AN EDUCATIONAL INTERVENTION TO INCREASE AWARENESS OF WEIGHT BIAS
IN NURSING STUDENTS

by

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ABSTRACT

Over one third of the adults and 12.5 million children in the United States are obese. The obesity rate continues to climb and along with that the rates of medical and psychological issues related to this disease. Weight bias based on negative stereotypes has been reported in healthcare professionals. This can affect the treatment and health seeking behavior of overweight patients. Recommendations from research include developing nursing curriculum to include information about weight bias and the specific needs of overweight patients. Research also suggests increasing awareness of one’s own bias, helps to decrease that bias. National initiatives by many health related organizations list obesity as a research priority. Obesity was recently recognized as a disease; guidelines were created to encourage the medical community to more actively treat overweight patients. The purpose of this study was to determine the effect of an educational intervention about weight bias in healthcare professionals on the attitudes of undergraduate nursing students. A quasi-experimental study using pretest-posttest design with two groups of undergraduate nursing students was used and weight bias was evaluated utilizing the Fat Phobia Scale. Statistical analysis results revealed all pretest scores were low and the posttest scores increased indicating an increase in fat phobia. Although the between group analysis was not completed due to the small sample size of one group, an unplanned discussion took place with both groups after the posttests were collected. This discussion suggested that the educational intervention was beneficial in stimulating conversation among the students about their feelings and attitudes toward patients with obesity and possibly raising awareness of how their words and actions could impact the treatment and health seeking behavior patients with obesity.
DEDICATION

I dedicate this dissertation to Brent. You are my best friend, husband, and source of constant support. Thank you for your love, patience, understanding, and never ending belief in me. Your love and support is what sustained me through this process. I love you.
LIST OF ABBREVIATIONS AND SYMBOLS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AACN</td>
<td>American Association for Colleges of Nursing</td>
</tr>
<tr>
<td>ACC</td>
<td>American College of Cardiology</td>
</tr>
<tr>
<td>AHA</td>
<td>American Heart Association</td>
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<tr>
<td>AMA</td>
<td>American Medical Association</td>
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<tr>
<td>ANA</td>
<td>American Nurse Association</td>
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<tr>
<td>ATOP</td>
<td>Attitudes Toward Obese Persons</td>
</tr>
<tr>
<td>BAOP</td>
<td>The Beliefs About Obese Patients</td>
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<tr>
<td>BMI</td>
<td>Body Mass Index</td>
</tr>
<tr>
<td>CDC</td>
<td>Center for Disease Control</td>
</tr>
<tr>
<td>df</td>
<td>Degrees of freedom: number of values free to vary after certain restrictions have been placed on data</td>
</tr>
<tr>
<td>FPS</td>
<td>Fat Phobia Scale</td>
</tr>
<tr>
<td>IRB</td>
<td>Institutional Review Board</td>
</tr>
<tr>
<td>Kg/m²</td>
<td>kilogram per meter squared</td>
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<td>n</td>
<td>number</td>
</tr>
<tr>
<td>NABN</td>
<td>National Association of Bariatric Nurses</td>
</tr>
<tr>
<td>NCLEX</td>
<td>National Council Licensure Examination</td>
</tr>
<tr>
<td>NIH</td>
<td>National Institutes of Health</td>
</tr>
<tr>
<td>NLN</td>
<td>National League of Nursing</td>
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</table>
\( p \) \hspace{1cm} \text{Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value}

SD \hspace{1cm} \text{Standard deviation: the amount of variation of a set of data values}

SPSS \hspace{1cm} \text{Statistical Package for Social Sciences}

\( t \) \hspace{1cm} \text{Computed value of } t \text{ test}

TOS \hspace{1cm} \text{The Obesity Society}

WHO \hspace{1cm} \text{World Health Organization}

\( \alpha \) \hspace{1cm} \text{Alpha: can range from 0 to 1 and 0 means there is no chance of making a Type I or Type II error and 1 means it is unavoidable.}

\( = \) \hspace{1cm} \text{Equal to}

\( < \) \hspace{1cm} \text{Less than}

\( > \) \hspace{1cm} \text{Greater than}
ACKNOWLEDGMENTS

I would like to thank my entire committee and my chair, Dr. Becky Atkinson for their guidance and support. I have learned so many things about research, writing, and academics. I am grateful for everyone’s time and commitment to making my study strong and meaningful. I am grateful to Dr. Susan Gaskins and Dr. Douglas McKnight for their thorough and thoughtful input throughout the process and to Dr. Alice March for joining my committee near the end and bringing new prospective and ideas. I would like to give special thanks to Dr. Sheethal Reddy for agreeing to serve as the external representative on my committee and her additional support, along with Dr. Michael Moore, with my data analyses and encouragement.

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Chapter One

AN EDUCATIONAL INTERVENTION TO INCREASE AWARENESS OF WEIGHT BIAS IN NURSING STUDENTS

Obesity is a national concern with rates having tripled in the last 30 years (Frerichs et al., 2012). According to the latest data from the Center for Disease Control ([CDC] 2015), about 17% or 12.5 million children in the United States (U.S.) between the ages of 2 and 19 years old are obese, and more than one-third (36.5%) of adults are obese. This problem is important to address because of increased medical costs related to obesity, but more importantly because of the increased health risks to the individual. Health issues that used to be exclusive to adults like hypertension, type 2 diabetes, and fatty liver disease are now also occurring in children with obesity (Frerichs et al., 2012).

Obesity-related medical expenses in 2015 were between $147 and $210 billion (Robert Wood Johnson Foundation, 2016). This medical issue has had a negative impact on the U.S. economy and has had devastating impacts on individual families. By addressing obesity, the medical community can assist individuals and families to lead longer, healthier lives and also decrease the future medical expenses for this nation. Many individuals with obesity have turned to bariatric surgery to help them overcome the health issues that arise from being overweight and obese. However, obesity also presents psychological issues related to bullying, emotional issues, anxiety, and peer rejection (Beck, 2016; Halfon, Kandyce & Slusser, 2013; Morrison, Shin, & Tarnopolsky, 2015).
Along with the physiological problems that come from obesity, many people with obesity often experience weight bias. Weight bias is now at the same level as racial discrimination (McClure, Puhl, & Heuer, 2011). The media often focus on blaming the individual for the weight problem relating it to being lazy, unattractive, and unintelligent (Himes & Thompson, 2007). Even news stories about people with obesity depict them as negative stereotypes, eating fast food, or lying on the couch. These images can lead to more weight stigmas, which could ultimately lead to decreased health-seeking behaviors, and impair both the mental and physical health of people with obesity (Amy, Aalborg, Lyons, & Keranen, 2006).

The media portrays thin people as happy and successful and those who are overweight as lazy and unhappy (Himes & Thompson, 2007). Western culture values beauty and thinness (Burmeister & Carels, 2014). Weight bias is perpetuated by these images and by cultural beliefs. These beliefs have led to the use of shame to motivate weight loss and blaming the individual for being irresponsible and lacking self-discipline (McClure et al., 2011). Current literature has shown weight bias is prevalent among healthcare professionals, including dieticians, nurses, and physicians to a concerning degree (Keyworth, Peters, Chisholm, & Hart, 2013; Merrill & Grassley, 2008; Puhl, Luedicke, & Grilo, 2013; Puhl, Schwartz, & Brownell, 2005). If healthcare providers increase their awareness of their weight biases, they may be able to improve the quality of care they provide to patients with obesity.

**Statement of Problem**

US obesity rates have risen along with the medical co-morbidities related to this disease (CDC, 2010). In response to this finding, on June 18, 2013, the American Medical Association (AMA) adopted a policy that recognizes obesity as a disease (“AMA Adopts New Policies,” 2013). This was done to encourage the medical community to more actively treat overweight
patients for weight loss. The American College of Cardiology, The American Heart Association Task Force on Practice Guidelines, and The Obesity Society used evidence-based practices to determine guidelines to manage obesity (Jensen et al., 2013). In addition to the problem of increasing obesity rates, negative attitudes toward individuals with obesity based on stereotypes have led to weight bias even in healthcare professionals and affect treatment and treatment-seeking behaviors. Nursing students often observe weight bias from instructors and other healthcare professionals by witnessing derogatory humor and negative attitudes toward patients with obesity (Puhl et al., 2013). This study looked at the problem of weight bias in nursing students in order to determine if an educational video was an effective tool to decrease weight bias in undergraduate nursing students.

Currently nursing education integrates obesity education throughout the curriculum and a few nursing schools even offer an obesity-specific lecture (Huseman & Rowan, 2010) with recent suggestions to add simulation lab experiences with patients with obesity (Mangold & Markiewicz, 2014). Nursing education must include a curriculum that calls on nursing faculty to examine their assumptions about patients with obesity and become familiar with appropriate ways to teach students to recognize, discuss, and provide patient care to patients with obesity (Fillingham, Peters, Chisholm, & Hart, 2014). This training is essential when working with any patient to address specific health prevention and promotion issues related to individuals with obesity. Research recommends that the curriculum also include information about weight bias and specific needs of patients with obesity (Waller et al., 2012).
Purpose of the Study

The purpose of this quasi-experimental study was to determine the effect of an educational intervention about weight bias in healthcare on the attitudes of undergraduate nursing students.

Research Question and Hypotheses

What is the effect of a video about weight bias in healthcare on the awareness and level weight bias on nursing students as measured by the Fat Phobia Scale (FPS)?

Hypotheses

1. There will be no significant difference between the two groups in the pretest scores on the FPS or between the two groups in the posttest scores.
2. Both groups of nursing students will have increased awareness of their own weight bias as evidenced by lower scores on the FPS after viewing the Weight Bias in Healthcare video.

Methodology

This study was a quasi-experimental study to determine the effect of an educational intervention about weight bias in healthcare on two groups of undergraduate nursing students using pre- and posttest design. The primary aim of this study was to determine the effectiveness of an educational intervention. The secondary aim was to determine if there is any difference in weight bias between a group of nursing students that have an obesity-specific lecture as part of the curriculum and a group of nursing students that have obesity integrated throughout the curriculum.

The FPS was used to measure weight bias and was used for both the pretest and posttest. With both groups of students, the FPS was completed by the participants and collected before the
students viewed the video. After watching the video, the students completed the FPS again. Data analysis was done to determine any change in the pretest and posttest data in both Group A and Group B using paired sample t-tests. Another analysis was planned to be conducted using independent t-tests to determine if there is a difference in the FPS scores of the pretest between Group A and Group B and the FPS scores of the posttest between Group A and Group B. Group A’s n was insufficient to complete this analysis, so the secondary aim of this study could not be met.

Assumptions of the Study

For the purpose of this study the following assumptions were made:

1. The participants in this study were an accurate representation of the undergraduate nursing students.
2. The participants’ responses to the questions in the instruments used were representative of their attitudes.

Conceptual Framework

Bandura’s social cognitive theory works well with Watson’s theory of human caring as a framework to develop caring in nursing students while increasing their self-efficacy. Bandura’s theory suggests individuals’ self-efficacy is influenced through vicarious experiences and through physiologic and affective cues. Watson’s theory suggests a genuine relationship between caregivers and patients can be achieved when the caregivers are aware of their own biases and can accept people as they are while treating them with respect and dignity. In this case, the video provided vicarious experiences with the scenarios and the participants were able to observe the physiologic and affective cues the actor portrayed when treated badly by the healthcare
providers. The video role modeled a genuine, respectful relationship between the healthcare provider and the patient.

**Bandura’s Social Cognitive Theory**

Bandura (1997) identified the following four sources as influencing individuals’ self-efficacy: 1) personal performance accomplishments 2) verbal persuasion, 3) vicarious experience, and 4) physiologic and affective cues like pain and anxiety. By increasing awareness of how language and physical environment can stigmatize overweight patients, students could increase their sense of self-efficacy in their care for patients with obesity. This could be achieved by observing the interactions with patients, the verbal persuasion of the experts’ commentary in the video, and by observing the cues of pain and anxiety exhibited by the actors portraying the patient with obesity when the interaction is inappropriate. Self-efficacy and outcome expectations are the two determinants of social cognitive theory for behavioral change (Wu & Chang, 2014). The video may have influenced the students’ belief that they can better care for patients with obesity.

The intervention of an educational video was used to increase knowledge, awareness, and communication skills through scenarios and experts providing information. These scenarios reinforce which behaviors the students are using that are effective for communicating with this patient population through vicarious experiences of the actors in the healthcare scenarios. The students were able to view scenarios that model inappropriate behavior for healthcare providers. After a short commentary pointing out the issues, more scenarios demonstrate appropriate behaviors. The narrator of the video uses verbal persuasion to share the impact of a positive or negative healthcare experience. Examples of recognizing physiological and affective cues associated with emotions are addressed in the video through the healthcare provider interacting
with the patient. The format used in the video supports social cognitive theory through role modeling in clinical practice for the nursing students (Perry, 2008).

**Watson’s Theory of Human Caring**

Accepting people as they are and collaborating with them to provide quality care while demonstrating respect, dignity, and compassion is Watson’s theory in practice (Iversen & Sessanna, 2012). Nurses need to be taught more than the technical skills required to provide safe care. Values, morals, intuition, and knowing one’s self are also essential for a genuine caring relationship (Sitzman, 2007). Watson describes the relationship between the nurse and the patient as one developed through touch, facial expressions, verbal expressions, and movements resulting in intentional caring (Watson, 2007). The video features attributes of all 10 of the carative factors to teach nursing students how behaviors such as facial expressions and verbal expressions can help lead to a genuine caring relationship (Creel & Tillman, 2011). Knowing one’s self and being aware of one’s own biases can help the nurse to provide a more genuine caring experience.

According to Watson, the caregivers’ character traits are learned early in life and are then influenced by family and friends. Nurse educators can also influence the humanistic/altruistic value system of nursing students (Rafael, 2000). Raising awareness of the biases individuals may have can help to improve the caring relationship with overweight and obese patients (Puhl & Brownell, 2003). Rafael (2000) states that to develop sensitivity, one must understand his or her own personal and cultural beliefs and be aware of how those beliefs can present barriers to caring.

Watson’s 10 carative factors are: 1) humanistic/altruistic value system; 2) enabling faith-hope; 3) cultivation of sensitivity to self and others; 4) helping human care relationships; 5) expressing positive and negative feelings; 6) creative problem-solving care process;
7) transpersonal teaching-learning; 8) supportive, protective, and corrective mental, physical, societal and spiritual environment; 9) human needs assistance; and 10) existential-phenomenological spiritual forces (Iversen & Sessanna, 2012). The carative factor most salient to this study is the cultivation of sensitivity to self and others. Table 1 shows how Watson’s carative factors are elicited in the video used for the intervention.

Table 1

*Link between Watson’s Theory and Healthcare Weight Bias Video*

<table>
<thead>
<tr>
<th>Watson’s Carative Factors</th>
<th>Corresponding Factors from Video</th>
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<tr>
<td>Humanistic/altruistic value system</td>
<td>Provide a positive, straightforward approach to medical issue related to weight</td>
</tr>
<tr>
<td>Enabling faith-hope</td>
<td>Be aware of patients’ special needs as far as equipment and sensitivities to being weighed.</td>
</tr>
<tr>
<td>Cultivation of sensitivity to self and others</td>
<td>Be Aware of your own attitudes toward obese individuals. Don’t make assumptions.</td>
</tr>
<tr>
<td>Helping human care relationships</td>
<td>Provide respectful, safe care for all patients.</td>
</tr>
<tr>
<td>Expressing negative and positive feelings.</td>
<td>Emphasize change in behavior instead of change in weight: set goals around healthy habits.</td>
</tr>
<tr>
<td>Creative problem-solving care process</td>
<td>Realize the impact of weight bias, both mentally and physically, and activities of daily living.</td>
</tr>
<tr>
<td>Transpersonal teaching-learning</td>
<td>Ask for permission to discuss weight related issues: be aware of one’s own attitudes toward obese individuals.</td>
</tr>
</tbody>
</table>
A caring, genuine relationship between patient and nurse may be encouraged by raising awareness in the nursing students of their own weight bias. The video provides observational learning through role modeling. The nursing students were exposed to information about obesity and observed an overweight patient in a healthcare experience scenario. (Bethards, 2014; Chin, & Chen, 2009; Eric et al., 2002; Johnson, Lasater, Hodson-Carlton, Siktberg, & Dillard, 2012; Sitzman, 2007; Wu.).

**Background**

A review of relevant literature was done and resulted in the following themes related to this research: a) nursing curriculum and obesity; b) weight bias toward individuals in healthcare settings; c) interventions to decrease weight bias; d) video as a teaching tool; e) Bandura’s social cognitive theory and Jean Watson’s theory of human caring.

**Nursing Curriculum and Obesity**

Most nursing curriculum currently provides information about obesity with two teaching strategies: a specific obesity module/lecture or integration of obesity throughout the curriculum. Obesity is a concern because of the increased health risks to the individual, the physical strain on the healthcare providers related to transporting and lifting, and the increased cost to society.
Along with the increased health risks to patients, many patients with obesity also face weight bias in healthcare settings. There are many studies reporting that healthcare providers are biased against patients with obesity (Puhl & Brownell, 2003; Puhl et al., 2005; Waller, Lampman, & Lupfer-Johnson, 2012).

Even though research clearly documents how detrimental weight bias can be to patients with obesity, there are very few studies about effective interventions, especially for nursing students (Camden, Brannan, & David, 2008; Fillingham et al., 2014; Keyworth et al., 2012; Steele et al., 2011). Recommendations for nursing education include providing information about the multiple etiologies of obesity, the co-morbidities that can accompany obesity, and sensitivity training to decrease weight bias (Puhl et al., 2005; Rowan, 2010; Steele et al., 2011).

**Weight Loss Treatment Guidelines**

The American Heart Association, The American College of Cardiology, and The Obesity Society developed treatment guidelines for obesity. They include advising patients with obesity about the increased health risks associated with higher weights, providing education about healthy lifestyle choices, and support to help patients reach their health goals (Millen et al., 2014). Commercial and medical weight loss programs rely heavily on social support (Branscum, Ling, & Wang, 2014). Social support has also been shown to aid with decreasing stress. Cho, Joe, Choo, and Choo (2014) found that if individuals have lower levels of perceived stress, they are more likely to try healthier behaviors.

**Weight Bias toward Individuals in Healthcare Settings**

Physicians, dieticians, and nurses have all been shown to have weight bias, which can have a negative impact on health seeking behaviors (Brown, 2006; Poustchi, Saks, Piasecki, Hahn, & Ferrante, 2013; Puhl & Brownell, 2003). Individuals with obesity face many challenges
in seeking medical care. They face stigmatization through language, being told they are “fat” or “overweight” leading to negative experiences with healthcare professionals (Brochu & Esses, 2011; Creel & Tillman, 2011; Puhl et al., 2013).

Another way patients with obesity are stigmatized is inappropriately sized equipment. Special equipment is necessary to care for the people with obesity. Hospital gowns, wheelchairs, beds, and even toilets need to be able to accommodate increased weight for safe and respectable care (Sing, Arthur, Worster, Iacobellis, & Sharma, 2007). Simple procedures like transferring and ambulating patients can create issues related to the small room sizes in most hospitals and exam rooms. Special lifts may be required to assist in transferring to ensure the safety of the patient and the staff (Murray, 2012; Merrill & Grassley, 2008).

It is important to raise awareness of weight bias among healthcare providers to decrease stigmatizing behaviors like not using appropriately sized equipment or using language like “fat” that has a negative impact on patients. The biased treatment people with obesity have faced has had a negative effect on their health-seeking behaviors (Furber & McGowan, 2011; Puhl et al., 2005).

Interventions to Decrease Weight Bias

Most effective interventions to decrease weight bias are based on empathy (Grosko, 2008). Finding ways to increase nursing students’ empathy and acceptance of patients with obesity is useful. This can be accomplished through the use of listening to stories or watching videos about individuals’ experiences with weight bias (Grosko, 2008), education about the etiologies of obesity, and acknowledging the complexity of the disease (Diedrichs & Barlow, 2011; Forhan & Salas, 2013; Kushner, Zeiss, Feinglass, & Yelen, 2014). Health at Every Size is
a program that promotes health and focuses on healthy behaviors instead of weight. This approach has been shown to help with body acceptance by individuals (Penney & Kirk, 2015).

Educating healthcare providers is vital to improving the quality of care provided to patients with obesity and decreasing stereotypes that impact care (Furber & McGown, 2011; Keyworth et al., 2013; Susman, 2014). Developing curriculum that addresses the physiological and psychological issues that affect this population can lead to improved communication and better health outcomes (Mold & Forbes, 2011; Puhl, Peterson, & Luedicke, 2013).

**Video as a Teaching Tool**

Video has been shown to be effective as a teaching tool in many programs, especially in nursing. It provides an opportunity for the students to learn appropriate behavior and attitudes through role modeling. Video is appealing to learners of all ages and appeals to auditory and visual learners. Research has found using short videos to teach specific orthopedic tests was well received by the physical therapy students. They found the videos were convenient and easily viewed and preferred them to the textbook (Bauer, Geront, & Huynh, 2001). Kelly, Lyng, McGrath, & Cannon (2009) had similar findings with nursing students noting video is best used in conjunction with lecture, not in place of lecture. It has also been suggested that nursing students have increased engagement that can lead to a deeper understanding of skills, while also stimulating discussion (Logan, 2012). McConville & Lane (2006) studied the effect of video use on the self-efficacy of nursing students dealing with difficult situations. Their findings showed students who viewed videos that show healthcare professionals dealing appropriately with difficult situations were effective in increasing their self-efficacy. The use of videos to supplement lecture content was found to have positive effects, and was shown to engage students and motivate their learning (Ljubojevi, Vaskovic, Stankovic & Vaskovic, 2014).
Significance of the Study

In an American Nurse Association (ANA) Issue Brief published in 2010, childhood obesity was identified as “one of the most serious public health threats of this century” (p. 1). Nurses have the responsibility to educate and advocate helping reverse the escalating numbers of children and adults with obesity (ANA, 2010). The ANA listed nurses’ contributions to reducing health disparities as a research agenda (2011).

The Center for Disease Control and Prevention (CDC), National Institutes of Health (NIH), and World Health Organization (WHO) all list obesity as a research priority. Children with obesity are highly likely to become adults with obesity (Rowen, 2009). With over 78 million American adults with obesity, there has also been a rise in hypertension, fatty liver disease, sleep apnea, and heart disease. The American Heart Association, American College of Cardiology, and The Obesity Society developed guidelines to help patients lose weight. These guidelines include participating in a medically supervised weight loss program for a minimum of six months while working on lifestyle goals. A recommendation of weight loss surgery is also considered for patients with obesity that have at least one co-morbidity. Every year, over 200,000 adults have bariatric surgery (AHA, 2014). Along with the physical problems that can result from obesity, weight bias can also increase health issues including unhealthy eating behaviors, psychological disorders, and avoidance of healthy activity (Kyle & Puhl, 2014). Nurse educators are challenged to prepare nursing students to provide quality care to this patient population.

The National League for Nursing (NLN) research priorities in nursing education 2012-2015 include several priorities that are specific to this study (NLN, 2012). One priority is the measurement of the cost-effectiveness of technologies in nursing education, and another is the
development and evaluation of teaching approaches that utilize evidence-based practice for patient care experiences (NLN, 2012). If this educational intervention were effective, it would be a cost effective use of technology to increase awareness of weight bias and specific needs of patients with obesity through viewing scenarios that demonstrate inappropriate and appropriate examples of healthcare interactions.

The possible results from this study included identifying specific information about obesity bias that could be included in nursing curriculum, and possibly decreasing nursing students’ biases toward people with obesity. Weight bias is currently demonstrated by healthcare professionals through embarrassing weighing procedures (e.g., weighing in public places, not having appropriate scales for overweight individuals), unsolicited advice, and lack of appropriately sized medical equipment (Poustchi et al., 2013). The influence of this valuable information about decreasing obesity bias could provide a simple method to implement in nursing curriculum. The result could potentially improve the healthcare provided to this population.

**Definition of Terms**

For the purposes of this study, the following terms are defined:

- **Body Mass Index (BMI)** - a measure of body fat based on height and weight. It is used as a gauge of risk for diseases and is calculated as weight in kilograms divided by height in meters squared (NIH, 2013).
- **Overweight** - BMI of 25 to 30 (CDC, 2015)
- **Obese** - a BMI of greater than 30 (CDC, 2015)
- **Weight bias** - discrimination and prejudice as a result of a person’s body weight and appearance (Diedricks & Barlow, 2011).
• Fat Phobia – pathological fear of fatness that is manifested as negative attitudes toward fat people, negative stereotypes, and prejudice against obese people (Robinson, Bacon, & O’Reilly, 1993).

Chapter Summary

In this chapter, the purpose, the significance, and the proposed research questions and hypotheses are discussed. Relevant literature including nursing curriculum and obesity-related issues, weight bias toward individuals with obesity in healthcare settings, weight loss treatment guidelines, interventions to decrease bias, and video as a teaching tool are included. The conceptual framework, Watson’s theory of human caring and Bandura’s social cognitive theory, are used to guide this study and the methodology is reviewed. A definition of terms and assumptions related to this study conclude this chapter.
Chapter Two

REVIEW OF LITERATURE

A review of literature was conducted to determine current research findings and recommendations for further investigation related to obesity and how weight bias is addressed in nursing schools. The review was conducted using Educational Research Information Center, Cumulative Index to Nursing and Allied Health Literature Plus with Full Text, and MedLine online databases. The searches included multiple terms including: weight bias, weight stigma, nursing curriculum and obesity, video as teaching tool, interventions to decrease bias, weight bias in nursing students and combinations of these terms. Watson’s theory of human caring and Bandura’s social cognitive theory were also explored and used as guiding frameworks for this study. All searches were limited to English language, peer-reviewed journal articles and texts.

This chapter overviews the current literature available on nursing curriculum and obesity, weight bias in the healthcare setting, weight loss treatment guidelines, interventions to decrease weight bias, and video as a teaching tool. This information was used to determine current practice in nursing curriculum for obesity, weight bias levels in nursing students, and effective interventions used to decrease weight bias in healthcare professionals.

Nursing Curriculum and Obesity

Obesity can be studied as a specific disease process or in terms of how it impacts other diseases. Obesity is a problem that can lead to many chronic medical conditions such as metabolic syndrome, cardiovascular disease, type 2 diabetes, sleep apnea, and fatty liver disease
Nursing curricula can incorporate the effect obesity has on each of these medical conditions or it can address obesity specifically. Lectures and activities for obesity education are recommended to include topics on the different etiologies, interventions, communication, equipment, and sensitivity (Furber & McGowan, 2011; Susman, 2014).

A lack of training about specific causes and treatments for obesity, along with negative attitudes toward patients with obesity, have been identified as current issues that could be addressed in nursing curriculum (Keyworth et al., 2013). Waller et al. (2012) determined nursing and psychology students have an implicit bias against patients with obesity. Recommendations from this research included nursing curricula’s incorporation of information specific to obesity and weight bias to raise awareness of weight bias and how this affects treatment and treatment-seeking behaviors. Recommendations also included identification of the specific needs of this population, and the need to develop a better understanding of effective interactions between the healthcare provider and patients with obesity. Specific education addressing the medical and psychological issues that come with obesity offer nursing students the information they need to better care for patients with obesity. Another important tool for nursing students is sensitivity training to raise their awareness of any bias they may have and to offer opportunities to decrease that bias (Waller et al., 2012).

Studies from 1990 to 2010 were reviewed to examine views of patients with obesity in relation to healthcare and the healthcare providers caring for patient with obesity (Mold & Forbes, 2011). Thirty studies were identified, and all reported that obesity impacted their healthcare interactions. Several themes were identified in a synthesis of these studies including: patient ambivalence, the experience of stigma and feeling of powerlessness, care and treatment avoidance, and psycho-emotional functioning (Mold & Forbes, 2011).
Patients with obesity reported being made to feel personally responsible for their health issues when they sought medical care at the primary care provider (Brown et al., 2006). This led to ambivalence and reluctance toward seeking healthcare. The experience of stigma and feeling of powerlessness was described in two studies (Puhl et al., 2008; Rogge & Greenwald, 2004). People with obesity reported they frequently experienced discrimination and humiliation. The stereotypes of being lazy and unintelligent contributed to their feelings of powerlessness. Care and treatment avoidance were influenced by the patients’ negative experiences in healthcare and their own negative self-image. The factors contributing to this included: disrespectful treatment; embarrassment about being weighed; negative attitudes of healthcare providers; equipment limitations; and receiving unsolicited advice about losing weight (Amy et al., 2006). Psycho-emotional functioning such as maladaptive coping and low self-esteem resulted from negative experiences, which then led to avoidance of those stressful situations (Myers & Rosen, 1999). These themes showed how the patients’ negative attitudes toward their own body and the negative experiences they have in healthcare settings negatively impact their health-seeking behavior and confidence in treatment decisions (Mold & Forbes, 2011).

This review of literature suggests healthcare professionals need more training and education about how to approach the subject of obesity, prevention, and treatments. Because of the high level of stigma that has been reported among healthcare workers, sensitivity training is also recommended (Mold & Forbes, 2011). Effective treatment of obesity is influenced by the relationship between the patients and healthcare providers. Understanding weight bias and being aware of ones’ own biases can lead to a more genuine caring relationship (Mold & Forbes, 2011; Puhl et al., 2013).
A literature review of the current state of obesity in nursing curricula indicated a lack of focus on obesity education in undergraduate nursing programs (Camden et al., 2008; Keyworth et al., 2012; Steele et al., 2011). Nursing students are not provided information on how to best approach the topic to assist patients with facilitating healthy changes. Bringing up weight issues in a nonjudgmental way, while expressing genuine concern, is not something that comes naturally to students. Research reported that nurses often do not feel that they have the education and tools to know how to bring up this sensitive issue and begin the education needed (Camden et al., 2008; Keyworth et al., 2012; Puhl et al., 2005; Waller et al., 2012). All studies acknowledge the need for more education about obesity and co-morbidities, and how nurses can discuss this sensitive topic.

In 2008, the National Association of Bariatric Nurses (NABN) recognized the impact of bias and prejudice toward patients with obesity in nursing care (Camden et al., 2008). NABN formed a task force and created best practices for patients with obesity focused on sensitive care for these patients. The goals for this group included increasing empathetic care to this population, growing the knowledge based on research to provide best nursing practices, and recommending areas of needed research. Camden et al. (2008) and Keyworth et al. (2013) stressed the importance of nurses being empathetic and educationally prepared to care for this medically complex high-risk patient population.

There are many complex etiologies of obesity including genetics, environment, and psychology. Providing this information to students can help diminish the stigma linked to people with obesity (Puhl et al., 2005). As with other prejudices, changing how nurses interact with patients with obesity may require them to increase their awareness of the complex etiologies for weight gain to better understand their own biases. Increasing nursing students’ awareness of their
own weight bias by asking them to complete weight bias measures and having evidence-based information about the causes of obesity can potentially increase empathy and decrease biases of healthcare providers based on inaccurate stereotypes (Puhl & Brownwell, 2003; Puhl et al., 2005; Waller et al., 2012).

Determining effective methods to incorporate information about weight bias into nursing curriculum is needed. Fillingham et al. (2014) completed a systematic review of educational interventions in undergraduate nursing programs related to obesity and the effectiveness of the interventions. PsyInfo, OvidMedline, British Nursing Index, and Embase were the databases searched. The inclusion criteria included studies published in English, involving undergraduate nursing student participants, and educational programs related to obesity. This search resulted in eight articles published between 2002 and 2011. Four of the studies implemented obesity as part of a health promotion module. The other four studies implemented obesity-related interventions in pediatric nursing, community partnership model, adolescent health and nursing, and midwifery. Lectures, group discussion, presentations, written assessments including reflective diaries were some of the educational methods used to implement obesity into the curriculum.

Most of the articles in the review focused on the delivery methods of the interventions and not the content (Fillingham et al., 2014) Three of the studies linked the topic of obesity to other co-morbidities like hypertension, smoking, and type 2 diabetes (Ben-Sefer, 2009; Brosnan et al., 2005; Tarrant & Chan, 2002). Only one study compared baseline data to post-intervention data and most of the others evaluated the students’ opinion of the module (Luszczynska & Haynes, 2009). The students provided positive feedback in all studies and it was reported that the students enjoyed the module and felt more confident in their abilities to help patients with obesity facilitate lifestyle change. The content and duration of the interventions were not clearly
reported. Since there were a small number of studies and the methodologies were not robust, it was not possible to identify effective interventions for nursing students to approach obesity. More research is necessary to determine how to best train nurses to deal with obesity.

Recommendations for curriculum for obesity include: etiologies, prevention, identification, treatments, and how to best communicate with patients about weight-related issues (Puhl et al., 2005; Rowan, 2010; Steele et al., 2011). The research suggests nursing curriculum include educating about proper equipment, such as bariatric chairs, beds, scales, and exam tables; modeling appropriate care; and addressing common misconceptions about patients with obesity. Fillingham et al. (2014) recommend the best time to incorporate this information into the curriculum is in the undergraduate level. This would help the student nurses develop physical skills and communication skills needed to care for patients with obesity. Caring for individuals with obesity includes learning about effective weight loss treatments and increasing awareness of weight bias.

Weight Loss Treatment Guidelines

Treating obesity can be quite challenging. Because of the increasing number of patients with obesity seeking healthcare, in 2013 AHA/ACC/TOS developed guidelines (Appendix A) for healthcare workers (Jensen et al., 2013). These guidelines include treatment interventions and are best accomplished by working with a team of professionals within an organized program lasting at least six months. The program should include face-to-face visits, feedback through the phone or email, and a maintenance program for participants who are successful. The interdisciplinary healthcare team should consist of registered nurses, physicians, registered dieticians, exercise specialists, and psychologists. Selecting patients for bariatric surgical treatment for obesity should be limited to those with a BMI greater than 40 (or greater than 35 with a serious health
issue). The patients should be able to show some success with making healthy lifestyle changes prior to surgery, and they should be made aware of all the risks and benefits of the surgical procedure (Millen et al., 2014).

Many of the successful weight loss programs use diet and exercise counseling, and some also utilize social support as an effective tool. Commercial weight loss programs like Weight Watchers, Jenny Craig, and Nutrisystem all offer similar tools including nutritional counseling, encouragement to be physically active, and an accepting environment that offers social support in a nonjudgmental way (Kamened, 2014). All of these programs focus on weight not health.

Medical weight loss programs focus more on the health aspects of maintaining a healthy weight by offering health screenings and medical treatment as needed. Medical weight loss programs provide a comprehensive medical assessment before and throughout the weight loss program. Appropriate screenings and diagnostic tests are ordered including any necessary referrals to specialists. Treatment and follow up are provided to those who need it. Related medical conditions such as hypertension, diabetes, sleep apnea, and hypercholesterolemia can all be treated and monitored by a medical professional (Haas, Moore, Kaplan, & Lazorick, 2012).

Social support. In both the medical and commercial weight loss programs, social support is important for positive outcomes. Branscum, Ling, and Wang (2014) studied the role of social support in weight control in 118 overweight adults. The participants were part of an online weight loss program that focused on five specific behaviors including: physical activity, screen time, consumption of sugar-free drinks, sugar-sweetened drinks, and fruits and vegetables. The results showed that social support had a significant impact on behavior especially by decreasing screen time and increasing consumption of fruits and vegetables. The results suggest that social support is the most important feature for success of online weight loss programs. Individuals are
able to receive support in a safe, sensitive environment without bias or discrimination. Their recommendations include more research to gain a better understanding of how social support impacts change in health behaviors (Branscum et al., 2014).

Social support can be provided face to face or by using social media tools. Online weight loss programs use social media to facilitate weight loss and to aid in the maintenance phase. Support from peers has been found to provide encouragement and information through telling of their own stories. Hwang, Etchegaray, Sciamanna, Bernstam, and Thomas (2011) tested the hypothesis that using an online social media tool is directly related to receiving functional support through encouragement, information, and shared experiences. Online surveys with 193 members were conducted to determine the types of support they had experienced with the use of discussion forums and blogs with SparkPeople.com, a free online weight loss program, over the previous four weeks. Most of the participants were white women with a mean age of 37 and BMI of 31. The people that accessed the forums or blogs at least one time a week were about five times more likely to receive encouragement and support from others on the site.

Hwang et al. (2011) described structural support as the frequency of using social media tools and functional support as perceptions of encouragement, information, and shared experiences. The results showed there is a link between structural support and functional support. The use of social media predicted support through encouragement, but not information or shared experiences. Using social media at least weekly may be an effective mechanism to improve weight management through encouragement from peers.

Recommendations included more research to examine if the results would be consistent with other online weight loss programs. It was also recommended to study the effect of other
factors that could influence receiving social support, including prior experience with weight loss and prior experience with online communities (Hwang et al., 2011).

**Stress reduction.** Along with aiding weight loss, social support has also been shown to decrease levels of perceived stress (Cho et al., 2014). A cross-sectional correlation study of 126 women with abdominal obesity demonstrated higher levels of perceived support and lowered levels of perceived stress. When perceived stress was lower, health-promoting behaviors increased. The authors recommend helping nurses, especially in weight management clinics, to specifically develop strategies to provide support and promote stress management skills (Cho et al., 2014).

Nursing can use these guidelines to help direct care of patients with obesity. The research suggests social support that is nonjudgmental and non-biased is effective at aiding in adherence to behaviors that lead to a more healthy weight. Therefore, if nurses provide a genuine, caring, supportive relationship, it can enhance the patients’ ability to achieve weight loss goals.

**Weight Bias Measurement Instruments**

The three most often used tools in research to measure weight bias are The Fat Phobia Scale (FPS), The Beliefs About Obese Persons (BAOP), and Attitudes Toward Obese Persons (ATOP). The Fat Phobia Scale was used for this study because it is the most reliable tool of the three and it is short and could be completed with paper and pencil.

**Fat Phobia Scale.** Fat phobia is described as a pathological fear of fatness that is manifested as negative attitudes toward fat people, negative stereotypes, and prejudice against people with obesity. To understand how negative attitudes could be changed, a valid and reliable method of measuring attitudes toward people with obesity was needed (Robinson, Bacon, & O’Reilly, 1993).
Robinson developed the Fat Phobia Scale (FPS) in 1984 to measure attitudes toward people with obesity. People entering the motor vehicle license bureau were asked to list adjectives to describe people with obesity. Those adjectives, along with clinical experience, were used to create a 50-item, modified 5-point semantic differential scale, which became the Fat Phobia Scale. The six subscales identified in the FPS are: undisciplined; inactive and unappealing; grouchy and unfriendly; poor hygiene; passivity; emotional/psychological problems; and stupid and uncreative (Robinson et al., 1993).

The FPS is a 50-item self-report measure that has been used in many studies to determine explicit fat biases and increase self-awareness of bias (Bacon et al., 2001; Essex, Miyahara, & Rowe, 2016; McClure et al., 2011; Poustchi et al., 2013; Puhl, Latner, O’Brien, Luedicke, Danielsdottir, & Forhan, 2015; Swift et al., 2013). The survey includes 14 adjectives, and respondents are requested to place an “X” closest to the word in the scale that best describes how they feel about people with obesity. Examples of the adjectives range from “attractive” to “unattractive,” “lazy” to “industrious,” and “no will power” to “has will power.” The scores will range between 1 and 5. The lower the scores, the less bias the person has toward people with obesity (Bacon et al., 2001). McClure et al., (2011) used the FPS to assess biases of participants viewing photos of women who are overweight. Participants were asked to choose an adjective that best describes the person in each photo using the FPS. The study showed participants were biased against the women who were overweight in the photos. News and media coverage of obesity increasingly uses negative stereotypes of people with obesity (McClure et al., 2011).

The Beliefs about Obese Persons (BAOP). Another scale often used, the BAOP measures the extent that people explicitly believe obesity is under the control of the individual. It has eight questions and uses a 6-point Likert scale. This scale has an alpha reliability range of
0.65 to 0.82 (Allison, Basile, & Yuker, 1991). Scoring this scale is done by multiplying the
response by (-1) for items 1, 3 through 6, and 8; totaling the responses to all items, and adding 24
to that value. The higher the score is, the stronger the belief that obesity is not under the
individual’s control (Allison, 1995).

**Attitudes toward Obese Persons (ATOP).** Another scale measures the explicit attitudes
toward obesity. The 20-question scale uses a 6-point Likert scale and has an alpha reliability
range of 0.80 to 0.84 (Allison et al., 1991). Scoring is accomplished by multiplying (-1) by the
following items: 2 through 6, 10 through 12, 14 through 16, 19, and 20; adding responses to all
the items; and adding 60 to that value. The higher the number indicates more positive attitudes
toward persons with obesity (Allison, 1995).

The FPS, along with the Beliefs About Obese Persons (BAOP) scale, and the Attitudes
Toward Obese Persons (ATOP) scale were used in another study to assess the use of the Yale
Rudd Center video, *Weight Bias in Healthcare*. Poustchi et al., (2013) conducted a study with 64
medical students. Medical students were asked to complete three reliable and validated measures
to determine explicit weight bias. They were then shown a short educational video about weight
bias. The students were asked to complete the measures again to determine if the video had any
effect in decreasing weight bias. The mean scores of all three scales before and after were
compared. The BAOP mean score was significantly higher in the posttest. There was no
significant change in the ATOP, and the FPS was significantly lower in the posttest scores,
indicating the negative attitudes had decreased after the intervention. Recommendations included
replicating this study and assessing sustainability of the results along with assessing the actual
application in clinical practice (Poustchi et al., 2013). The FPS was chosen for this study because
it has the highest reliability and it is convenient for the students to complete quickly on paper.
Weight Bias toward Individuals in Healthcare Settings

There is evidence that patients with obesity experience weight bias in healthcare settings (Brown, 2006; Poustchi et al., 2013; Puhl & Brownell, 2003). Making healthcare equitable to everyone regardless of class, race, and gender is challenging and requires effort.

Weight Bias as a Social Justice Issue

Social justice refers to fairness (McParland & Eccleston, 2013), and health equity is an important part of social justice. Yanicki, Kushner, and Reutter (2014) suggest four ways nursing can improve social justice through promoting health equity. First, nursing curricula should include awareness of the impact of lack of health equity to social justice. Second, nursing leadership also has the responsibility to create supportive environments and work with organizations to improve health equity. The third way nursing can improve social justice is by sharing knowledge between nursing organizations to determine best practices to provide social justice through health equity. And finally, research is necessary to increase knowledge about different approaches that work well with different populations and practice settings (Yanicki et al., 2014).

Oppressed groups are usually thought to include marginalized racial or ethnic groups, and socially devalued groups including women, people with disabilities, and the lesbian, gay, bisexual, and the transgender community (Abe, 2015). Individuals with obesity often experience similar bias and discrimination resulting in oppression and exclusion (Lawrence, Hazlett, & Abel, 2012). This biased treatment has been shown to affect health-seeking behaviors, academic opportunities, and advancement in the work place (Friedman & Puhl, 2012). Weight has been reported to influence hiring and advancement practices.
Weight bias also is present in education in terms of college admission. In 2013, a study was done with 198 volunteers from the community. They were asked to evaluate candidates who would be most and least likely to be selected for the university based only on visual figures of varying body sizes. The figures ranged from emaciated to obese. Bias was demonstrated for both ends of the weight spectrum, but negative attitudes were associated only with the obese (Swami, 2013). Students who were overweight were seen as being less ambitious, having poor self-discipline, and poor hygiene. These stereotypes have also been reported in employment settings (Friedman & Puhl, 2012).

Employment is another area where weight bias has impacted people who are overweight. A group of 202 university students evaluated resumes with photos, some normal weight and some overweight, computer-generated images of the same person. They were hiring for both face-to-face positions and telemarketing. The participants evaluated the candidate who was overweight to have more negative stereotypes, decreased physical attractiveness, less healthy, and significantly less employable (Grant & Mizzi, 2014).

Education, employment, and even legal situations have been shown to have weight bias issues. White, Wott, and Carels (2014) conducted a study in which they gave a group of 185 undergraduate men and women three vignettes describing accidents while leaving three different locations: a fast food restaurant, a department store, and a gym. The participants were asked to complete an online survey about their perception of the level of responsibility of a plaintiff for her own injuries. Each vignette used the same facts, with only the location of the accident and the body size of the plaintiff changing. The participants were then given a simple explanation of contributory/ comparative negligence and asked to determine what degree of the responsibility for the accident was the fault of the plaintiff. The results showed the participants were more
likely to blame the defendant as the defendant’s weight increased. Level of blame was directly related to weight, with the participants with the self-reported weight bias reporting the highest level of customer responsibility. At the conclusion of the study White et al. (2014) recommended that jurors be informed that weight bias could influence judgments.

The prejudiced attitudes of others can have a direct negative impact on people who are overweight in other areas too. In 2001, Puhl et al. (2005) conducted three experiments testing the effect of perceived social attitudes toward people with obesity. These experiments used undergraduate Yale students as participants, and they conducted two sessions, each one week apart. They tested hypotheses that attitudes toward people with obesity are greatly influenced by the perceptions of other people’s attitudes. These experiments reported people would change their attitudes based on the perceptions of the attitudes of others they valued. The recommendations from this study include professors’ need to advocate for weight tolerance and model positive attributes. Providing students with the causes of obesity may help decrease negative attitudes and could be easily be included in curriculum. Research-based prevalence rates of traits, such as compliance to medical advice, could also help decrease weight bias (Puhl et al., 2005).

**Psychological Issues Related to Weight Bias**

Weight bias can also impact a belief in a just world, or a person’s belief that the world is fair and just and people get what they deserve (Hafer & Begue, 2005). Some psychological results on individuals from weight bias include: body image disturbance, depression, disordered eating, decreased self-esteem, and being bullied (Hanuger & Thompson, 2012). Weight bias can also lead to harmful eating pathology including binge eating and purging, decreased physical activity, and an increase in caloric intake (Schvey & White, 2015).
Pearl and Dovidio (2014) completed a two-part study to assess how experiencing weight bias impacts individuals’ beliefs in a just world. The first study asked 804 participants to complete an online survey about their belief in a just world, exercise intention motivation, self-efficacy, and experiences with weight bias. The survey included measures of intrinsic motivation to exercise and self-efficacy to exercise, and questions about experiencing weight bias. The results showed those who have experienced weight bias had lower levels of exercise motivation and self-efficacy. The participants who had support in their exercise program were less likely to lose the motivation to exercise. Social support played an important role in maintaining exercise routines even after experiencing weight bias.

The second study in this project involved 237 participants with obesity randomly assigned to read a passage describing weight bias as either pervasive or rare. They then completed measures on exercise intentions, motivation, body dissatisfaction, weight bias internalization, and experiences with weight bias. The results suggested that people who experience weight bias are at an increased risk for internalizing those feelings and believing the world is unfair. Pearl and Dovidio’s (2015) study shows that healthcare providers who offer interventions for people who experience weight bias can help decrease the negative effects. The authors also discussed the possibility that the results may be associated with the loss of a sense of control. They recommend that it may be helpful to provide interventions to increase a sense of control for those who have experienced weight bias and this may decrease the psychological issues related to a weakened belief in a just world. Specific suggestions for interventions included goal setting and guided training specific to exercise (Pearl & Dovidio, 2015).

Body size should not only be protected against discrimination, but also considered as a basic personal liberty (Tirosh, 2012). Every person should have the ability to do what he or she
wants to do without restraints as long as it does not harm another individual. People with obesity do not feel that freedom. Body dissatisfaction can lead to avoidance of social situations. Many say that they will not eat in front of others, will not go to the beach, and will not travel because they are not happy with the size of their body and the way they look (Carmona, Torneró-Quinones, & Sierra-Robles, 2014).

While it is important to determine the causes and best treatment for obesity, it is also vital to determine what educators can do to decrease the bias and discrimination obese individuals face in healthcare experiences (Puhl & Brownell, 2003). Weight bias awareness is crucial for nurses and all healthcare providers to improve communication and make all patients feel more comfortable in seeking healthcare. Watson (2007) suggested in order to establish a caring, genuine relationship between nurse and patient, the nurse must be aware of his or her personal biases. Providing information about obesity stigmatization through language and actual physical barriers will help raise awareness of how this stigmatization is exhibited in healthcare.

Weight bias is perpetuated when the equipment in the healthcare setting does not fit the patient. Possible modifications that can increase the comfort of patients with obesity may be larger exam tables and chairs, and appropriate scales in private spaces (Phelan et al., 2015). Merrill and Grassley (2008) conducted a hermeneutic phenomenological study with women who were overweight to learn more about their experiences with healthcare. Eight volunteers participated in face-to-face interviews resulting in four major themes. The findings identified the following themes: struggling to fit in, being dismissed, feeling not quite human, and refusing to give up. The women talked about the physical space, small exam tables, and blood pressure cuffs and how this made them feel like they had to fit the space. They identified feelings of embarrassment when healthcare providers dismissed their concerns or blamed all symptoms on
weight. They did not feel they were equal to thin women, and they felt disrespected based on their weight. These issues often led to a decrease in their health-seeking behaviors. The women in this study talked about how they had to be persistent in finding a provider that would listen and treat them with respect. They all talked about repeated failed attempts at losing weight and how much they would like the support and resources of medical professionals. The recommendations include providing comprehensive education to nursing students to help care for this population, including education about stigma, and more research to determine the best methods to accomplish this (Merrill & Grassley, 2008).

If the environment is more appropriately sized and less judgmental, the patient will be more comfortable seeking care. Providing a safe, nonjudgmental environment where individuals with obesity can get the medical, nutritional, and psychological support they need, can lead to positive health outcomes for this population (Sylvetsky et al., 2012).

**Stigmatization through Language**

Being sensitive to language use is an important factor when caring for individuals with obesity (Puhl et al., 2013). Understanding how even the language used by healthcare providers impacts patients and health-seeking behavior is important. It is the healthcare provider’s responsibility to address health concerns in a respectful, non-blaming way. Brochu and Esses (2011) examined the difference between the use of the words *fat* and *overweight*. They used a large online testing questionnaire described as a social attitudes study. The participants were asked for attitude rating for 10 social groups including people who were overweight. A total of 477 undergraduate psychology students completed the questionnaire. Negative attitudes and more weight stereotypes were associated with the word *fat* than with *overweight*. They then completed another study measuring perceptions of the body size of both *fat* and *overweight*. 
The second study randomly assigned the students to two groups, one labeled as fat condition and one labeled as overweight condition. They were all asked to identify figure silhouettes as fat or overweight and then complete a stereotype measure. The measure asked the participants to list characteristics describing a person who is fat or a person who is overweight and to indicate a degree of positivity or negativity to each of their responses. This study had 78 participants. The results were not significantly different between the group given the fat condition and the group assigned to the overweight condition. Both groups identified the same silhouette with their label, demonstrating that there was no difference when asked to identify a person as fat compared to identifying a person as overweight. However, the results did show a higher level of bias toward people described as fat than toward people described as overweight.

The authors completed a third study to test the possible explanations for the biasing effect of the fat label. This study included 60 students, and they were again assigned randomly to either the fat or the overweight condition. The participants were asked to identify which figure silhouette best fit the condition they were assigned (fat or overweight) and then they completed the Anti-Fat Attitudes Questionnaire. This study again showed no significant difference between the two groups when identifying the silhouette that best fit the description of their assigned condition, either fat or overweight. This group also showed more negative attitudes associated with the fat label than the overweight label. The results showed that the label fat has a biasing effect related to a greater endorsement of weight stereotypes (Brochu & Esses, 2011).

Wadden and Didie (2003) studied 167 obese female and 52 obese male participants who were enrolled in randomized trials for weight loss, and they asked what terms were desirable for a physician to use. All participants had a BMI of at least 35.3 kg/m2. The participants were asked to complete a questionnaire that described a scenario of a patient who was overweight visiting a
physician. They were asked to identify eleven terms using a five-point scale from very desirable to very undesirable. The results identified the less desirable terms as *fatness, obesity, excess fat,* and *unhealthy body weight.* The more desirable terms included *BMI, weight,* and *weight problem* because these terms were viewed as neutral. This information is useful to medical professionals for improving communication with patients. The study recommended more research to help primary healthcare providers determine the methods and communication skills to use for prevention and treatment of obesity (Wadden & Didie, 2003).

A phenomenological study looking at the stigmatization of patients with obesity by nurses involved interviews with eight adults self-identified as overweight who were willing to share their healthcare experiences (Creel & Tillman, 2011). Six themes of stigmatization were identified and they are: unintentional harm, presuppositions, reluctant care, shame, marginalization, and anxiety in seeking healthcare. These are common themes identified in other weight bias research (Brown, 2006; Merrill & Grassley, 2008; Puhl & Heuer, 2009; Puhl et al., 2014).

According to Creel and Tillman (2011), the unintentional harm theme is related to comments healthcare professionals had made about their size or “yelling down the hall” (p. 1341) for special large equipment. Presuppositions refer to the assumptions made about the individual based solely on their size. One comment was made by a participant that she is annoyed that every time she saw her physician, he related every issue to the fact that she is overweight, even a sinus infection. Feeling like they are a burden leads to the assumption of reluctant care. Participants talked about how they felt like nurses did not want to care for them because of the increased weight and the increased risk for the staff. Some of the hospitalized
patients were not turned or showered because the nurses were afraid they would fall and then would be very difficult to get up off the floor.

Participants expressed how the nurses’ comments made them feel humiliated and ashamed. When the nurses needed more help to care for them, the participants stated they felt ashamed they were so big, and they felt bad for the nurses caring for them. Patients can feel marginalized when hospital gowns do not cover properly, the staff does not use the proper size blood pressure cuff, or the patient cannot fit into any of the chairs in the waiting room. They stated that they felt “ostracized” and different which led to wondering if they were receiving the same quality of care as others who are not obese.

The last theme that emerged from stigmatization of patients with obesity was anxiety. The participants related feeling stressed about seeking healthcare because of the treatment they were anticipating. Past treatment increased anxiety about what they would experience the next time they visited their doctor. For many, this led to just avoiding seeking treatment until they were very ill (Creel & Tillman, 2011). The recommendations from this study include changing curricula to include information on caring for patients with obesity including health risks and stigmatization of this population, and more research into the effect of bias toward this population as it continues to grow (Creel & Tillman, 2011).

The stigma associated with obesity increases with the negative attitudes expressed by healthcare providers (Puhl et al., 2013). Using a five-point Likert scale, a sample of 1,064 residents of the United States population rated 10 terms to determine if the words were desirable, stigmatizing, blaming, or motivating, and they were asked how they would react. The results showed the terms weight and unhealthy weight were the participants’ two most desirable terms for healthcare providers to use when discussing weight related issues. Fat and morbidly obese
were rated as the most undesirable terms to describe individuals with increased weight. The results were consistent across socioeconomic classes, and 19% of participants stated they would not go to seek medical attention after having a stigmatizing experience. The recommendations include assessing if weight-based terminology used in healthcare has any effect on health outcomes, and determining if there is a preference of weight-based terminology among different ethnic groups (Puhl et al., 2013).

**Physical Barriers**

Another example of bias in healthcare is not providing safe, appropriate equipment. Singh et al. (2007) assessed both patients’ and nurses’ perceptions of the adequacy of the equipment in an emergency department in Canada in 2005. A questionnaire was developed and all patient participants completed a nine-item questionnaire and the nurse participants completed a 10-item questionnaire about equipment. A total of 134 patients and 130 nurses participated in the study. The results showed that the nurses were not familiar with the weight limits of the equipment used, but both the nurses and patients acknowledged that this population has special requirements for appropriate care. The recommendations included future research into how to assess for adequate equipment, documenting the consequences for patients and nurses when appropriate equipment is not used with patients with obesity, and the impact a bariatric coordinator could have on the health outcomes of patients with obesity and the safety of the patients and nurses (Singh et al., 2007).

Lifting and transferring patients with obesity presents a safety challenge for both the patient and the healthcare professional. Hignett and Griffiths (2009) used a mixed methods approach to identify risks to both patients and staff when caring for bariatric patients. Using focus groups and questionnaires, they identified five themes for patient pathways. Those themes
are: patient factors; building and vehicle space and design; equipment and furniture; communication; and organizational and staff issues. The results identified a need for physical space and appropriate equipment to decrease handling risks to both patient and staff. The authors’ recommendations included more research to determine best methods for implementation of policies, equipment use, and communication related to obese patients (Hignett & Griffiths, 2009).

Another study was done with healthcare professionals being given a questionnaire about safely lifting and transferring patients with obesity (Murray, 2012). A total of 185 questionnaires were returned identifying all the staff that would need to be involved with caring for patients with obesity. The list included: equipment staff, technical support, and special transport team, along with an interdisciplinary medical team. Lifts are sometimes required to transfer patients. Transferring and mobilizing patients was identified as a possible challenge because of the limited space in patient rooms. The extra equipment and the oversized chairs and bed can make it difficult to maneuver in the patient rooms. Some things that are not easy to change, but are essential for safe care, are the load-bearing capacity of the floors and the width of the doorways and the halls. The minimum special equipment identified as necessary to care for bariatric patients included: bariatric bed, chairs and wheelchairs, a hoist for transfers, and a bariatric stretcher or table. Proper body mechanic training and training on the bariatric equipment is also required to improve the safety of the staff and the patients. The author recommended a special team for bariatric patients be created and provided with specific training related to caring for patients with obesity (Murray, 2012).

These results are consistent with the results of Merrill and Grassley (2008). Examination tables, chairs, even toilets need to have high weight limits to ensure comfort and safety. Merrill
and Grassley (2008) conducted a study examining the lived experiences of female patients who were overweight. They studied the perception of the women’s experiences with healthcare services and providers. Using a hermeneutic phenomenological approach, they interviewed eight US women who identified themselves as overweight. Several themes were identified from the interviews which included: “‘struggling to fit in’, which consisted of trying to fit into limited physical space (examination rooms, equipment), limited time, limited satisfaction, and support in relationships with healthcare providers” (Merrill & Grassley, 2008, p.139). The recommendations include further research to determine the best methods to educate nurses to care for patients with obesity and how to best decrease the stigma associated with obesity.

**Effect on Health Seeking Behaviors**

Perpetuating stereotypes of patients with obesity by assuming that they have no self-control and their behaviors are solely to blame for their health issues have a direct negative impact on health-seeking behaviors. This finding of a decrease in health-seeking behavior as a result of experiencing weight bias was found in many studies (Furber & McGowan, 2011; Merrill & Grassley, 2008; Puhl et al., 2005; Sylvetsky, Welsh, Walsh, & Vos, 2012).

Sensitivity in how information is given to patients is also important. Furber and McGowan (2011) reported that pregnant women who were overweight felt that public and healthcare professionals made them feel humiliated about their size. When pregnant women who were overweight needed an ultrasound, it was more difficult to get good images but this was not explained during the healthcare visit and caused increased stress. Pregnant women who were obese complained that healthcare workers made them feel that they were at fault for the increased risks in their pregnancy related to weight. This qualitative study used semi-structured interviews with nineteen women who had a BMI greater than 35 kg/m2 conducted in the third
trimester of pregnancy and between three and nine weeks after delivery. The way information was provided to the patients was perceived as insensitive and very technical. One woman said she felt she did not want to go to the doctor because she did not want to hear she was “fat.” Embarrassment was a common theme among the women in this study (Furber & McGowan, 2011). Recommendations include clear communication and consideration of the psychological issues that could be associated with being obese and pregnant. Healthcare professionals need to acknowledge the positive aspects of pregnancy with these patients along with all the increased risks.

Furber and McGowan (2011) reported healthcare professionals have preconceived stereotyped presumptions about patients with obesity that were incorrect. Additional health risks need to be explained in a way that is not blaming. The recommendations include the importance of finding evidence-based practices to teach healthcare students about weight bias that could be included easily in nursing curriculum. The recommendations suggested nurses especially, because they have the most contact with patients, need to be sensitive to the patient’s specific needs, must truthfully explain concerns in language the patient can understand, and provide the appropriate equipment needed to care for this population.

A link has been found between weight discrimination from others and weight-based self-discrimination. The term *internalized weight discrimination* is used to describe negative feelings about one’s self that are related to weight. Latner, Barile, Durso, and O’Brien (2014) studied the potential link among health-related quality of life and discrimination and internalized weight bias. The participants were contacted through online weight-related platforms and were made up of 81 mostly women with obesity. Two measures were used to analyze perceived discrimination (Everyday Discrimination Scale) and health-related quality of life (Medical Outcomes Survey
Short-form Health Survey). The results showed people with higher BMI experienced more bias from others, but it also showed poorer physical-health-related quality of life only in participants with high levels of internalized weight bias (Latner et al., 2014). Recommendations included more research on the population as a whole and on individuals to identify methods to reduce stigma and help cope with discrimination.

**Interventions to Decrease Weight Bias**

Some organizations are implementing tools to help combat weight bias. Ohio State University Medical Center developed the RESPECT model to stress the importance of sensitivity to this population. Each letter of the word represents important caring characteristics: R- rapport that is courteous and communication and behavior that is considerate; E- environments that are safe and effective for caring for overweight patients; S- safety for patients and staff; P- privacy and maintaining dignity; E- encourage realistic health goals; C- caring and compassion, not blaming and shaming; T- tact when dealing with all patients, families, and staff. This model was developed to help healthcare professionals provide respectful optimum care (Budd & Peterson, 2015).

Providing respectful, safe care to all patients, including patients with obesity, is a theme that is consistent throughout the literature (Budd & Peterson, 2015; Diedrichs & Barlow, 2011; Forhan & Salas, 2013; Kushner, Zeiss, Feinglass, & Yelen, 2014; Lee, Ata, & Brannick, 2014; Poustchi et al., 2013). Diedrichs and Barlow (2011) conducted a study of providing an obesity lecture containing topics on etiology and bias to one group of undergraduate psychology students and compared pre- and post-intervention attitudes toward individuals with obesity. The results demonstrated a lecture addressing etiologies of obesity and bias did decrease bias and challenged stereotypic beliefs about weight control. These positive changes were sustained when retested
three weeks later. The authors recommended that more research in this area is needed to
determine effective interventions to decrease weight bias.

A meta-analysis of weight bias interventions was done to determine what interventions are effective (Lee et al., 2014). The search resulted in thirty studies that met the inclusion criteria of adult samples and validated measures of weight-biased attitudes. The interventions fell into three categories: empathy, social consensus, and causality or controllability.

The interventions based around empathy or increasing acceptability of obese people used narratives of obese individuals’ family history, experiences with bias, and how they felt as a result of the discrimination. This study used a pre- and posttest method and the results of this study showed a significant increase in the participants’ positive feelings toward people with obesity (Grosko, 2008).

Many resources are available for educators to use including the Yale Rudd Center for Food Policy and Obesity. Utilizing these resources to raise awareness of personal biases may improve the quality of care for this population. The Weight Bias in Healthcare video from the Yale-Rudd Center was used to study weight bias reduction in second- and third-year medical students (Poustchi et al., 2013). The medical students viewed the Weight Bias in Healthcare video and their weight bias was assessed using three different measures. The measures were the FPS, the Attitudes toward Obese Persons Scale, and the Beliefs about Obese Persons Scale. The results showed a decrease in negative stereotypes related to obese people. The recommendations included further research to determine if these results impacted behavior.

The social consensus interventions were based on attempting to decrease bias by influencing the participants’ feelings regarding acceptance of people with obesity using the influence of their peers and the general population. One study (Puhl et al., 2005) asked the
participants to attend two sessions. At the first session, the participants were provided with a list of 10 positive traits and 10 negative traits. They were then asked to estimate the percentage of people with obesity that has each trait. After one week, the participants were called back and randomly assigned to two groups. One of the groups was given the positive feedback, explaining that others had more favorable feedback than their own. The group that was assigned to the negative feedback was told other students expressed less favorable feedback toward people with obesity than their own. The participants were then asked to complete the measures again. The results showed the participants who were placed randomly in the positive group had more positive traits and less negative traits in the measure in the second session (Puhl et al., 2005). This meta-analysis was able to show that weight bias interventions have had a small positive effect on decreasing weight bias attitudes.

The interventions based on causality (i.e. providing students with information about the etiologies of obesity) did not have a decrease in their weight-biased attitudes, but the students who received a specific lecture about weight bias did show a decrease in biased attitudes (Diedrichs & Barlow, 2011). The interventions had a greater impact on decreasing weight bias on healthcare professionals compared to the general public. The authors of the meta-analysis recommend more research be done to find effective interventions for the general public. They also encouraged more investigation for weight bias interventions in general. They expressed a belief that many types of interventions, not just one single intervention, may be necessary to have an effective impact on decreasing weight bias (Lee et al., 2014).

Health at Every Size is an approach to optimizing the health of individuals with obesity. The focus of the program is on health and behaviors, not on weight. The program works toward a fulfilling life with eating based on internal cues for hunger and satiety and participating in some
physical activity. Body acceptance was encouraged and found to be directly related to the acceptance from a significant other and society (Penney & Kirk, 2015). This approach was found to be effective in reducing the incidence of medical and psychological co-morbidities like hypertension, hypercholesterolemia, depression, and self-esteem. It is believed that this approach to improving health for individuals with obesity that does not focus on any aspect of weight plays a role in decreasing weight bias (Penney & Kirk, 2015).

The importance of obesity being recognized as a complex, chronic health condition has helped individuals realize the stereotypes of people with obesity may be wrong (Forhan & Salas, 2013; Kushner et al., 2014). Understanding all the possible causes of obesity and how difficult it is to treat may reduce weight bias. Obese standardized patients were used in a study to assess an intervention. The participants began with reading two articles on communication and weight stigma. Then they participated in a discussion with peers about the articles. Next, they had an eight-minute interaction with the standardized patient with obesity. The interaction was followed by another participant peer discussion (Kushner et al., 2014). The participants were 127 first-year medical students enrolled in a Communication Skills unit at Northwestern University Feinberg School of Medicine. The results show a decrease in negative stereotyping, and an increase in empathy and self-confidence in caring for patients with obesity. Recommendations included utilizing resources available to help educate individuals about weight bias.

**Video as Teaching Tool**

The use of video as a teaching strategy in nursing has been studied and shown to be effective for nursing education in conjunction with lectures (Bauer, Geront, & Huynh, 2001; Kelly, Lyng, McGrath, & Cannon, 2009; Logan, 2012; McConville & Lane, 2006; Sorenson &
Dieter, 2005; Swift et al., 2013; Winters et al., 2003). The use of videos in conjunction with lecture and discussion are a cost effective education tool that is positively perceived by students.

Holland et al, (2013) found that videos are useful in nursing education to for students to develop technical skills development. McConville and Lane (2006) used video to increase students’ self-efficacy with difficult patient situations like sharing news of a death with family members, working with children or adults with disabilities, and working with aggressive patients. A total of 145 volunteer students participated in this study that included a control group and an experimental group. Videos were developed to demonstrate someone dealing with a difficult situation using both appropriate and inappropriate techniques. All scenarios were based on real life situations. Eighteen videos lasting about 2-3 minutes each were posted to the on-line learning platform for student viewing. A self-efficacy scale was developed for this study that used a five-point scale for self-reported confidence in dealing with specific difficult situations. This scale was used as both the pre- and posttest. A multivariate analysis of variance was used to determine changes in self-efficacy over time and to compare the experimental group who watched the videos to the control group who had only lecture. Self-efficacy was used as the measure of effectiveness. The results showed the videos were successful at increasing self-efficacy in the nursing students. Future recommendations included assessing the effectiveness of this education in actual clinical situations.

Bauer, Geront, and Huynh (2001) replicated a pilot study (Bauer & Huynh, 1998) examining three different ways of teaching the proper methods of performing a manual blood pressure. The use of CD-ROM, the conventional method of dual stethoscope use, and a combination of both were used to teach 73 first-year nursing students randomly assigned to each group. The results showed that the group most compliant to all the steps to perform blood
pressure checks was the group that had the combination of the CD-ROM and conventional teaching methods (Bauer, Geront, & Huynh, 2001).

Hampton, Pearce, & Moser (2016) completed a study with online nursing students and found that the teaching methods rated as the most preferred, most engaging, and second most effective for learning were videos or PowerPoint converted to videos. The use of case studies was rated as the most effective method to promote learning. These students also rated group learning as the least preferred method of learning.

Kelly and colleagues (2009) and Sorenson and Dieter (2005) assessed the use of E-learning and came to the same conclusion that the use of video is convenient and flexible, but is most effective when used in conjunction with traditional lecture. The same benefits were found to be true about the use of YouTube (Logan, 2012) to teach perioperative nurses skills specific to their area. YouTube was shown to be a useful tool to engage the learners, promote critical thinking and decision-making, and increase creativity.

Recommendations from these studies include assessing the self-efficacy of students after the video (McConville & Lane, 2006), using video as an interactive tool in conjunction with discussion and then assessing student outcomes (Logan, 2012), conducting more research to determine how nursing educators feel about making and using video in the curriculum (Kelly et al., 2009), and investigating evaluation tools used directly before and after the use of the video (Sorenson & Dieter, 2005).

Video use appeals to multiple learning styles and promotes active learning (Logan, 2012). Current nursing cohorts consist of Baby Boomers, Generation Xers, and Millennials. According to Logan (2012), Baby Boomers are known to adapt to new technology and are open to using that technology. Generation X students strive for work-life balance as a priority. They can see
the advantages technology offers to increase time away from work. Millennials have been raised using computers and feel confident using new technologies (Logan, 2012).

Often video is used in conjunction with lecture to teach clinical nursing skills. Holland et al., (2013) showed all students offered positive feedback about having unlimited access to viewing the skills related to administrating oral medications. Most preferred the videos used in conjunction with lecture and not in replacement of lecture. McKenny (2011) conducted another study that recommends videos be used in conjunction with lecture and not to replace lecture researched an educational video for the skill of wet-to-dry dressings. This study stressed how videos can demonstrate interaction skills between the nursing students and patients. The video provided a safe environment for the student to have an emotional reaction to the interactions between the nurse and patient. The recommendations included studying other clinical skills and assessing the retention of the information covered (McKenny, 2011).

Films have also been used to improve negative attitudes toward overweight people. Results of a randomized control trial with dieticians and medical students with an intervention group (n=22) and a control group (n=21) showed that viewing films of individuals’ personal stories about weight bias improved explicit attitudes about obese people (Swift et al., 2013). Films/videos have been reported to be useful teaching tools for nursing students to learn skills and change attitudes. Accessing free tools available to educators is a cost-effective way to provide information that students could access as often as they need and at a time that is convenient.

**Conceptual Framework**

Bandura’s social cognitive theory and Watson’s theory of human caring were used as frameworks for this study. These theories work well together to guide the intervention of using
an educational video to raise awareness of weight bias through observation of healthcare providers interacting with patients with obesity, and receiving information about the causes and health implications of obesity.

**Bandura’s Social Cognitive Theory**

Social cognitive theory has been used in many nursing research studies. Albert Bandura developed this theory as a psychological model of behavior (Bandura, 2003). The basis of the theory is that learning occurs in a social context and that much is learned through observation. There are three core concepts to this theory. The first is that people learn through observation either through a live model, a verbal instructional model, or a symbolic model like films or online media. The second concept is that people can influence their own environment through reflection, behavior, and goal setting. External reinforcement is not the only motivation for learning; intrinsic reinforcement such as pride or sense of accomplishment also drives behaviors. The third concept is that observational learning involves attention, retention, reproduction, and motivation. Students need to have the ability to pay attention, be able to store the information learned and pull from it when needed, then actually use the information; and finally they need to be motivated to model the behavior learned (Bandura, 2003).

Bandura (2003) states adaptation and change occur through personal and environmental influences. Observational learning is based on four processes: attention, symbolic representation, transformation to action, and motivational incentives. Self-efficacy is necessary for accomplishments and is a judgment of capability. There are four ways to develop self-efficacy: 1) mastery of experiences or overcoming obstacles and managing failures to be informative; 2) social modeling or seeing others succeed plants the belief they will succeed too; 3) social persuasion encourages more effort and avoids focusing on doubt; and 4) reading physical and
emotional states correctly to judge their own capabilities resulting in learning how to manage negative physical and emotional states (Davidson, 2003).

Social cognitive theory is used to guide simulation activities for nursing students and can lead to increased self-efficacy for nursing students (Burke & Mancuso, 2012). Students learn socialization, sensitivity skills, and collaboration through the scenarios. Bandura’s theory is based on the importance of observational learning through modeling. Nursing students will be able to draw on their experience of observing behaviors and model their own behavior after positive models (Bahn, 2001). Using the power of peer and societal reinforcement, the behavior is more likely to be adopted. Role modeling clinical behavior through scenarios enables students to learn appropriate professional interactions with patients and other healthcare team members. Values and attitudes specific to the discipline of nursing, along with new skills, can be demonstrated through scenarios modeling appropriate behavior (Bahn, 2001). Bethards (2014), a study that used social cognitive theory as a framework for simulation activities, found the biggest challenge to be ensuring all students were engaged in observing the scenario.

Caring can also be learned through role modeling using Bandura’s social cognitive theory. Nelms, Jones, and Gray (1993) conducted a study using Bandura’s theory as a framework. The students observed role modeling of professional attitudes and behaviors, and they were expected to acquire new caring skills. Students were shown a video of a student nurse and faculty member in a clinical setting and then asked to complete a questionnaire. The results of the study showed the students were able to learn caring behaviors through observing faculty role modeling. The students made comments that they learned caring behaviors by observing genuine relationships modeled by others. They also discussed how observing negative interactions impacted them. They viewed the nurses who “didn’t take time” or who were “in too
much of a hurry to listen” as being burned out and noncaring. The students showed empathy toward the patients and some developed a feeling of a connection to the profession.

The indirect experience of role modeling through viewing a video also increased the students’ level of self-awareness (Nelms, Jones, & Gray, 1993). Some of the students stated that the video made them think about how they interact with patients. The importance of communication, both listening and explaining, were identified by the participants as important aspects of caring. Another unexpected outcome of this intervention was that the nursing student participants identified incorrect nursing procedures demonstrated in the video. Johnson et al. (2012) agreed that observational learning could lead to students gaining new information about behaviors and attitudes. The recommendations included faculty being more aware of the influence their behavior and attitudes can have on students.

Nurses are expected to be both competent and caring professionals. They need to have the knowledge and skills to provide the clinical care required by patients, but also the caring component important to quality care. Caring is associated with nurturing and often thought of as an essential trait of nursing (Rhodes, Morris, & Lazenby, 2011). Caring also plays a role in developing a genuine relationship with patients. Watson’s theory of human caring has been used to guide nursing research around caring and the best methods to incorporate caring in the nursing curriculum (Eric et al., 2002; Iverson & Sessanna, 2012; Sitzman, 2007; Wu et al., 2009).

**Jean Watson’s Theory of Human Caring**

Watson’s theory of human caring was first published in 1979 and has evolved over the years since (Rafael, 2000). This theory stresses three factors: importance of the lived experiences of both the patient and the nurse; the unique aspects of mind-body-spirit, while maintaining the importance of the whole person; and multiple ways of knowing. Watson stressed that the nurse
must have a sense of self-knowing to enable her to be wholly engaged with the client to lead to a genuine caring relationship (Rafael, 2000). This process would include being aware of one’s own biases and developing empathy.

The 10 carative factors of Watson’s theory of human caring provide structure for nursing education. With so much nursing care focused on technological skills, the caring component needs to be integrated into nursing education. Caring is a core value of the National League of Nursing, and care-centered nursing curricula, including bias awareness, has been encouraged (NLN.org). This suggests nursing curriculum, especially in clinical education, should be based on the five attributes that make up caring: human dignity, integrity, autonomy, altruism, and social justice (Wu et al., 2009).

Watson’s theory of human caring has also been used to demonstrate what caring looks like in clinical settings. Weber State University created a senior level course focused on Watson’s theory of human caring for undergraduate nursing students (Sitzman, 2007). The students’ reactions were positive and most planned on using what they learned in their practice as professional nurses. Recommendations included that nurse educators need to cultivate genuine caring in nursing students through providing opportunities for deeper understanding of how genuine caring can impact care (Eric et al., 2002).

Watson’s theory of human caring is effective in producing positive health outcomes. It has been used as a framework in many nursing studies (Eric et al., 2002; Iverson & Sessanna, 2012; Wu et al., 2009). Eric et al. (2002) conducted a study to determine how a nurse’s caring relationship affects blood pressure and quality of life of patients with hypertension. A single group pre- and posttest design was used. A total of 52 patients with hypertension were recruited and were given questionnaires with demographic information and quality of life measure. All
participants also had their blood pressure measured. Nurse researchers were all trained in
Watson’s 10 carative factors and this was the basis of caring used by them while caring for the
participants. The nurses provided weekly visits utilizing the carative factors and measuring blood
pressure. After three months, the participants were given the Quality of Life measure to complete
once again and blood pressures were measured. The results were consistent with the finding of
Wu and colleagues (2009), showing a caring relationship between the nurse and patient resulted
in positive health outcomes (Eric et al., 2002).

Watson’s theory was used as a framework to educate the staff on the importance of early
referrals to optimize the quality of life of dying patients and their family members (Iversen &
Sessanna, 2012). Educating hospital staff on making appropriate referrals to hospice is important
to ensure the best quality of care. Caring is the basis for this education, resulting in better insight
into patients’ needs. The teaching was provided through in-services and afforded opportunities
for self-awareness. Iverson and Sessanna (2012) recommended using videos and case studies to
help reinforce the knowledge being introduced.

Cook and Cullen (2003) discussed how Watson’s theory of human caring is integrated
throughout nursing education. The clinical setting is the environment where the nursing students
can practice appropriate caring behaviors with patients. Throughout the curriculum, students
have opportunities to interact with patients and then reflect on their caring behaviors. Through
post-clinical discussions and journal entries, the students learn through reflection about effective,
caring interactions with patients.

Many factors influence nursing students’ ability to demonstrate genuine caring to
patients. Personal experience and education are factors in Watson’s theory of human caring.
Providing care to a vulnerable population can present many challenges, but is imperative.
Genuine caring and empathy can have a positive impact on health seeking behaviors and even health outcomes (Eric et al., 2002; Wu et al., 2009).

Bandura’s social cognitive theory and Watson’s theory of human caring worked well together as a conceptual framework for this study. Bandura’s theory is based on learning occurring in a social context and through observation. The video provides the students with scenarios designed to increase empathy. The nursing students observed the behavior modeled by the healthcare professionals in the video who demonstrate values and attitudes specific to nursing. Nursing students may have been able to increase their level of self-awareness of weight bias through watching the video and completing the FPS.

Watson’s theory acknowledges many ways of knowing how to help establish a genuine caring relationship between the nurse and the patient. The video provides empirical ways of knowing by demonstrating both inappropriate and appropriate ways of interacting with overweight and obese patients. The intervention may have even stimulated thinking about ethical and respectful treatment of all patients. Watson emphasized the importance of being aware of one’s own biases and developing empathy in order to have a genuine caring relationship with patients. This video intervention was created to increase empathy. The actors in the video demonstrate the effects of stigmatization, and this may increase awareness of the effects of language and physical barriers this population experiences.

Even though it has been determined that weight bias is prevalent in many disciplines in healthcare, there is very little research on effective interventions to address this issue with nursing students. This research study determined if a short video about weight bias in healthcare would have an effect on the nursing students’ awareness and level of weight bias.
Chapter Summary

The purpose of this review of the literature was to provide an overview of the current state of nursing curriculum in regard to obesity, weight loss guidelines, weight bias prevalence in healthcare, video used as a teaching tool, interventions to decrease weight bias, and Bandura’s and Watson’s theories. Nursing curriculum currently provides information about obesity in two ways: an obesity-specific lecture and integration of obesity information throughout the curriculum. Most nursing schools integrate obesity information in terms of how it impacts other disease processes. Regardless of the way obesity is integrated in nursing curricula, the vast majority of programs do not cover the topic of weight bias.

Simply learning more about the disease process does not ensure a decrease in weight bias. One of the important factors in addressing the health issue of obesity is providing nurses with the tools to effectively communicate with patients who are obese. Weight bias is prevalent in most healthcare disciplines, even among those who work in the field of obesity. Many studies have shown that specific education about weight bias is needed to raise awareness and possibly decrease bias. When patients receive sensitive social support it has been shown to be effective with helping patients make behavior changes to improve health.
Chapter Three

METHODOLOGY

The purpose of this research study was to investigate the effectiveness of using the Yale Rudd Center video as an educational intervention to increase awareness of weight bias and decrease weight bias among nursing students. The chapter describes the research study process for this study. The sample consisted of two groups. Group A was a group of undergraduate nursing students who have had an obesity lecture as part of the nursing curriculum. The topics for the classroom lecture on obesity are: etiology and epidemiology of obesity for adults and pediatrics, defining optimal weight, health risks associated with obesity, nursing management of obesity (both conservative and surgical), and metabolic syndrome (See Appendix C). Group B was a group of undergraduate nursing students who have obesity content integrated throughout their curriculum in terms of how obesity affects other disease processes in several units including endocrine, cardiac, adult health, and surgery.

All participants in this study viewed a video on weight bias in healthcare settings. This educational intervention used scenarios to increase empathy for individuals with obesity and to inform viewers of the specific needs of these individuals in healthcare settings. The research literature reviewed for this study suggested that viewing the video could have resulted in increased self-efficacy for the students caring for patients with obesity by increasing their knowledge about the etiologies of obesity and increasing their awareness of any weight biases.
This chapter presents the methodology used to conduct this research study. The research study design, sample, intervention, data collection, and data analyses are included.

**Research Design**

This research study was a quasi-experimental design consisting of two groups of undergraduate nursing students using a pretest and posttest design. The independent variable of this research study was the educational video intervention. The dependent variable was the nursing students’ scores on the FPS, a measure of weight bias awareness.

**Setting**

This research was conducted at two private universities in the southeastern United States with baccalaureate of science in nursing programs that were chosen because both are well respected nursing programs and both incorporate obesity in their curriculum but in different ways. Both universities offer Bachelor, Master, and Doctorate degrees in nursing. The two universities require a grade point average of at least 3.5 in high school to gain admission to the nursing programs. Other admission criteria include Scholastic Aptitude Test or American College Testing test scores and letters of recommendation. The Commission on Collegiate Nursing Education (CCNE) accredits both universities’ nursing curriculum. In 2012, the experimental group setting graduated 121 bachelors of nursing students with a NCLEX pass rate of 94.2% (Emory.edu). Group B’s school graduated 136 bachelors of nursing students in 2012 with a NCLEX pass rate of 95% (Samford.edu).

**Entrance to Site**

Entrance to the university sites was obtained through obtaining permission from the Associate Deans of the Bachelor of Science Nursing programs and contacting the course leaders for the undergraduate program. The course leader for Group A did not want this researcher to
directly speak to the students to recruit. She preferred sending a brief summary of the research study to the students through their learning platform and sending reminder emails about recruitment times and locations. Group B’s course instructor permitted this researcher to directly recruit students during a scheduled class. Both course instructors told this researcher to limit time with students to one hour.

**Ethical Considerations**

Institutional Review Board (IRB) approval was obtained from the University of Alabama and one of the universities was used as research site. The IRB determined no IRB approval was required for this study at the other university. Approval was also obtained from the course leaders and the Associate Dean of the Bachelor of Nursing Program at both of the research universities’ sites. The rights and welfare of all subjects were protected according to all three universities’ protocols for human subject research throughout this study.

**Sample Description**

The researcher at the end of a scheduled nursing lecture recruited a convenience sample of traditional baccalaureate nursing students in their junior year of study. Group A was a group of undergraduate nursing students who attended a school that offers an obesity-specific lecture as part of the curriculum in the adult health course. The course instructor denied weight bias was covered in their obesity lecture. The obesity lecture was presented during the previous semester. This group also had courses covering social responsibility, bioethics in nursing, and the professional nurse prospective. The curriculum for this program requires two years of general education and 60 credit hours of clinical and nonclinical nursing courses.

Group B was a group of undergraduate nursing students who attend a school that integrates obesity throughout the curriculum incorporating the effect it has on other disease
processes. This group also has two semesters of cultural perspectives and one semester of professional nursing concepts. This program requires general education along with 74 credit hours of nursing courses. This school is Christian based that requires nursing students to complete 4 credit hours of biblical perspective and 4 credit hours of religion course. Both groups’ course instructors stated they did not think they covered the topic of weight bias currently in their curriculum.

It was made clear at the time of consent that participation, or lack of participation, would not have any impact on students’ course grade. Inclusion criteria, therefore, were: nursing students currently enrolled in a baccalaureate nursing program, in their junior year of study.

Sample Recruitment

Recruitment for each group was done according to guidelines set by the instructor and dean of each school. The original plan was to directly contact both groups of students to explain the study and recruit participants. After receiving permission from the dean of the school, Group A was notified by the course instructor that she would share information about the study verbally by the course instructor in class as well as a notice to the students on their classroom platform “Blackboard” explaining the opportunity to participate in nursing research including dates and times. She did not allow the researcher to directly recruit the students. The first three attempts were unsuccessful in recruiting participants. On the final participation day, four students consented to participate. The students who completed the study were offered an opportunity to participate in a raffle for one of ten VISA gift cards as incentive to participate. All four answered the question correctly and received the gift card.

With Group B, this researcher received permission from the dean of the school of nursing and the course instructor to access the nursing students. A date was arranged that worked for the
course instructor, and the researcher went to the classroom. The course instructor introduced the researcher who explained the study and invited all the students to participate. The course instructor explained to the students that participating in this research was an opportunity for all of them to become part of evidence-based practice for nursing. All students chose to consent to participate in the study. The students who completed the study were offered an opportunity to participate in a raffle for one of ten $15 VISA gift cards as incentive to participate.

A power analysis was done using G* Power (Faul, Erdfelder, Lang & Buchner, 2007) to estimate the sample size for a within-group paired-samples t-test. Based on the power analysis conducted, 54 participants were needed for a medium effect size for both groups. The estimated class size for Group A was 122. All students enrolled in the course during spring semester of 2016 were offered enrollment in the research study. Current enrollment for fall semester for Group B was 41 students.

A second power analysis was done using G* Power (Faul, et al., 2007) to estimate the sample size needed for a between group, independent-samples t-test. This analysis was planned to examine significant differences between Groups A and B at posttest. Based on a medium-effect size with two groups of 45 participants, this results in a power of 0.86, which is considered adequate. After four attempts to recruit, the actual number of participants in this study was 4 females for Group A and 40 females and 1 male for Group B.

An unplanned discussion took place after the posttest was collected for both groups. Many of the students discussed how they never thought about how they felt about patients with obesity until they were asked to complete this test. This led to the students discussing how they never really thought about how powerful their language could be. They specifically referenced the phrase, “get the extra-large cuff.” The students discussed how embarrassing that would be for
the patients. The scenarios depicting real life examples of weight bias in the healthcare setting seemed to make it easy for the students to relate. Many of the students talked about how they felt toward this population and how important it is to treat everyone with respect. We ended our discussion with how the patient experience could affect the patients’ future health seeking behavior and how they, as nurses, can impact that.

The unplanned discussion with both groups of nursing students following collection of the posttests was serendipitous. It suggested that the video stimulated thought and discussion among the students. The comments from the students expressing empathy for patients with obesity suggest they did have an awareness of weight bias and how that could impact health-seeking behavior. Developing empathy in the students for patients with obesity is in line with recommendations from The National Association of Bariatric Nurses (Camden et al., 2008). Increasing sensitivity to the specific needs of this population could improve the quality of care by decreasing the stigma linked to people with obesity. The discussion provided a deeper understanding of the impact of the video on the students. The video intervention may be more effective with a planned discussion following the viewing.

**Informed Consent Form**

The informed consent included the researcher conducting the study, the time commitment needed, potential benefits and risks, explanation of the proposed study, and participants were informed that participation is voluntary. Participants who agree to participate were provided with a copy of the consent form, and confidentiality was explained to all participants. See Appendix D, E, and F for the consent forms for the three academic institutions involved in this research.

It was not anticipated that the video would cause stress beyond routine daily activities. None of the nursing students became emotionally upset or expressed feeling uncomfortable.
while viewing the video or completing the measure. The participants were told they could leave the study at any time. Information about counseling options available on both campuses was available the day of data collection for anyone that was interested. It was made clear to all participants the data collected would not have any effect on the nursing students’ grades.

**Intervention Instrument**

**Yale Rudd Center Weight Bias in Healthcare Video.** The Yale Rudd Center *Weight Bias in Healthcare* video is a tool to help raise awareness and decrease weight bias in healthcare providers. It was produce by Rick Leone and hosted by Emme Aronson. Several experts provided commentary during the video including: Kelly D. Brownell, Ph.D., Rebecca Puhl, Ph.D., and Marlene Schwartz, Ph.D. This video is about 17 minutes long and includes short scenarios involving healthcare experiences of individuals with obesity, causes of obesity, and demonstrates the effect of weight bias in healthcare on patients.

The video begins with a scenario of a child and parent in an exam room. A physician comes into the room to examine a burn on the child’s arm and ends with the comment, “I’m afraid we can’t help him, clearly he did this to himself” (Yale Rudd Center, 2009). The absurdity of this situation is discussed and related to patients with obesity. Patients are being blamed and shamed about their health issues and weight issues. The experts then explain what weight bias is, how it is exhibited throughout healthcare, and how it impacts patients’ health. A scenario of an overweight female patient going through an outpatient appointment demonstrates inappropriate behavior of healthcare providers.

The video states that weight bias is more common than bias related to ethnicity, sexual orientation, religion, and physical disability support the need for solutions to be found (Yale Rudd Center, 2009). The statistics show that obesity is an epidemic that affects every healthcare
provider, emphasizing the importance of learning how to move away from obesity being blamed on the individual and moving toward a supportive, straightforward approach. Being aware of one’s own bias and attitudes is an important first step. Using proper equipment, gowns, and respecting all patients would also help to decrease bias and improve the healthcare experience (Yale Rudd Center, 2009).

A final scenario of the same overweight female going to an outpatient appointment is played out again, but this time with respectful and appropriate behavior from the healthcare team. The experts point out that weight bias is a strong social injustice, and they provide important steps to address this along with resources for healthcare providers.

The scenarios with appropriate, caring interactions model those that may positively influence the nursing students. The intention of showing the video to the nursing students was to stimulate them to think about ethical treatment of patients and to develop empathy for patients with obesity. Watson emphasizes the importance of being aware of one’s own biases as essential to cultivate a genuine, caring relationship between the nurse and patient (Rafael, 2000). Bandura’s social cognitive theory and Watson’s theory of human caring were used to guide this research to determine the effect of an educational intervention about weight bias in healthcare on the attitudes of undergraduate nursing students. The video provided opportunity for the nursing students to observe inappropriate interactions as well as desirable behaviors. Learning through observation and verbal instruction is the basis of Bandura’s theory and the video provides this.

**Measurement Instrument - Fat Phobia Scale**

The FPS (short form) (Bacon, Scheltema, & Robinson, 2001) is the instrument that was used in this study to determine weight bias of the nursing students. This measure was chosen for this study because it is the most reliable of the most often used instruments to measure weight
bias and it could be completed twice within the limited time the researcher had with the participants. This measure is freely available at the Yale Rudd Center and has been proven reliable and valid (Bacon et al., 2001). The short form of the FPS has 14 items and takes about 20 minutes to complete. Bacon et al. (2001) developed the short form to be user-friendlier in research and the clinical setting. They found this short scale to have excellent reliability with a Cronbach alpha of 0.87-0.91. The short form also showed a high correlation with the 50-item scale, establishing validity. The short form was found to have the same quality psychometric properties as the original scale (Bacon et al., 2001). The short form correlated with the original in both samples, and this provides evidence of concurrent validity (Bacon et al., 2001). See Appendix B for the FPS (short form).

**Fat Phobia Scale Scoring.** The tool used to measure fat phobia was the 14-item Fat Phobia Scale. Total score is the average of all items, with some items reverse-scored (items 1, 2, 8, 9, 11, 13). The range for the scores is 1-5 and lower scores indicate less fat phobia while higher scores indicate higher levels of fat phobia. A score of ≤2.5 on the FPS indicates positive or neutral attitudes. A high level of fat phobia is indicated by a score of ≥4.4 on the FPS (Bacon, Scheltema, & Robinson, 2001).

**Data Collection**

The FPS measure was collected pre-educational intervention and post-educational intervention for both groups of undergraduate nursing students. Both groups provided consent, and then completed the FPS, watched the video, and completed the FPS again. It took the students approximately 20 minutes to complete the posttest.
Data Analyses

Descriptive statistics including calculation of means were conducted first. Skewness and kurtosis of the means were assessed to examine the normality of the data distribution. Within group comparisons were made using a paired sample t-test to measure change in participants’ scores after the intervention (Polit & Beck, 2008). A significant difference in scores at post-intervention would suggest that the educational intervention affected weight bias attitudes. Two independent sample t-tests were planned to compare scores of Groups A and B at baseline and post-intervention (Polit & Beck, 2008). Cohen’s D was calculated to determine the effect size and post-hoc paired samples t-tests were conducted item by item for Group B.

Chapter Summary

The methodology for this quantitative quasi-experimental study was provided in this chapter. The FPS tool and the video used for this study were described. The chapter also provided this study’s research design, sample, recruitment, data collection and analysis. Protection of human subjects and anticipated ethical considerations concluded this chapter.
Chapter Four

RESEARCH FINDINGS

This chapter presents the analysis of the results of the study conducted to determine the effect of an educational intervention on weight bias in the attitudes of undergraduate nursing students at two nursing schools. Descriptive statistics including skewness and kurtosis were computed to determine the distribution of the FPS scores. These results are presented in this chapter as well as the results of the paired samples t-tests and an item-by-item analysis.

Overview of Data

The mean scores were normally distributed with little variability and were clustered in the low range. The results indicate the participants had low levels of fat phobia before the intervention. The intervention resulted in a statistically significant increase in the mean scores, indicating an increase in fat phobia levels. These results had not been found in any previous research utilizing the video intervention. Even though there was an increase in scores, they were all still in the positive/neutral level of fat phobia and lower than previous research findings of fat phobia levels in healthcare professionals.

Descriptive Analyses

Skewness and kurtosis of data for both groups was examined to determine whether data was normally distributed (see Table 2). Skewness describes the symmetry of the data distribution while kurtosis refers to the “peakness” or “flatness” of data distribution (Tabachnick & Fidell, 2007). Data that is perfectly distributed will have a skewness and kurtosis of 0 (Tabachnick &
Fidell, 2007). It is recommended that values for skewness are between -1.0 and 1.0. Kurtotic values greater than -2 are considered excess kurtosis (Tabachnick & Fidell, 2007). Skewness values for both Groups A and B fall within acceptable ranges suggesting a normal distribution. Similarly, values of kurtosis for both groups fell within acceptable range. All of the scores for both groups, both pretest and posttest, are within the low range with small standard deviations. The measure used (FPS), although valid and reliable, may not have been sensitive enough for these participants.

Table 2

*Skewness and Kurtosis of Sample.*

<table>
<thead>
<tr>
<th>Group</th>
<th>Men</th>
<th>Women</th>
<th>Skewness (SE)</th>
<th>Kurtosis</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>0</td>
<td>4</td>
<td>.423 (1.014)</td>
<td>.862 (1.014)</td>
<td>-.416 (2.619)</td>
<td>1.738 (2.619)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>40</td>
<td>.502 (.369)</td>
<td>-.086 (.369)</td>
<td>.110 (.724)</td>
<td>-1.286 (.724)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the pretest, 75% of participants in Group A scored below or equal to 2.5 (positive/neutral level of fat phobia). No scores are greater than or equal to 4.4 (high level of fat phobia). Group B pretest results are 54% of participants scored in the positive/neutral range and 0% in the high range. On the posttests, 0% of Group A scored in the positive/neutral or high range. Posttest results for Group B are 49% scored in the positive/neutral range and 0 in the high range. Neither group had any participant score in the high range at any time. The results are displayed in Table 3.
Table 3

Means and Categorization of Fat Phobia Scale Scores.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Mean</th>
<th>Minimum-Maximum</th>
<th>Score &lt;2.5 (%)</th>
<th>Score &gt;4.4 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pretest (SD)</td>
<td>Posttest (SD)</td>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>A</td>
<td>4</td>
<td>2.30 (0.21)</td>
<td>2.88 (0.36)</td>
<td>2.50-3.36</td>
<td>75</td>
<td>0</td>
</tr>
<tr>
<td>B</td>
<td>41</td>
<td>2.35 (0.46)</td>
<td>2.72 (0.46)</td>
<td>1.93-3.50</td>
<td>54</td>
<td>49</td>
</tr>
</tbody>
</table>

Statistical Analyses of Data

The initial statistical plan included conducting paired sample and independent samples t-tests within and between groups; however, Group A’s sample size did not meet recommended level for power necessary to proceed with either paired samples or independent samples t-tests. For this reason, only descriptive statistics are included for Group A. No further analyses were conducted with this group. A paired-samples t-test was conducted with Group B to determine within group changes. The data was input into Microsoft Excel and verified twice for accuracy by the researcher and a colleague. Data were then imported into the Statistical Package for Social Sciences (SPSS version 23) for analyses.

There was one research question for this study: What is the effect of a video about weight bias in healthcare on the awareness and level of weight bias on nursing students as measured by the FPS? Mean scores for the pre- and posttest are included in Table 4 for Group B. Paired sample t-tests for Group B indicate significant change in scores (t = -4.97 (40), p < .05). The results are included in Table 4.
Table 4

Paired Sample t-test Results for Group B Fat Phobia

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Std. Error</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Upper                              Lower</td>
</tr>
<tr>
<td>B</td>
<td>-0.36</td>
<td>0.47</td>
<td>0.07</td>
<td>-4.97</td>
<td>40</td>
<td>0.000*</td>
<td>-0.51                                -0.22</td>
</tr>
</tbody>
</table>

*p < .05

To determine the magnitude of the effect size, Cohen’s D was calculated to be 1.57 which is a large effect size (Polit & Beck, 2008, p.603). The large effect size seems to be the result of the restricted range of responses. The range of the pretest scores is 0.5 for Group A and 2.0 for Group B. The range for the posttest scores is 0.86 for Group A and 1.57 for Group B.

To examine which items changed from pretest to posttest, post-hoc paired samples t-tests were conducted item-by-item on pretest and posttest FPS scores for Group B. As the number of statistical comparisons increases, so too does the risk for Type 1 error, incorrectly rejecting the null hypothesis. A conservative approach is to make a Bonferroni correction, which establishes a more stringent significance level (Miller et al., 1981). An alpha level of 0.004 was used as a conservative level of statistical analysis (α=0.05/14 comparisons).
Table 5

*Post-hoc item-level analyses for Group B pretest and posttest scores*

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Dev.</td>
<td>Std. Error Mean</td>
<td>Lower</td>
<td>Upper</td>
<td></td>
<td>t</td>
</tr>
<tr>
<td>Lazy/ Industrious</td>
<td>-.585</td>
<td>.921</td>
<td>.144</td>
<td>-.876</td>
<td>-.295</td>
<td>-4.068</td>
<td>40</td>
</tr>
<tr>
<td>No will power/ Has will power</td>
<td>-.683</td>
<td>1.035</td>
<td>.162</td>
<td>-1.010</td>
<td>-1.010</td>
<td>-4.224</td>
<td>40</td>
</tr>
<tr>
<td>Attractive/ Unattractive</td>
<td>-.341</td>
<td>.617</td>
<td>.096</td>
<td>-.536</td>
<td>-.147</td>
<td>-3.545</td>
<td>40</td>
</tr>
<tr>
<td>Good self-control/ Poor self-control</td>
<td>-.341</td>
<td>.855</td>
<td>.133</td>
<td>-.611</td>
<td>-.072</td>
<td>-2.558</td>
<td>40</td>
</tr>
<tr>
<td>Fast/ Slow</td>
<td>-.195</td>
<td>.601</td>
<td>.094</td>
<td>-.385</td>
<td>-.005</td>
<td>-2.080</td>
<td>40</td>
</tr>
<tr>
<td>Having endurance/ Having no endurance</td>
<td>-.366</td>
<td>.662</td>
<td>.103</td>
<td>-.575</td>
<td>-.157</td>
<td>-3.540</td>
<td>40</td>
</tr>
<tr>
<td>Active/ Inactive</td>
<td>-.585</td>
<td>.974</td>
<td>.152</td>
<td>-.893</td>
<td>-.278</td>
<td>-3.848</td>
<td>40</td>
</tr>
<tr>
<td>Weak/ Strong</td>
<td>-.292</td>
<td>.750</td>
<td>.117</td>
<td>-.530</td>
<td>-.056</td>
<td>-2.499</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>-.390</td>
<td>.833</td>
<td>.130</td>
<td>-.653</td>
<td>-.127</td>
<td>-3.000</td>
<td>40</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------</td>
<td>------</td>
<td>------</td>
<td>--------</td>
<td>--------</td>
<td>---------</td>
<td>-----</td>
</tr>
<tr>
<td>Dislikes food/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likes food</td>
<td>-.463</td>
<td>.745</td>
<td>.116</td>
<td>-.699</td>
<td>-.228</td>
<td>-3.983</td>
<td>40</td>
</tr>
<tr>
<td>Shapeless/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shapely</td>
<td>-.463</td>
<td>.745</td>
<td>.116</td>
<td>-.699</td>
<td>-.228</td>
<td>-3.983</td>
<td>40</td>
</tr>
<tr>
<td>Undereats/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overeats</td>
<td>-.463</td>
<td>.745</td>
<td>.116</td>
<td>-.699</td>
<td>-.228</td>
<td>-3.983</td>
<td>40</td>
</tr>
<tr>
<td>Insecure/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secure</td>
<td>-.463</td>
<td>.745</td>
<td>.116</td>
<td>-.699</td>
<td>-.228</td>
<td>-3.983</td>
<td>40</td>
</tr>
<tr>
<td>Low self-esteem/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High self-esteem</td>
<td>-.463</td>
<td>.745</td>
<td>.116</td>
<td>-.699</td>
<td>-.228</td>
<td>-3.983</td>
<td>40</td>
</tr>
</tbody>
</table>

*Note. *P* < .004.

**Chapter Summary**

Data were collected and analyzed to determine the effect of an educational video on 45 baccalaureate nursing students from two different schools who were in their junior year of nursing school. The initial data plan was modified given sample recruitment challenges that precluded further significant testing with Group A.

Scores on the FPS for both groups are in the neutral/positive range at baseline and increased after the intervention but still remained neutral/positive at posttest. All pretest and posttest scores are low with low standard deviations, indicating a floor effect. A floor effect occurs when the majority of participants score low or near the bottom of a measure restricting the range of scores. These data suggest that these nursing students demonstrated a low level of fat
bias even before the intervention. Post-hoc item-level analyses were completed for the pretest and posttest FPS of Group B. The results suggest the nursing students’ strongest negative stereotypes about overweight people are that they are “undisciplined” and “unappealing”. The same five items scored the highest on both the pretest and posttest means. Scores on these items, however, still fell within the positive-neutral range on the FPS.
Chapter Five

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

This chapter includes a review of the purpose of this research, the findings, and discussion of implications of the findings. The chapter concludes with future recommendations suggested by the analysis and discussion of the findings.

Purpose Statement

The purpose of this quasi-experimental study was to determine the effect of an educational intervention about weight bias in healthcare on the attitudes of undergraduate nursing students at two nursing schools. The secondary aim was to determine if there is any difference in weight bias between a group of nursing students who have an obesity-specific lecture as part of the curriculum and a group of nursing students who have obesity integrated throughout the curriculum. The research question answered with this study was: What is the effect of a video about weight bias in healthcare on the awareness and level of weight bias on nursing students as measured by the Fat Phobia Scale (FPS)?

Discussion of Results

This section reviews the statistical analyses for this research, offers a discussion of the results as they relate to the conceptual framework, and how they relate to findings reported by other researchers. The results suggest that although the video did not raise awareness of weight bias based as measured only on the scores of the FPS. The following discussion includes a brief review of the emphasis in nursing curriculum that may have contributed to the students’ low fat
phobia levels. An item-by-item analysis was done to determine which adjectives scored the highest, indicating how participants stereotyped overweight and obese people.

**Statistical Data Interpretation**

A paired samples $t$-test was done with the data for the group who had obesity integrated throughout their curriculum to determine the effect of the educational intervention. The group who received the obesity lecture did not have a sufficient number of participants, therefore the planned paired samples $t$-test was not done for this group and the between group analysis was not completed. A paired samples $t$-test was done with the data for the group who had obesity integrated throughout their curriculum to determine the effect of the educational intervention.

These scores actually revealed a statistically significant increase in the FPS after viewing the video indicating an increase in fat phobia. Therefore the hypothesis that the students would have lower scores on the FPS after the intervention was rejected. These findings did not support any literature using the *Weight Bias in Healthcare* video as an intervention to decrease fat phobia.

The findings in this study reveal that the students had low bias before the intervention reflected by scores that were much lower than previous studies completed with healthcare professionals (Poon & Tarrant, 2009; Puhl, Wharton, & Heuer, 2009; Wolf et al., 2010). Based on the low FPS scores it could be concluded that the participants in this study already had a low bias before consenting or were much more aware of their biases. Puhl, Wharton, & Heuer (2009) found the mean score for dietetic students to be much higher for fat phobia. Poon and Tarrant (2009) found practicing nurses and student nurses also had higher scores on the FPS than the participants in this study. A study by Swift et al. (2013) supports the ideas that one reason this sample may have low biases is because they are more advanced nursing students and may have
had sensitivity or other clinical training that younger students have not. In the Swift et al study, a questionnaire was given to 1130 students that contained demographics, the FPS, and the BOAP. The participants demonstrated significant fat phobia with a mean score of 3.8. Final year nursing students had lower scores suggesting that the curriculum had some impact on the level of fat phobia. Another contribution to this could be the cultural competent curriculum in nursing education, a topic to be considered later in the chapter.

**Low Variability of Scores**

The pretest scores had a very restricted range. The variability of scores is so small that any slight increase in scores became significant. These results, although statistically significant, may not be clinically meaningful since the posttest scores indicate positive or neutral attitudes.

**Post Hoc Item by Item Analysis**

The post hoc statistical analyses of the item scores on the FPS show an increase on the posttest mean scores for each item. The results of this study differ from previous similar studies in that the mean scores are much lower on both the pretest and posttest (Puhl, et al., 2009; Swift, et al., 2013; Wolf, 2010). Five of the fourteen items scored in the low fat phobia range. The five items that scored lowest on both the pretests and posttests were: “slow”, “likes food”, “overeats”, “insecure”, and “low self-esteem”. This suggests these characteristics are not how the students stereotyped overweight and obese individuals. These results differ somewhat from findings from other research studies. Puhl, Wharton, and Heuer (2009) conducted a randomized experimental study with 182 dietetic students. They found the five adjectives with the highest scores for healthcare workers to be: “overeats”, “insecure”, “likes food”, “inactive”, and “low self-esteem.”
A study with nursing students and registered nurses found the adjectives with the highest score in that study were: “overeats”, “likes food”, “slow”, “unattractive”, and “shapeless” (Poon & Tarrant, 2009). McClure et al. (2011) conducted another study using an online randomized experimental study with 188 adults. The participants were given a neutral online news story about obesity. The story also had one of four photographs, some stereotypical for people with obesity and some not stereotypical. The five adjectives with the highest scores were: “likes food”, “overeats”, “inactive”, “slow”, and “low self-esteem”.

In this study the same five items have the highest scores on both the pretest and posttest. They were: “shapeless”, “no will power”, “unattractive”, “weak”, and “self-indulgent” and the item that scored the highest was “shapeless”. Most other item scores were in the neutral/positive range. This finding was not consistent with other studies using the FPS.

These adjectives are often how individuals with obesity are portrayed in the media. Fat stigmatization occurs in television shows, videos, and movies. It is often done through the use of humor or the form of commentary (Himes & Thompson, 2007). The stigma can stem from negative attitudes toward people with obesity believing these individuals have complete control over their weight (Burmeister & Carels, 2014; Himes & Thompson, 2007). “Likes food”, “overeats”, “inactive”, “slow”, and “low self-esteem” are adjectives that describe how people with obesity are often portrayed in media, which feeds the stereotype. People who are thin are often portrayed with more positive characteristics like kindness and they appear happier (Burmeister & Carel, 2014).

The five adjectives with the highest scores on previous studies are more similar to the five lowest scored items in this study. The participants in this study have much lower mean scores than previous studies. Previous research had mean scores between 3.53 – 3.95 (McClure
et al., 2011; Poon & Tarrant, 2009; Puhl, Wharton, and Heuer, 2009), compared to mean scores in this study of pretest 2.35, posttest 2.72.

A study involving phone interviews lasting between 60 and 90 minutes found the participants believed the media values people who are thin, they even talked about how the media does not use people with obesity or they are portrayed negatively. The phone interviews were done to increase anonymity to the participants to try to get more open, honest answers to the questions. The participants also mentioned how some advertising is changing and brought up the Dove campaign that used women of many sizes outside of the usual stereotype used for beauty campaigns (Couch, Thomas, Lewis, Blood, Holland & Komersaroff, 2016).

The low scores on the FPS were surprising not only because they were different than previous studies, but also because of the way media portrays people with obesity. Several studies indicate that repeated exposure to negative depictions of individuals with obesity can affect the viewers’ attitudes toward this population (McClure, et al., 2011; Pearl, Puhle, & Brownell, 2012; Puhl, Luedicke & Heuer, 2013). In the recent presidential debate, fat shaming and weight bias became part of the conversation on a national stage. Assigning personal blame for weight issues perpetuates the belief that body weight is completely within personal control.

The Biggest Loser, a popular television show journaling the weight loss process of contestants, also perpetuates the perception that weight is completely controllable. Domoff et al (2012) and Yoo (2013) both found that watching an episode of this program increased dislike of people with obesity and also increased the participants’ belief that the contestants can control their body weight. This finding is similar to McClure et al. (2010) research that suggested exposing people to images of people with obesity in news reports increased their weight bias.
The participants’ low scores on the FPS in this study are encouraging that the acceptance of weight bias by the public did not have a great effect on these participants. These results may be related to several things. The schools may have already addressed biases in the curriculum by the junior year, indicating that it may be more valuable to use this educational intervention earlier in the program of study. Social desirability may have influenced the students to answer the questions as they thought they should, not as they truly felt. Perhaps another measure, or combination of measures, would have been more effective in detecting bias.

**Low FPS Scores**

This section addresses possible reasons for the low FPS scores and also supports the reasons for this study. In 2008 the American Association for Colleges of Nursing (AACN) created a toolkit of Resources for Cultural Competent Education for Baccalaureate Nurses. There is an emphasis on social justice education for the professional nurse. This study gave the nursing students an opportunity to be more aware of how bias is exhibited in healthcare through role-playing scenarios in the video. It also demonstrated instances that could raise their awareness of their own opportunities to make patients with obesity healthcare experiences better. This could potentially increase not only their self-awareness, but also their self-efficacy to care for this population. Current research suggests the use of video is more effective if used in conjunction with lecture or discussion (Kelly et al., 2009; Sorenson & Dieter, 2005; McConville & Lane, 2006; Logan, 2012). A post video discussion in this study was not planned because of the limited time allotted to spend with the students.

The 4th competency of the Tool Kit of Resources for Cultural Competent Education for Baccalaureate Nurses states nursing students need to advocate for social justice and in doing so help decrease health disparities and improve quality of care of vulnerable populations (“Tool Kit
Yanicki et al. (2014) suggested nursing could impact social justice and it starts with including raising awareness about the impact of the lack of health equity. The video gave examples of health inequity and the impact it has on patients. Other recommendations from the Yanicki et al study suggested that nursing leaders should create supportive work environments, nursing organizations need to share knowledge to determine best practices and concluded that more research is necessary to increase knowledge specific to different patient populations and practice settings.

In response to this request, nursing curriculum may have changed to include more courses dealing with social injustice. Both of these nursing programs require courses that would increase awareness of social injustice. Discussing race, class, and gender and raising awareness of the biases surrounding these issues may also have had an effect on the attitudes of the students toward patients with obesity and all social injustice.

One explanation for the low scores on the pretests and posttests could be that the students’ curriculum had addressed bias in healthcare and the video was not necessary for them to have low weight bias. It was encouraging that the video stimulated conversation among the students and both groups made comments suggesting the video made them consider the importance of their words and actions with all patients.

Another explanation for the low scores could be that the nursing students may have been reluctant to answer the questions negatively and some level of bias could have affected their responses (Poon & Tarrant, 2009). After the students watched the video, they could have realized it is common, even as nurses, to have biased feelings toward this population and then felt safer to answer the questions more honestly.
The fact that the students from Group B attend a religious institution may have also influenced the low scores. The religious courses and 60 convocation units including activities, guest speakers, and lectures related to Christianity required to graduate could have had an affect on the students’ attitudes and biases.

**Social Cognitive Theory**

The basis of Bandura’s Social Cognitive Theory for behavioral change is learning takes place in a social context, and much of that is through observation. In this research the participants had the opportunity to learn by observing the interactions between the healthcare workers and the patient with obesity. The video portrayed the pain and anxiety of the patient caused by the inappropriate interactions. The contrast with how the film depicted the patient’s response to appropriate interactions provided examples of how healthcare providers’ behaviors could impact patient care. The video was able to provide role modeling of appropriate behavior of the professional nurse in a clinical situation. Those observations provided a resource to the students of positive role models (Bahn, 2001). Nelms et al. (1993) found nursing students were able to learn caring behaviors through observing faculty role modeling. Along with the positive role modeling, the participants were also able to identify the negative interactions and the impact they had on the patients. The instrument used to collect data for this study could not be used to measure if the students learned caring behavior.

This intervention also provided knowledge from top experts in obesity, role modeling of good and bad communication skills through scenarios, and the effects of both types of communication specific to the healthcare setting. The information about the etiologies of obesity and specific examples of how to talk to patients about their weight in a respectful way provided viewers with opportunities to learn through observation. The observation, combined with the
reflection that occurred during the unplanned discussion after the posttest was collected, provided the students with opportunities to improve their self-efficacy for caring for this population.

**Watson’s Theory of Human Caring**

Watson’s theory of human caring is based on accepting people as they are and building a genuine caring relationship based on respect, dignity, and compassion. This intervention gave the participants an opportunity to observe how facial expressions and words can impact the nurse/patient relationship. Being aware of one’s own biases can help in creating a more genuine caring relationship (Creel & Tillman, 2011; Puhl & Brownwell, 2003; Rafael, 2000). The one carative factor from Watson’s theory most relevant to this study is the cultivation of sensitivity to self and others. This intervention aimed to elicit this by showing the impact of the negative and positive interactions.

Cook and Cullen (2003) discuss the importance of reflecting on patient interactions as a way to develop caring behaviors. The discussion among the students in this study was an example of students reflecting on the scenarios in the video and how they felt their caring behavior could impact patient care. Wu et al. (2009) and Eric et al. (2002) found a caring relationship between the nurse and patient resulted in positive health outcomes. The students stated after viewing this video that they will be more aware of their interactions with patients with obesity. Many of the students verbalized the video made them more aware of their own feelings and attitudes. Increasing self-awareness is essential to enable the nurse to develop a genuine and caring relationship with patients (Rafael, 2000).

These findings are not consistent with Diedrichs and Barlow (2011). They claimed that a lecture about obesity etiologies and weight bias could decrease bias. The video provided both
etiologies of obesity and information on weight bias. The results of this study did not find a decrease in weight bias, but actually an increase, suggesting that knowledge acquisition may not be enough to affect changed attitudes. Even though the increase was statistically significant, the scores were still low indicating a low weight bias. The weight bias video was produced to increase empathy for individuals with obesity. Lee et al. (2014) has also found interventions based on empathy were effective at decreasing weight bias.

**Limitations**

The following limitations for this study include:

- This researcher was unable to complete the between group analyses because the sample size of Group A was too small. If the researcher could have had direct contact with the students to recruit, a larger number may have participated. The different recruitment strategies created a limitation in this study because this researcher was unable to determine if there is a difference in weight bias between students who have an obesity specific lecture and students who have obesity information integrated throughout their curriculum.

- Both schools were private schools in the South. Their curriculum may already cover social injustice sufficiently so that the students were already aware of their weight biases. Other nursing programs may have different outcomes with this research.

- Another limitation of this study is the participants were third year students. It is not known if other levels of students would have the same results.

- The FPS may not have been sensitive enough to measure weight bias in these participants. Using multiple measures may have resulted in detecting more subtle biases in the participants.
Implications

The implications for nursing education and nursing practice that speaks to decreasing weight bias in healthcare providers and advocating for social justice.

Implications for Nursing Education

The implications of this research for nursing education include the importance of exposing nursing students to scenarios demonstrating social injustice. The AACN recommends including social injustice education for professional nurses (“Tool Kit of Resources for Cultural Competent Education for Baccalaureate Nurses”, 2008).

Incorporating videos to demonstrate specific situations is an easy way to integrate technology to communicate concepts to students in a cost-effective manner. The students in this study maintained interest in the entire video and then wanted to discuss what they saw and the feelings they had after watching. The video was able to provide information directly from experts in the field and demonstrate both appropriate and inappropriate interactions of healthcare providers and the effect it can have on patients.

The low FPS scores for the participants in this study may indicate the nursing curriculum at these two schools may already be incorporating classes that raise awareness to social injustice and the effects it can have on the healthcare of vulnerable populations and the health seeking behaviors of these populations. If nurse educators can increase students’ awareness of healthcare inequities, this could have a tremendous reach in improving quality of healthcare. The education would directly impact the way the future nurses care for their patients, but also may inspire some students to get involved with organizations and actually take steps to change policy at a higher level.
Implications for Nursing Practice

Practicing nurses need to be aware of their biases in order to provide genuine quality care. Nurses need to be aware of the multiple etiologies of obesity and the impact of weight bias enacted through words and behaviors can have.

Nurses provide the majority of care in most healthcare settings. They also serve as role models to other healthcare professionals and even to the public. If nurses could provide appropriate respectful care to overweight patients, healthcare would be less threatening and these patients would be more likely to seek healthcare in the future. Ensuring proper equipment is in place to safely care for all size patients decreases the risk of injury to both the patients and the nurses. Weighing patients in a private area, ensuring appropriately sized blood pressure cuffs, gowns, exam tables and chairs are available, and not offering unsolicited advice about weight loss are all ways the nurse could make the visit more comfortable for a patient with obesity (Poustchi et al., 2013).

Working with other departments like equipment and engineering would be something nurses can do to ensure special bariatric equipment is labeled appropriately and staff is sufficiently trained on the use of that equipment. Continuing education needs to be provided on safe lifting, transferring, and special needs of this patient population. This video would be an easy way to add weight bias training to any organizations’ yearly competencies. The staff would be able to watch at their convenience and discuss specific concerns at staff meetings. The video stimulated conversation among the participants in this study and may have the same effect on practicing nurses.

Increasing nurses’ awareness of their weight bias helps create a more genuine and caring relationship between the nurse and patients with obesity. When patients with obesity feel
comfortable they may be more likely to seek treatment before their issues take them to the Emergency Department. Every patient should have safe, respectful care regardless of his or her size (Tirosh, 2012; Yanicki et al., 2014).

**Suggestions for Future Research**

There is a large body of research about weight bias and healthcare providers including dieticians, physical therapists, and nurses. There is very little research involving nursing students. More evidence-based nursing education information is needed to help develop an effective curriculum to address social injustices, and more specifically weight bias. It is also important to determine at what point in the curriculum this specific information would be most impactful. The recommendations for research in the area of nursing education about weight bias include:

1. Replicating the study to assess differences with a larger sample size and including different institutions including: public, larger, from different regions of the U.S., rural and urban, and four year and two year programs.

2. Replicating the study, timing the testing to be done more closely to the obesity lecture to determine if that would have a different outcome.

3. Future research could be done to determine if using an obese patient in the simulation skills lab would be beneficial especially to practice safe transfer and lifting. Providing the nursing students actual opportunities to care for overweight and obese patients in a practice lab would raise awareness of the specific challenges that come with caring for this population and increase the students’ self-efficacy in caring for this population.
4. Replicating this study and adding a qualitative approach with a post video discussion might illuminate more of the biased thinking among nursing students and identify how the video raised awareness. Current research suggests the use of video is more effective if used in conjunction with lecture/discussion.

5. Research involving standardized patients (actors hired to portray patients with certain conditions) would be interesting to determine if the intervention had more of an impact for the students to actually be caring for overweight patients and interacting with them. While the current study demonstrated bias behavior in the video, actually interacting with a real patient might have more of an impact.

6. Replication of this study and then following the students to a clinical unit and interviewing their patients to determine if they felt the students had any biases against them. This would demonstrate if the curriculum actually had any impact on the nursing students’ professional practice.

7. Replication of this study with first year nursing students should be done to determine if the intervention would have more of an effect if presented earlier in the nursing program. This intervention could be used as a tool to raise awareness of weight bias early in their nursing education, which could possibly help raise awareness to social injustice as a whole.

8. Replicating this study with nurse educators would demonstrate the level of fat phobia among that group. The educators have great influence on nursing students with their words and actions. Increasing the educators’ awareness of their own weight bias would be another step at decreasing weight bias in healthcare.
Understanding if the educators have a high bias would determine the need for interventions with them.

**Conclusions**

The data analysis for this study revealed higher scores on the FPS after participants viewed the educational video about weight bias in healthcare, with this sample of undergraduate nursing students. Although the results showed an increase in fat phobia, the scores remained in the positive or neutral level. Because previous research has demonstrated the need for interventions to decrease weight bias among healthcare providers, nurse educators are encouraged to increase awareness of their own weight bias and also provide opportunities to increase awareness in their students. This video was useful in stimulating discussion among the students and it would be simple and cost effective to incorporate into nursing curriculum.
REFERENCES


Iversen, A., & Sessanna, L. (2012). Utilizing Watson’s Theory of Human Caring and


Ljubojevic, M., Vaskovic, V., Stankovic, S., & Vaskovic, J. (2014). Using Supplementary Video in Multimedia Instruction as a Teaching Tool to Increase Efficiency of Learning and


Merrill, E., & Grassley J. (2008). Women’s stories of their experiences as overweight patients. *Journal of Advanced Nursing*, 64, (2), 139-146.


APPENDIX A

AHA/ACC/TOS Guidelines for Treating Obesity

1. Identifying patients who need to lose weight by assessing BMI and waist circumference; and advise overweight and obese individuals about the increased risk of cardiovascular disease, type 2 diabetes, and other co-morbidities related to obesity.

2. Matching treatment benefits with risk profiles by providing education about how lifestyle changes that result in even small weight loss can have a significant benefit on health.

3. Diets for weight loss that include decreased calorie intake and refer to dietician for nutritional counseling.

4. Lifestyle intervention and counseling including information about diet, physical activity, and behavior therapy.
APPENDIX B

Fat Phobia Scale

Listed below are 14 pairs of adjectives sometimes used to describe obese or fat people. For each adjective pair, please place an X on the line closest to the adjective that describes your feelings and beliefs.

1. lazy ______ ______ ______ ______ ______ industrious
   5 4 3 2 1
2. no will power______ ______ ______ ______ ______ has will power
   5 4 3 2 1
3. attractive ______ ______ ______ ______ ______ unattractive
   5 4 3 2 1
4. good self-control ______ ______ ______ ______ poor self-control
   5 4 3 2 1
5. fast______ ______ ______ ______ ______slow
   5 4 3 2 1
6. having endurance ______ ______ ______ ______ having no endurance
   5 4 3 2 1
7. active ______ ______ ______ ______ inactive
   5 4 3 2 1
8. weak______ ______ ______ ______ ______ strong
   5 4 3 2 1
9. self-indulgent ______ ______ ______ ______ self-sacrificing
   5 4 3 2 1
10. dislikes food ______ ______ ______ ______ likes food
    5 4 3 2 1
11. shapeless ______ ______ ______ ______ shapely
    5 4 3 2 1
12. undereats ______ ______ ______ ______ overeats
    5 4 3 2 1
13. insecure ______ ______ ______ ______ secure
    5 4 3 2 1
14. low self-esteem______ ______ ______ ______ high self-esteem
    5 4 3 2 1
Scoring
1) For items 3, 4, 5, 6, 7, 10, and 12: score as 1 2 3 4 5
2) For items 1, 2, 8, 9, 11, 13, and 14: score as 5 4 3 2 1
3) Add up the score for each item to get the total score. Then divide by 14 (or the number of items answered, whichever is less). The range of scores is 1 – 5. High scores = more “fat phobia”. Low scores = less “fat phobia”.

For more information on the Fat Phobia Scale (short form):

APPENDIX C

Topics for Obesity Lecture

* Etiology and epidemiology of obesity
  - Adults
  - Pediatrics
* Define optimal weight
* Health risks associated with obesity
* Describe nursing management of obesity
  - Conservative and surgical
* Describe metabolic syndrome
APPENDIX D

The University of Alabama IRB Approval Letter

February 9, 2016

Tamara Tanner, MS, RN, CPN, CBN
ELFTN
College of Education
The University of Alabama
Box 870302

Re: IRB # 15-OB-401 (Revision) “An Educational Intervention to Increase Awareness of Weight Bias in Nursing Students”

Dear Ms. Tanner:

The University of Alabama Institutional Review Board has reviewed the revision to your previously approved expedited protocol. The board has approved the change in your protocol.

Please remember that your approval period expires one year from the date of your original approval, December 18, 2015, not the date of this revision approval.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants.

Good luck with your research.

Sincerely,

[Signature]
MSS, CIRM-CP
Director of Research Compliance & Research Compliance Officer
Office of Research Compliance

358 Rose Administration Building
Box 870302
Tuscaloosa, Alabama 35487-0302
(205) 348-4886
fax (205) 348-7889
umo.rc@ua.edu
(205) 348-430-4004
APPENDIX E

University of Alabama Informed Consent

Study title: An Educational Intervention to Increase Awareness and Decrease Weight Bias in Nursing Students
Investigator’s: Tamara Tanner, MSN, RN, CPN, CBN, Doctoral Candidate
Institution collaborating with UA: Emory University and Samford University

You are being asked to take part in a research study.
This study is called (An Educational Intervention to Increase Awareness and Decrease Weight Bias in Nursing Students). The study is being done by Tamara Tanner who is a graduate student at the University of Alabama. Mrs. Tanner is being supervised by Dr. Becky Atkinson, PhD at the University of Alabama.

Is the researcher being paid for this study? This researcher is not being paid for this study.
Is this research developing a product that will be sold, and if so, will the investigator profit from it? This research will not result in the development of a product that will be sold.
Does the investigator have any conflict of interest in this study? This researcher has no conflicts of interest in this study.

What is this study about? What is the investigator trying to learn?
This study is being done to find out if an educational intervention of a video about weight bias will have any effect on undergraduate nursing students.

Why is this study important or useful?
The purpose of this quasi-experimental study is to determine the effect of a video about weight bias in healthcare on undergraduate nursing students at two nursing schools. Group A students attend a school that offers an obesity-specific lecture as part of the current curriculum, Group B students attend a school that integrates obesity throughout the curriculum. The influence of this valuable information about decreasing obesity bias could provide a simple, cost- and time-efficient method to implement in nursing curriculum. The result could potentially improve the healthcare provided to this population.

Why have I been asked to be in this study?
You have been asked to be in this study because you are currently enrolled in a BSN program in your Junior year of study.

How many people will be in this study?
About 70 other people will be in this study.

What will I be asked to do in this study?
If you meet the criteria and agree to be in this study, you will be asked to do these things: Complete a short measure, watch a brief educational video, and then complete the short measure again.

How much time will I spend being this study?
A total of about one hour will be required of your time to participate in this study. The measure that you will complete before and after the video will take approximately 20 minutes each to complete and the video is 17 minutes long.

**Will being in this study cost me anything?**
The only cost to you from this study is your time.

**Will I be compensated for being in this study?**
In appreciation of your time, you will receive an opportunity to participate in a raffle to win one of ten $10 gift cards.

**What are the risks (dangers or harms) to me if I am in this study?**
The chief risk is that you may get upset by the questions in the measure. If you become upset during the intervention or the completing the measure, you may leave the room and the study. If you would like, information about counselors available through campus will be provided. Risks to privacy and confidentiality will be reduced by using student numbers for identification on the pre- and posttests. All measure results will be entered into a password-protected computer and the originals will be kept behind two locked doors until they can be destroyed.

**What are the benefits (good things) that may happen if I am in this study?**
Although you will not benefit personally from being in the study, you may feel good about knowing that you have helped determine if this intervention will have any effect on weight bias of nursing students, potentially improving nursing curriculum and in turn improving the care of overweight and obese patients.

**What are the benefits to science or society?**
This study will help nurse educators to be more helpful to nursing students by providing them with information about weight bias.

**How will my privacy be protected?**
Your information will be protected by Your information may be shared with the Institutional Review Board or the Office for Human Research Protections (Federal Government). Your information will only be used for monitoring purposes.

**How will my confidentiality be protected?**
All efforts, within reason, will be made to keep your personal information in your research record confidential but total confidentiality cannot be guaranteed. All consent forms will be separated from datasheets, you will use your student ID number for records, and the data will be kept in a locked drawer and stored on a password protected computer.

**What are the alternatives to being in this study? Do I have other choices?**
The alternative to being in this study is not to participate.

**What are my rights as a participant in this study?**
Taking part in this study is voluntary. It is your free choice. You can refuse to be in it at all. If you start the study, you can stop at any time. There will be no effect on your relations with the University of Alabama, Emory University, or Samford University. The University of Alabama, Emory University, and Samford University Institutional Review Board (“the IRB”) is the committee that protects the rights of people in research studies. The IRB may review study records from time to time to be sure that people in research studies are being treated fairly and that the study is being carried out as planned.

**Who do I call if I have questions or problems?**
If you have questions, concerns, or complaints about the study right now, please ask them. If you have questions, concerns, or complaints about the study later on, please call the investigator Tamara Tanner at 404-428-7624.
If you have questions about your rights as a person in a research study, call Ms. Tanta Myles, the Research Compliance Officer of the University, at 205-348-8461 or toll-free at 1-877-820-3066.

You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website at http://osp.ua.edu/site/PRCO_Welcome.html or email the Research Compliance office at participantoutreach@bama.ua.edu.

After you participate, you are encouraged to complete the survey for research participants that is online at the outreach website or you may ask the investigator for a copy of it and mail it to the University Office for Research Compliance, Box 870127, 358 Rose Administration Building, Tuscaloosa, AL 35487-0127.

I have read this consent form. I have had a chance to ask questions. I agree to take part in it. I will receive a copy of this consent form to keep.

____________________ Signature of Research Participant    Date

____________________ Signature of Investigator    Date
APPENDIX F

Samford University IRB Approval Letter

Project Approval Form
Identification and Certification of Research Projects Involving Human Subjects

The Institutional Review Board (IRB) must complete this form for all applications for research and training grants, program projects and center grants, demonstration grants, fellowships, traineeships, awards, and other proposals which might involve the use of human research subjects independent of source of funding.

This form does not apply to applications for grants limited to the support of construction, alterations and renovations, or research resources.

PRINCIPAL INVESTIGATOR: Tamara Tanner

PROJECT TITLE: AN EDUCATIONAL INTERVENTION TO INCREASE AWARENESS OF WEIGHT BIAS IN NURSING STUDENTS

CHECK ALL THAT APPLY:

☐ This is a training grant. The Institutional Review Board (IRB) must review each research project involving human subjects proposed by trainees separately.
☐ This application includes research involving human subjects.
☐ The IRB has reviewed and approved this application on Feb 22, 2016 in accordance with Samford University’s assurance approved by the United States Public Health Service. The project will be subject to annual continuing review as provided in that assurance.
☐ This project received expedited review.
☐ This project received full board review.
☐ This application may include research involving human subjects. Review is pending by the IRB as provided by Samford’s assurance. Completion of review will be certified by issuance of another APPROVAL FORM as soon as possible.
☐ Exemption from subject informed consent based on number(s): ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

Feb 22, 2016
Date

EXMT-N-16-5-13
IRB Application #
APPENDIX G

Samford University Consent Form

Samford University Institutional Review Board
Informed Consent for Participation in a Research Study

Principal Investigator(s): Tamara Tanner, MS, RN, CPN, CBN, Doctoral Candidate
University of Alabama
Study Title: AN EDUCATIONAL INTERVENTION TO INCREASE AWARENESS AND
DECREASE THE PREVALENCE OF WEIGHT BIAS IN NURSING STUDENTS
Date:

Name of participant: _____________________________________________ Age:

____________________

The following information is provided to inform you about the research project and your
participation in it. Please read this form carefully and feel free to ask any questions you
may have about this study and the information given below. You will be given an
opportunity to ask questions, and your questions will be answered. Also, you will be given
a copy of this consent form.

Your participation in this research study is voluntary. You are also free to withdraw from
this study at any time. In the event new information becomes available that may affect the
risks or benefits associated with this research study or your willingness to participate in it,
you will be notified so that you can make an informed decision whether or not to continue
your participation in this study.
1. **Purpose of the study:**
   The purpose of the study is to determine if an educational intervention of a video about weight bias will have any effect on undergraduate nursing students.

   You are being asked to participate in a research study because you are currently enrolled in a BSN program and in your Junior year of study.

2. **Procedures to be followed and approximate duration of the study:**
   You will be asked to complete the Fat Phobia Scale, then watch a 17-minute video about weight bias in healthcare, and then complete the Fat Phobia Scale again.

3. **Expected costs to you:**
   The only cost to you from this study is your time.

4. **Description of the discomforts, inconveniences, and/or risks that can be reasonably expected as a result of your participation in this study:**
   The chief risk associated with this study is that you may experience some discomfort caused by the questions in the measure or while viewing the video. If this occurs, you may leave the room and the study at any time. Information about available counseling on campus will be available. The researcher will be available at the end of the data collection for any questions or concerns.

5. **Foreseeable or anticipated risks from participation in this study:**

6. **Compensation in case of study-related injury:**
   No study-related injuries are anticipated.

7. **Good effects or benefits that might result from this study:**
   a) **The benefits to science and humankind that might result from this study.**
      This study is designed to learn more about effective interventions to raise awareness and decrease the level of weight bias in undergraduate nursing students. The study results may be used to help others in the future.
   b) **The benefits you might get from being in this study.**
      This study is not designed to benefit you directly.

8. **Alternative treatments available:**
   You may choose not to participate.

9. **Compensation for participation:**
   In appreciation for your time, you will receive a light meal which will be provided after the measures are collected.

10. **Circumstances under which the Principal Investigator may withdraw you from study participation:**
11. **What happens if you choose to withdraw from study participation:**

   You have the right to leave the study at any time without penalty. You may refuse to do any procedures with which you do not feel comfortable, or answer any questions that you do not wish to answer. You can request your information not be used if you withdraw from the study by notifying the researcher.

12. **Confidentiality:**

   All efforts, within reason, will be made to keep your personal information in your research record confidential but total confidentiality cannot be guaranteed. All consent forms will be separated from datasheets, you will use your student ID number for records, and the data will be kept in a locked drawer and stored on a password protected computer.

13. **Privacy:**

   Your information may be shared with the Samford University Institutional Review Board or the Office for Human Research Protections (Federal Government). Your information will only be used for monitoring purposes.

14. **Contact Information.**

   If you should have any questions about this research study, please feel free to contact **Tamara Tanner** at 404-428-7624, tlanner@crimson.ua.edu or, Faculty Advisor for this study, **Becky Atkinson, PhD** at atkin014@bamaed.ua.edu.

   For additional information about giving consent or your rights as a participant in this study, to discuss problems, concerns, and questions, please feel free to contact the Samford University Institutional Review Board Chair ________________

**STATEMENT BY PERSON AGREING TO PARTICIPATE IN THIS STUDY**

   I have read this informed consent document and the material contained in it has been explained to me verbally. All my questions have been answered, and I freely and voluntarily choose to participate. I have received a copy of this consent form.

________________________________________________________________________

Date

Signature of Participant

________________________________________________________________________

Printed Name of Participant

Consent obtained by:

________________________________________________________________________

Signature

________________________________________________________________________

Printed Name and Title
APPENDIX H

Emory IRB Letter

TO: Cassandra Tanner, MS, RN, CPN, CIBN, Doctoral Candidate University of Alabama
Principal Investigator

DATE: January 25, 2016

RE: Notification of Submission Determination: No IRB Review Required

An Educational Intervention to Increase Awareness and Decrease the Prevalence of Weight Bias in Nursing Students

The above-referenced study has been vetted by the Institutional Review Board (IRB), and it was determined that it does not require IRB review. Emory’s involvement does not meet the criteria for “Engagement” in accordance with the OHRP Guidance on Engagement of Institutions in Human Subjects Research (IHE).

B. Institutions are Not Engaged in Human Subjects Research if

(3) Institutions whose employees or agents access or utilize individually identifiable private information only while visiting an institution that is engaged in the research, provided their research activities are overseen by the IRB of the institution that is engaged in the research.

As described in the materials submitted, the primary aim of this study is to determine the effectiveness of an educational intervention of nursing students at Stanford University and Emory University. The measure will be collected pre-educational intervention and post-educational intervention for both groups of the undergraduate nursing students. The University of Alabama will be the IRB of record.

Please note that any changes to the protocol could conceivably alter the status of this research under the federal regulations cited above. Accordingly, any substantive changes in the protocol should be presented to the IRB for consideration prior to their implementation in the research.

Sincerely,

[Signature]

Research Protocol Analyst

This letter has been slightly signed

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