The

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Obesity, *8*(1), 11–20. https://doi.org/10.1111/cob.12225	assumed roles in assisting patients with weight management. 4. The factors that influence utilization of and referral to weight management programs.	groups Florida	and demographics. Completed surveys were collected in 2 months, obtained from the medical practices and mailed to the researcher for analysis.	community resources in low-income households. 31.5% of providers discussed weight and weight management with patients, despite over half of patients self-identifying as overweight. * Older patients discussed exercise more than younger subjects. * Ethnicity, gender, income, and age are not significantly linked to provider respectfulness of weight. African Americans were more likely to discuss weight management. Patients prefer referrals within the community. Cost and time impact resource access.	majority of patients think that the staff should be involved in weight management during office visits. Limitations: Patient-perception survey, self-report bias. 60% identified as overweight, potential under/over-reporting. Limited generalizability due to sample homogeneity; diverse samples and healthcare settings needed.

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