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Sevasti Simotas
San Jose State University

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**Evaluation of Nurse Practitioner Management
of Obese Patients**

Sevasti Simotas, MS, FNP

San José State University

School of Nursing

Jayne Cohen, DNSc, RNC, NP

Professor

San José State University

School of Nursing

Sevasti Simotas

██

██

██ (home)

██ (FAX)

Abstract

The purpose of this research project was to study current practice behaviors of adult and family nurse practitioners when evaluating and managing obese patients. Forty-three nurse practitioners were surveyed by questionnaire. Study results indicated that nurses' assessment of obesity was limited in the areas of body mass index measurement and co-morbid condition assessment. In addition, the nurse practitioners studied did not discuss adjusting caloric intake to support patients' caloric needs. The discussion of caloric intake versus caloric needs in conjunction with portion control is important to ensure weight loss success. The knowledge gained from this research may increase nurse practitioners' awareness regarding the need to integrate assessment and management of obesity in their ongoing care of obese patients. Pender's Health Promotion Model guided this research. The Model emphasizes the importance of assessing the patient's readiness for adoption of a healthier lifestyle. Individuals who are 20% over their ideal weight are considered obese, a condition which complicates other health problems such as hypertension, diabetes, and heart disease. Therefore, vigilant management is key to reduce the morbidity and mortality associated with obesity.

Evaluation of Nurse Practitioner Management of Obese Patients

The Problem

Obesity

Baron (1994) defined obesity as an overabundance of fatty tissues in an individual. The diagnosis of obesity was achieved through the calculation of the individual's body mass index (BMI). Baron (1994) explained that the BMI calculation is made by dividing kilograms of body weight by height in meters squared. A normal BMI is 20-25 kg/[m]². The National Institutes of Health classified obesity into mild (BMI 27.5-30), moderate (BMI 30-40), and morbid (BMI >40). Obesity has afflicted more than 26% of Americans and 50% of minorities, according to The National Task Force on the Prevention and Treatment of Obesity (1993). The National Institutes of Health and Technology Assessment Conference Panel (1992) discussed that the exact cause for obesity has yet to be clearly understood; however, it was widely accepted that obese individuals have an imbalance in caloric intake and energy expenditure.

Health Problems Related to Obesity

Colditz (1992) found that obesity was found complicated by conditions such as hypertension, elevated cholesterol, coronary heart disease, diabetes mellitus, gall bladder disease, respiratory disease, and cancer. According to Pi-Sunyer (1993), it would be prudent for health professionals to recommend that individuals maintain an average or low-average weight to diminish the risks obesity can pose on their health. In addition, Grodstein, Levine, Troy, Spencer, Colditz, and Stampfer (1996) reported

that more than \$100 billion are spent annually to treat health problems related to obesity.

Psychosocial Implications of Obesity

People in Western society believe themselves to be valuable when they feel they are attractive and desirable to others, according to Rodin (1993). Men and women throughout history have had different beliefs regarding what physical attributes are considered beautiful. In today's society, part of being viewed as beautiful is associated with being thin and fit. For example, the ideal woman of 20 years ago was heavier than today's ideal woman. However, as Rodin (1993) found, women today are heavier, though the idealized woman of today is thinner. Societal influence is responsible for men's and women's preoccupation with weight. As Rodin (1993) discussed, physical perfection is a paramount desire and aspiration in contemporary Western culture. This quest for physical excellence stemmed from the belief that if people are attractive, they will be more likely to be successful, and ultimately more satisfied in life. Rodin (1993) further explained that heavier individuals were often viewed by others as less intelligent and less likely to be successful. Therefore, health care providers' understanding of the importance obese individuals placed on attractiveness was imperative to provide a healthy approach to their treatment.

Nurse Practitioners and Obesity

According to Snyder and Yen (1995), nurse practitioners (NPs) use a holistic approach in their evaluation to ensure thorough assessments and accurate diagnoses of their patients. Therefore, it is the obligation of the NPs in the primary health care setting to discuss the obesity of their patients when evaluating them during a complete

physical exam. A complete discussion of obesity is imperative when evaluating obese patients to deliver quality patient care. Smithing and Wiley (1996) discussed the importance of educating patients in making decisions about their lives. The authors found patients to have an improved quality of life, fewer admissions to hospitals, and lower health care costs when their NP providers took interest in teaching them and their families. Smithing and Wiley (1996) proposed additional office time be allowed to facilitate the education of patients.

According to Courtney and Rice (1997), NPs communicated more effectively with their patients than any other providers. This effective communication was the necessary ingredient to develop a good rapport with the patient to elicit positive change. Nurse practitioners are ideal health care providers to follow obese individuals since NPs are skilled in communicating, educating, and motivating patients to change.

Nurse Practitioners and Managed Care

Due to the managed care environment, NPs at one of the country's largest health maintenance organizations (HMOs) are expected to evaluate patients in a short period of time (i.e., 15 minutes). Therefore, many providers may be reluctant to embark on sensitive issues such as obesity during a short office visit. Nurse practitioners may not effectively discuss obesity management with their patients for fear that the discussion may exceed the allotted time.

Purpose and Significance of the Study

The purpose of this study was to assess the extent to which adult and family NPs at an HMO discuss the management of obesity with their obese patients. The

knowledge gained from this study may encourage NPs functioning in high-volume organizations to approach obese patients.

Literature Review

An extensive review of current literature revealed that NPs have not studied or evaluated their clinical practice behaviors with respect to the management of obesity. Kuczmarski, Flegal, Campbell, and Johnson (1994) found that adults in the United States were heavier today than 30 years ago. Their study revealed that 33.3% of the adult population was overweight. The increased prevalence of obesity resulted in health problems that increased morbidity and mortality. The researchers reported that obesity was a difficult problem to manage. Private industry has attempted to assist individuals with weight loss without significant success. The authors proposed that health care providers focus on prevention of the overweight state.

The National Institutes of Health and Technology Conference Panel (1993) studied the profile of the American who attempted weight loss. The authors evaluated the data from four self-report surveys. They found that 33% to 40% of women, and 20% to 24% of men attempted weight loss. However, the authors found that many persons who dieted did not have a high BMI. In addition, persons with higher education and income had a low BMI. The panel cited improvement of self-image, elimination of discrimination, and reduction of health problems associated with being overweight as reasons why individuals decided to reduce their weight. The panel emphasized that weight reduction and maintenance required continuous attention by the obese patient. Consequently, weight reduction must be a slow process directed by a health care provider.

Grodstein, Levine, Troy, Spencer, Colditz, and Stampfer (1996) studied 192 persons 3 years after completion of a 26-week commercial weight reduction program. The authors found that during the weight loss program, individuals lost weight. However, 3 years after completion of the program, the participants' mean weight was similar to their pre-diet mean weight. Only 20% of the participants surveyed weighed less than they did before their diet. The authors stated that individuals required close supervision to achieve weight loss success. The authors found that individuals who exercised were less likely to regain their weight. The authors concluded that given the difficulty in losing and maintaining weight, promoting prevention of obesity would be prudent.

Yanovski (1993) discussed the importance of individualizing treatment of obesity. The author also emphasized that maintenance of weight loss must be a long-term commitment between patient and provider. According to Yanovski (1993), obesity is a condition that should be treated like any other chronic disorder. The author stated that weight gain in an unsupervised patient after dieting, although frustrating to the provider, is not surprising. Yanovski (1993) also proposed training of providers and their staff on the psychological issues associated with obesity. For example, obese persons were usually uncomfortable about being weighed at every visit. Therefore, the health care provider should have discussed the anxiety around the process of weighing, and negotiated a more acceptable solution for both provider and patient.

Landau and Moulton (1992) identified specific techniques to promote success when managing obesity. The authors emphasized that listening to the patient, and refraining from making judgmental remarks, promoted a therapeutic environment in

which the patient could discuss the problem. The primary care provider should assist the patient in discussing the reasons for interest in weight reduction. In addition, the authors reported that a provider should approach the patient with specific reasons for weight loss.

Foreyt and Goodrick (1993) focused on the importance of self-care in obesity management. The authors stated that patients must desire weight reduction and adoption of a healthy lifestyle to be successful. They discussed that obesity is a chronic condition that requires continuous care. Obese individuals must change their behaviors to reduce their risk of disease and improve their health. In another article, Foreyt and Goodrick (1993) supported a non-dieting method to control obesity through therapy and peer group interventions (e.g., cessation of caloric restriction, gradual increase in activity level, gradual reduction of fatty food consumption, and acceptance of new weight after implementation of healthier habits). Patients in prior weight loss studies had many failures, in part, for conventional diets limited food choices drastically.

Keller, Oveland, and Hudson (1997) acknowledged that the importance of maintenance of a modest loss was important in the prevention of diseases associated with obesity. The authors found that tailoring behavioral modification to individual clients was the most effective approach to weight reduction. Keller et al. (1997) proposed three strategies to assist patients with weight control including biophysical, cognitive-behavioral, and social-contextual. The biophysical strategies involved caloric minimization, food composition, and exercise. Cognitive-behavioral strategies included educating individuals to be mindful of their caloric intake, awareness of the necessity

to eliminate eating to satisfy emotions, and to accept oneself. Social-contextual strategies involved emotional support of obese individuals by their significant others and understanding cultural significance. Keller et al. (1997) discuss that in cultures where motherhood equaled status, it was considered attractive to be heavy. However, in cultures where women did not achieve status through motherhood, women were found to be thinner.

Goldstein (1992) reviewed studies in which patients achieved a modest weight loss to evaluate whether a modest or significant weight loss would be most beneficial in the prevention of diabetes, hypertension, elevated cholesterol, and heart disease. The author found that a 10% loss of weight was advisable and prudent to prevent conditions associated with obesity. He recommended that an incremental approach to weight reduction be implemented as a means of achieving the goals of the patient and preventing disease.

Conceptual Framework: Pender's Health Promotion Model

The conceptual framework that guided this research was Pender's Health Promotion Model which focuses on promoting healthy lifestyles. Walker, Sechrist, and Pender (1987) reported that 50% of deaths annually are directly related to unhealthy lifestyles. This model identifies cognitive and perceptual factors that are addressed when attempting healthful behaviors. Cognitive and perceptual factors involve health care providers' assessments of patients' readiness for change. For this model to be implemented successfully, patients must be ready for the challenge of a healthier lifestyle. In addition, patients must feel their health is an important commodity worth protecting. Pender's model also identifies modifying factors, such as environment, that

are important for primary care providers to consider when assisting patients with health promotion. Lastly, the model encouraged action toward behavioral modification to achieve a healthier lifestyle. This model provides an ideal framework for practice necessitating lifestyle change to promote health.

Research Methodology

Research Design

This was a nonexperimental descriptive survey.

Subjects and Setting

The data were obtained by using a convenience sample of adult and family NPs employed within a large HMO in California. The names of the providers were obtained through the HMO's NP telephone directory. All the NPs were mailed a cover letter, a questionnaire, and a stamped return envelope. The questionnaire asked them to report their practice behaviors with obese patients. Confidentiality was maintained since the questionnaires were not number coded.

The target population was 102 NPs. Of the 102 NPs, 43 responded to the questionnaire (42%). Forty-one of the NPs were females and two males. Respondents' ages ranged from 32 to 59 years, with a mean of 47.9 years. Seventy-four percent (32) of the NPs were Master's prepared, 21% (9) had Bachelor's degrees, 2% (1) had Associate degrees, and 5% (2) were educated in diploma schools. Respondents reported that they were employed with the HMO from 2 to 24 years with a mean of 5.2 years. Eighteen NPs were with the HMO for 11 or more years, while 25 were with the HMO from 2 to 11 years. No NPs were employed with the HMO for less than 2 years.

Ten NPs (23%) were formerly obese, yet 10 different NPs (23%) reported being currently obese.

Instrument

The questionnaire's items were based on a review of current literature related to the assessment and treatment of obese individuals. The framework that structured the questionnaire was the nursing process: (a) assessment, (b) planning, (c) implementation, and (d) evaluation. The nursing process is an effective approach in assisting patients with change (Murdock, 1997). The assessment section of the questionnaire covered the NP's acknowledgement of the patient's problem. The planning section included questions that may encourage the initiation of lifestyle changes in a patient. The implementation items focused on specific actions that are recommended to achieve a healthier lifestyle. Lastly, the evaluation section addressed the behavior of the NP after the establishment of a relationship with the obese patient. There were two to five questions under each nursing process category.

Three NP experts in obesity management were solicited to evaluate the newly constructed tool for content validity. One NP expert was an assistant director and co-founder of a weight management program, while the other two NPs were directly affiliated with weight management programs. The NP experts independently determined that the tool the researcher developed was effective. No revisions to the instrument were made.

Results of Study

The NPs reported seeing from 5 to 500 patients per month. The largest percentage of NPs (30%) reported evaluating 100 obese patients per month.

Table 1 outlines the percentage of NP providers' responses regarding their practice behaviors. As seen in Table 1, under assessment, 59% (26) of NPs responded that they never calculated patients' BMI. None of the NPs reported consistent calculation of BMI in their obese patients. Fifty-three percent (23) of NPs assessed co-morbid conditions of their patients almost always. Sixteen NPs (37%) reported assessing the patient's readiness for change often.

The planning section of the questionnaire revealed that 51% (22) of NPs almost always involved patients in the management of their obesity. In addition, 47% (20) of NPs discussed adoption of a healthier lifestyle as a process that takes time.

As seen in Table 1, the implementation section of the questionnaire found that 18 NPs (42%) often educated their patients on the importance of adjusting their caloric intake to support their caloric needs. Twenty-eight percent (12) of NPs reported conveying importance of matching caloric intake and needs almost always. Thirty-four percent (15) of NPs reported never discussing a 2 gram of fat per 100 calorie diet. Forty-two percent of NPs (18) sometimes discussed food portion control while 2% (1) never discussed portion control. Forty-seven percent (20) of NPs reported they promoted exercise almost always. Referral to a weight management clinic was recommended sometimes by 42% of NPs queried.

In the evaluation section, 34% (15) of NPs questioned reported giving patients a business card occasionally to ensure patients' access to the NP. Fifty-eight percent

(25) of NPs reported that they now and then follow up the patient's visit with a phone call. Follow-up visits were reported being scheduled sometimes by 49% (21) of NPs, and never by 21% (9) of NPs.

Discussion and Recommendations

The largest percentage of NPs (30%) reported evaluating 100 obese patients per month. Therefore, it is important that these patients have their obesity addressed and managed. The majority of these NPs did not calculate BMI; they perhaps simply visually evaluated the size of the patient. However, measuring the BMI would provide a clearer picture of the scope of the problem. Respondents were not requested to report why they did not perform this particular function. Calculation of a BMI is recommended to classify the severity of obesity in a patient. Nurse practitioners can improve their evaluation of obese patients by including a BMI calculation in their objective findings. Based on these data, another area for improvement may be in the NP assessment of co-morbid conditions. Although more than half of NPs did assess for diabetes, hypertension, and elevated cholesterol, consistent assessment of co-morbid conditions by all providers is important. These conditions are prevalent in obese patients, and increase the patients' risk of morbidity and mortality.

According to Lissner, Steen, and Brownell (1992), health care professionals should educate obese patients to consume no more than 25% fat per 1,200 calories (2 grams of fat per 100 calories). Nurse practitioners can enhance the education of obese patients to include a 2 gram of fat per 100 calorie diet, portion control, and consistent exercise. Although many NPs studied educated their patients about diet and exercise, many NPs do not have time to educate patients about specific caloric

intake and expenditure. Lack of discussion of specific information about fat grams, portion control, and exercise may be confusing to patients. The confusion patients may experience may impede their success in weight loss. To assist NPs in the deliverance of specific information, NPs can distribute and discuss literature about weight reduction with patients during the clinic visit.

This study also reveals follow-up as an area to improve in the care of obese patients. Nurse practitioners can invite their obese patients to return for follow-up appointments where obesity can be the focus of the discussion. In addition, NPs can consider referral of their obese patients to weight management experts where available. Health education classes, combined with individual attention by NPs, may promote obesity management success. Obesity should be viewed as a condition that requires long-term treatment and close supervision in order to increase the success of weight loss and weight maintenance.

Limitations of the Study

Study limitations included (a) small sample size, (b) use of a convenience sample rather than randomization, (c) subject's reluctance to self-report, (d) a new instrument without established psychometric properties, and (e) results of the study may not be generalizable.

Implications for Nursing

Nurse practitioners view obesity as a complicated disease process with multiple physical, psychological, and societal causes and effects. Nursing education generally focuses on a holistic approach to health care; therefore, NPs have the scientific knowledge to promote positive change in the obese patient population. However,

managed care often does not afford NPs the time to implement this holistic approach. Nurse practitioners may consider rallying HMOs for increased scheduled time to evaluate and educate obese patients in order to promote weight loss and eliminate the consequences of the overweight state.

Ultimately, prevention of obesity is key to its elimination. Nurse practitioners' focus on obesity prevention may be helpful in the pediatric setting. Education of families and children, by nurses, may assist in reducing the numbers of overweight adults. However, if prevention is not an option, a sensitive, specific approach can benefit the adult patient. At the onset of any intervention related to obesity, it is critical that NPs include the assessment of the patient's readiness for adoption of a new lifestyle. As Pender's Health Promotion Model emphasizes, in order to be successful, patients must be prepared for the challenge of change. Patients who adopt the goal of weight reduction require specific information to achieve their goals. This information needs to be delivered methodically in an unrushed manner and setting.

Severe time constraints are inherent in the managed care setting. Many NPs are employed in these setting types. While NPs advocate to increase the time allocation of patients' visits, they must also strategize about how to most efficiently serve patients. Therefore, it is imperative the NPs adopt a systematic, methodical approach for the evaluation and management of obesity. A consistent approach is key to better serving this patient group, and will help enhance satisfaction among NPs. Nurse practitioners' attitudes and sensitivity in working with obese patients may serve as an example for other providers as we reach out to promote the health of one-third of our country's population.

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Table 1

Evaluation of Nurse Practitioners' Management of Obesity

	Never	Sometimes	Often	Almost Always
<u>Assessment</u>				
Body Mass Index calculation	59%	32%	9%	0%
Assessment of co-morbid conditions	2%	6%	37%	53%
Assessment of readiness for change	0%	27%	37%	34%
<u>Planning</u>				
Patient involvement in obesity management	0%	12%	37%	51%
Discussion about adoption of healthier lifestyle	0%	16%	37%	47%
<u>Implementation</u>				
Education about adjusting caloric intake to support caloric needs	5%	26%	42%	28%
2 gm of fat per 100 calorie diet	34%	28%	28%	9%
Portion control	2%	42%	28%	28%
30 minutes of cardiovascular exercise	0%	14%	40%	47%
Weight management clinic referral	14%	42%	28%	16%

(table continues)

	Never	Sometimes	Often	Almost Always
<u>Evaluation</u>				
Offer business cards to patients	12%	34%	33%	21%
Follow-up phone call	30%	58%	7%	5%
Follow-up visit	21%	49%	19%	12%

Note. Sample size was 43. Percentages do not sum to 100% due to rounding.