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Instilling Diet and Exercise Confidence: Influence of Nurse Body Size

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INSTILLING DIET AND EXERCISE CONFIDENCE:
INFLUENCE OF NURSE BODY SIZE

By

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Baccalaureate Candidate in Nursing

UNDERGRADUATE HONORS THESIS

Submitted to the University of New Hampshire
in Partial Fulfillment of
the Requirements of

University Honors-in-Major

May 2014

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Dedication & Acknowledgements

I would like to dedicate this research project to my parents, Dale and Wendy Spaulding, for their love and support, as well as their endless encouragement to be and do my best.

A special thank-you extended to everyone who has supported me in this endeavor:
Dr. Joyce Capiello and Dr. Gene Harkless for helping me through the research process every step of the way; and my friends and family who love me and support me endlessly.

Abstract

This paper reports a research study focused on perspective of nurse body size and how it affects confidence in a nurses' ability to provide education on diet and exercise. The study followed a descriptive method design guided by a cross-sectional survey with quantitative variables. Results show that there is increased confidence in a nurse's ability to provide education and influence habits regarding diet and exercise when the nurse role models such behaviors. Other findings presented include respondents' perception of their body mass index versus their actual body mass index, percentage of respondents with health care conditions related to obesity, and percentage of respondents who have received education on diet and exercise from a health care professional. The results of the study will enhance nursing literature and will benefit registered nurses, advance practice nurses, and nurse educators. It will provide nurses with an increased understanding of how their body size can influence receptiveness to teaching on diet and exercise.

Introduction

Obesity is the accumulation of abnormal or excessive adipose tissue that can result in health risks. Body Mass Index (BMI) is a measurement of obesity and can be calculated by dividing the person's weight in kilograms by his/her height in meters squared. A BMI of 25.00 to 29.99 is considered overweight and a BMI of 30.00 and over obese. In the United States, the obesity epidemic has been escalating; from 2009 to 2010 the prevalence of obesity was 35.5% and 35.8% in men and women, respectively (Flegal, Carroll, Kit, & Ogden, 2012). Obesity can be a genetic or an acquired health condition. An unhealthy diet and a sedentary lifestyle are the main contributors to acquired obesity. In the United States, the obesity epidemic has become increasingly problematic; contributing to the development of chronic diseases including: hypertension, hypercholesterolemia, type 2 diabetes, cerebral vascular disease, congestive heart failure, various cancers, osteoarthritis, and sleep apnea. Obesity is accountable for over 407,000 deaths per year, or 17% of all deaths (CDC/NCHS, 2012).

The estimated annual medical cost for obesity in the U.S. was \$147 billion in 2008; the medical costs for people who are obese were \$1,429 higher than those of a normal weight person (Finkelstein, Trogon, Cohen, & Dietz, 2009). The health risks and costs associated with obesity can be reduced via patient education. According to Annesi (2011), after patient education on diet and exercise, 26% of participants, in the study, reduced their weight by 5% or more. Learning is comprised of three domains: cognitive, psychomotor, and affective. Cognitive learning involves the acquisition of information and addresses the development of the learner's intellectual abilities. Psychomotor learning involves acquiring fine and gross motor abilities with complexity. Affective learning results in a change of beliefs, attitudes, and values. Values are the operational beliefs that guide our actions and ways of living. Role-modeling is one

educational method that can instill an affective change. According to Bastable, Gramet, Jacobs, and Sopczyk (2011), role modeling occurs when the learner acquires new behaviors and social roles by identification with the one setting the example. The advantages of role modeling, when used correctly, consist of influencing attitudes and instilling desired behaviors (Bastable et al, 2011). A change in values needs to be reached to be receptive to cognitive and psychomotor learning, such as education on diet and exercise.

Positive role-modeling can be effective in patient education; however, the opposite is true for negative role-modeling. A limitation to role modeling is that unacceptable behavior can be easily instilled by negative role models (Bastable, et al., 2011). Negative role-modeling can result in the absence of affective learning. Cognitive and psychomotor learning, and therefore patient education, is less likely to occur if affective learning does not take place. In the health professions, especially nursing, where patient education is a primary mission this can be damaging to patient wellness.

The average BMI of nurses, often responsible for patient teaching and role modeling, was reported to be 27.2, meaning 54% of nurses are overweight or obese (Miller, Alpert, & Cross, 2008). The purpose of this study is to determine whether an overweight or obese physical appearance of a nurse impacts patients' receptiveness to health teaching on diet and exercise. The findings of this study will be of interest to nurses, advanced practice nurses, and nurse educators. This study will show if nurse's body size affects confidence in his/her ability to provide effective education on diet and exercise.

Review of Literature

Searches were done in, CINAHL, PubMed, and Cochrane databases for this literature review. Search terms included “nurse,” “body size,” “obesity,” “overweight,” “teaching,” and “education.” These terms were used alone and in combination. The inclusion and exclusion criteria included only full text articles involved in nursing documentation, published in the English language.

In a study conducted by Miller and colleagues (2008), the mean BMI of nurses, advanced practice nurses, and nurse educators, was 27.2 and almost 54% were overweight or obese. Thirty-eight percent of these nurses, advanced practice nurses, and nurse educators were overweight, 18.7% obese, and 5.2% morbidly obese (Miller et al., 2008). The prevalence of being overweight and obese in nursing is lower than that of the general population, 65% (CDC, National Center for Health Statistics, 2000). In a group of health care professionals, presumed to have an advanced knowledge of the health risks associated with obesity and methods for managing it, this percentage is high and may show that nurses are not responding to obesity prevention advice.

Lifestyle behaviors, such as diet and exercise, are lead contributing factors to obesity. In the study performed by Miller and colleagues (2008), 53% of nurses reported lack of motivation to make necessary lifestyle changes, 40% reported being unable to lose weight despite healthy diet and exercise eating habits, and 7% acknowledged their increased BMI but reported being comfortable with their weight. In this study lack of motivation to change lifestyle behaviors was the lead contributing factor to obesity. This is also supported by Zapka, Lemon, Magner, and Hale (2008), in which nurses’ self-reported inadequate health, diet, and physical activity

behaviors. This study, as well as a meta-analysis by Overgaard, Gyntelberg, and Heitmann (2004) found that stress was not directly correlated with an increased BMI.

Patient education and health promotion are priorities in nursing. To meet the responsibility of motivating patients to develop strategies for health promotion, nurses must practice preventive care and act as role models (Kay, 1999). An awareness of one's self-care management and implementing improvement strategies can be important steps in helping others to achieve wellness. Gallup polls (2013) consistently show that nurses are the most trusted health professionals; therefore nurses are well positioned to and have a professional responsibility to be effective health educators.

In the current literature there is disagreement as to whether nurses need to embody these healthy lifestyle behaviors in order to promote them. According to Slater (1990), being an effective role model revolves around 'personal effectiveness'. Personal effectiveness emphasizes nurses having confidence in him/herself, being able to communicate with sincerity, and showing warmth and empathy. The concept of humanistic role modeling, which highlights working through struggles to achieve a goal rather than the idea of automatic perfectionism, is also being promoted (Rush, Kee, & Rice, 2005). In contrast, Borchardt (2000) and Wells-Freedman (1996) reported that nurses who meet societal expectations for healthy behaviors place themselves in a position to advise with conviction. If health is to be sustained, those who provide patient education must be capable of caring for both themselves and others.

The research to date has focused on nurses' perception of role-modeling and how they define the term. According to a study performed by Rush and colleagues (2005), nurses define role-modeling through the meaning they give the term and their perception of societal

expectations. For the participants, in this study, the term role model conjured up the image of the ideal accompanied by expectations of perfection (Rush, Kee, & Rice, 2005). Some nurses had a negative view of role-modeling because they felt threatened by such lofty expectations. The nurses, who had positive views, saw role-modeling as a nonthreatening standard for which to strive. These nurses sought to inspire their patients to look after their own health. Nurses also perceived their credibility, as health educators, to be linked with their compliance of health behaviors. This view is supported by Connolly, Gulanick, Keogh, and Holm (1997), in which 70% of critical care nurses reported being a good example for their patients and would recommend their lifestyle because they watch their weight and follow a healthy diet.

Nurses also defined role-modeling through their perception of societal expectations. They thought that society expected them to be informational sources and to practice what they preached (Rush et al., 2005). These nurses believed that if they did not embody health behaviors it would negatively impact society's view of their credibility. This view was verified when overweight nurses reported that obese patients do not trust them regarding health teaching and are unable to perceive them as role models (Frost, Jorgensen, & Hounsgaard, 2006).

Once nurses' perception of role-modeling were established researchers asked what society thinks about nurses' body sizes and does it influence their confidence in a nurse's ability to teach about healthy lifestyles? According to Hicks, McDermott, Rouhana, Schmidt, Seymour, and Sullivan (2008), people felt less confident in overweight nurses' ability to provide education on diet and exercise. A reduction in society's confidence, in nursing ability to teach health education, could have significant effects on patients' success in following diet and exercise recommendations. The participants in this study were college students from a large public university in upstate New York. Participants were approached randomly and asked to participate

in the study. The instruments used to conduct this study consisted of two pictures that were created on MyVirtualModel.com and consisted of two Caucasian women dressed in white pantsuits and shoes. One picture depicted a weight-appropriate nurse, dress size 10/12, and the other depicted an overweight nurse, dress size 20/22. A visual analogue scale was created and placed next to the pictures (Hicks et. al, 2008).

The current literature on this topic includes quantifying nurse overweight and obesity rates, information on nurses as appropriate role models for health education, nurses' definition and view of role modeling based on the meaning they give the term and their view of societal expectations, and college students' perception of overweight nurses' ability to perform health education on diet and exercise. A disparity in the current research is whether people over the age of thirty-five, who are more likely to have a health condition related to obesity, have decreased confidence in a nurse's ability to provide education on diet and exercise depended on nurse body size.

Purpose

The aim of this study was to explore perceptions of nurse's body size on providing effective education on diet and exercise.

Methodology

This research study, recruitment materials, informed consent, and participant survey were all approved by the University of New Hampshire Institutional Review Board in January 2014. All participants acknowledged the informed consent by proceeding to the participant survey (see Appendix B). Only minimal risks were anticipated in this study. The collected data is stored on a password protected computer that only I, and my faculty advisors Joyce Cappiello, PhD, APRN-

FNP, FAANP, Assistant Professor and Gene Harkless, DNSc, APRN, FAANP, CNL, Associate Professor, Chair have access too. The respondents were de-identified and the data encrypted via the UNH program, Qualtrics. There were not any direct benefits of participating in this research study to the participants besides contributing to nursing literature.

This research study was performed using a quantitative method. A descriptive design was utilized to evaluate patients' confidence in underweight, normal-weight, overweight, and obese nurses to provide education on diet and exercise. It also determined patients' perspectives on the ability of overweight and obese nurses to change their beliefs and behaviors, in relation to diet and exercise. The target population for this study was male and females over the age of thirty-five; due to an increased likelihood of being diagnosed with chronic diseases related to obesity. The inclusion criteria consisted of English-speaking adults from any ethnic background. Patients with cognitive/learning disabilities were excluded from this study. Convenience sampling was used to identify between 30 and 100 participants.

A cross-sectional survey (see Appendix C) was created using the UNH program, Qualtrics. This survey acquired information from the participants including: demographics, percentage of participants with health conditions related to obesity, perception of nurse body size, confidence in different nurses' ability to provide education on diet and exercise based on body size, and which nurse they believed could most likely influence their habits on diet and exercise. Respondents' perceptions were based off four generic pictures of nurses that each represented a specific BMI category. Recruitment material (see Appendix A) was distributed via email and social media, resulting in convenience sampling. Quantitative data gathered from the survey was then analyzed using SPSS software.

Findings

Demographics

The research sample included 73 respondents; 12 male (16.4%) and 61 female (83.6%). The respondents were between the ages of 39 and 80 (mean age of 60). The mean height for this sample was 65.77 inches and the mean weight 157.78 pounds. The BMI was calculated for each participant, ranging from 18.55 to 43.34 (mean BMI of 25.65 and a standard deviation of 5.28). The sample average for being overweight or obese was 45.2%. Of the respondents 49.4% reported having no health conditions; 30.1% one health condition; 2.4% two health conditions; 2.0% three health conditions. 56.9% of the sample reported having received education on diet/healthy eating habits and 54.9% on exercise from a health care professional.

Nurse BMI Categorization

The participants were asked to designate each generic nurse depicted to one of the four BMI categories: underweight, normal weight, overweight, or obese. 90.0% of the respondent correctly identified nurse A as underweight; 98.6% nurse B as normal weight; and 94.3% nurse D as obese. Only 75.7% of the sample correctly identified nurse C as overweight, with 22.9% identifying nurse C as obese.

Likelihood to Convince to Make Changes in Diet/Exercise Habits

Nurse A.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Likely	32	38.6	45.1	45.1
	Somewhat likely	24	28.9	33.8	78.9
	Likely	12	14.5	16.9	95.8
	Very likely	2	2.4	2.8	98.6
	Extremely likely	1	1.2	1.4	100.0
	Total	71	85.5	100.0	
Missing	System	12	14.5		
Total		83	100.0		

Nurse B.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not likely	4	4.8	5.6	5.6
	Somewhat likely	6	7.2	8.5	14.1
	Likely	20	24.1	28.2	42.3
	Very likely	29	34.9	40.8	83.1
	Extremely likely	12	14.5	16.9	100.0
	Total	71	85.5	100.0	
Missing	System	12	14.5		
Total		83	100.0		

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Nurse C.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not likely	33	39.8	46.5	46.5
	Somewhat likely	26	31.3	36.6	83.1
	Likely	10	12.0	14.1	97.2
	Very likely	1	1.2	1.4	98.6
	Extremely likely	1	1.2	1.4	100.0
	Total	71	85.5	100.0	
Missing	System	12	14.5		
Total		83	100.0		

Nurse D.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not likely	54	65.1	76.1	76.1
	Somewhat likely	12	14.5	16.9	93.0
	Likely	2	2.4	2.8	95.8
	Very likely	1	1.2	1.4	97.2
	Extremely likely	2	2.4	2.8	100.0
	Total	71	85.5	100.0	
Missing	System	12	14.5		
Total		83	100.0		

40.8% of respondents chose very likely, 28.2% likely, and 16.9% extremely likely in regards to the likelihood of nurse B, the normal weight nurse, being able to convince him/her to make changes in his/her diet and exercise habits. For the underweight (nurse A), 45.1% selected not likely and 33.8% somewhat likely. For the overweight (nurse C), 46.5% selected not likely

and 36.6% somewhat likely. For the obese (nurse D) nurse 76.1% selected not likely. (Appendix A, Figures 1-4)

Nurse that Instills the Most Confidence

Select which nurse shown above instills the most confidence in providing education on diet and exercise?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Nurse A.	1	1.2	1.4	1.4
Valid Nurse B.	67	80.7	97.1	98.6
Valid Nurse C.	1	1.2	1.4	100.0
Total	69	83.1	100.0	
Missing System	14	16.9		
Total	83	100.0		

97.1% of the respondents chose nurse B, the normal weight nurse, as the nurse that instills the most confidence in providing education on diet and exercise. (Appendix A, Figure 5)

Ability to Change Diet/Exercise Habits

Which nurse shown above could best positively influence your habits about diet and exercise?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Nurse B.	69	83.1	98.6	98.6
Valid Nurse C.	1	1.2	1.4	100.0
Total	70	84.3	100.0	
Missing System	13	15.7		
Total	83	100.0		

98.6% of the respondents chose nurse B, the normal weight nurse, as the nurse that could best positively influence his/her habits on diet and exercise. (Appendix A, Figure 6)

Actual versus Perceived BMI

	Actual BMI	Perceived BMI
Underweight	0%	4.2%
Normal Weight	54.8%	36.1%
Overweight	31.5%	43.1%
Obese	13.7%	11.1%

4.2% of the sample perceived their BMI as underweight, 36.1% normal weight, 43.1% overweight and 11.1% obese. Based off of calculated respondent BMI, 0% of the respondents were underweight, 54.8% normal weight, 31.5% overweight and 13.7% obese. 61.1% of the sample perceived their BMI correctly; 19.4% perceived their BMI to be one category greater than their actual BMI, 1.4% perceived it to be two categories over, 15.3% one category under, and 2.8% two categories under. There is a moderate inverse correlation of $-.304$ between actual BMI and the accuracy of perceived BMI.

Normal Weight (n=39)		
2.6%	Obese	2 categories over
30.8%	Overweight	1 category over
59.0%	Just right	Correct
7.7%	Underweight	1 category under

Overweight (n=23)		
8.7%	Obese	1 category over
69.6%	Overweight	Correct
21.7%	Just right	1 category under

Obese (n=10)		
50.0%	Obese	Correct
30.0%	Overweight	1 category under
20.0%	Just right	2 categories under

There were 39 participants within the normal weight BMI category. 59.0% of these respondents correctly identified their BMI; 2.6% identified themselves as obese (two categories over), 30.8% identified themselves as overweight (one category under), and 7.7% identified themselves as underweight (one category under). There were 23 participants within the overweight BMI category. 69.6% of the respondents correctly identified their BMI category; 8.7% identified themselves as obese (one category over) and 21.7% as just right (one category under). There were 10 participants within the obese BMI category. 50.0% correctly identified their BMI category, 30.0% identified themselves as overweight (one category under) and 20.0% as just right (two categories under). (Appendix A, Figure 7)

Discussion

The mean BMI for the research sample was 25.65, or overweight, and the average for being overweight or obese was 45.2%. The sample rate is lower than the general population rate for overweight and obesity (65%). The sample is therefore not entirely representative of the population. The lower rate correlates to 49.4% of respondents reporting having no health conditions. 56.9% of the sample reported receiving education on diet/healthy eating habits and 54.9% on exercise from a health care professional. It is concerning that only a little more than half of the participants received education on diet and exercise. The other half of the sample did not receive education on healthy behaviors and the topics should be addressed by health care professionals as either a preventative measure or an intervention depending on BMI.

The majority of the respondents were able to correctly identify the BMI category for each nurse image. This shows that the sample was able to correctly perceive body weight of other people. Only 75.7% of the population correctly identified nurse C as overweight. Two possible reasons for this include a lack of knowledge regarding BMI categories or that it was difficult to determine the correct BMI category from the image. The findings also show that respondents have the most confidence in nurse B, the normal weight nurse, to provide effective education and influence their habits on diet and exercise. The findings also show that there is a moderate inverse correlation between actual BMI and the accuracy of how the sample perceived its BMI.

Limitations

There are a few limitations to this study. The first limitation is the self-recording of height and weight by the participants. Relying on respondents to record their height and weight, rather than getting direct measurements, leaves room for inaccuracy. It is possible that anonymous respondents chose not to report accurate height and weight measurements.

Another limitation to this study was the variability among the pictured images. Steps were taken to reduce this limitation as much as possible. The nurses depicted were all of the same race and gender. Variability could be seen however in age, background of the images, and facial expressions of the nurses. Age, implying experience, is a variable that could affect a person's confidence in a nurse to provide effective education on diet and exercise.

Implications

The findings of this study suggest that people have increased confidence in nurses' ability to provide effective education on diet and exercise when he/she role models such behaviors. These findings can help registered nurses, advanced practice nurses, and nurse educators understand how their body size affects a patient's receptiveness to education. If a patient has decreased confidence in a nurse's ability to provide effective education, affective learning, in this case a change in attitude regarding healthy diet and exercise habits, may not occur. Without an affect change, cognitive and psychomotor learning, concerning healthy behaviors, cannot occur.

Recommendations

This study suggests several avenues for future research. One suggestion for further research is to study the perspective of actual patients, with a chronic diagnosis related to obesity, who are receiving education on diet and exercise. Obtaining perspective from patients, rather than the general population, could further the literature on this topic and give nurses a better understanding of how and if their body size affects education. A second suggestion for future research is to determine if a nurse's body size affects a patient's ability to learn and implement changes in their own lifestyle habits. Further research can explore why health care professionals are not providing preventive education on diet and exercise for all patients.

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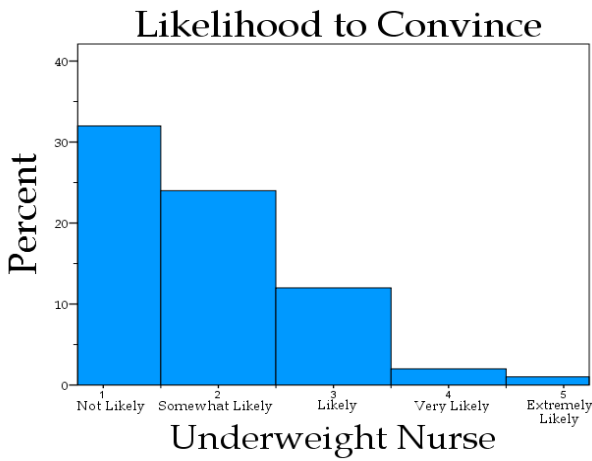
Zapka, J., Lemon, S., Magner, R., & Hale, J. (2009). Lifestyle behaviours and weight among hospital-based nurses. *Journal Of Nursing Management*, 17(7), 853-860.

Appendix A

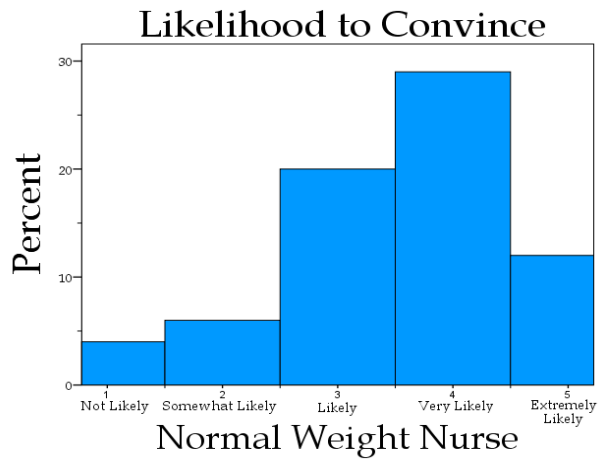
Graphs of Findings

Likelihood to Convince to Make Changes in Diet/Exercise Habits

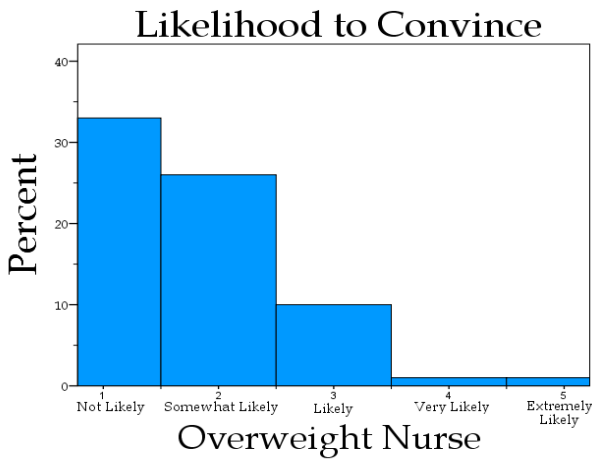
Nurse A. (Figure 1)



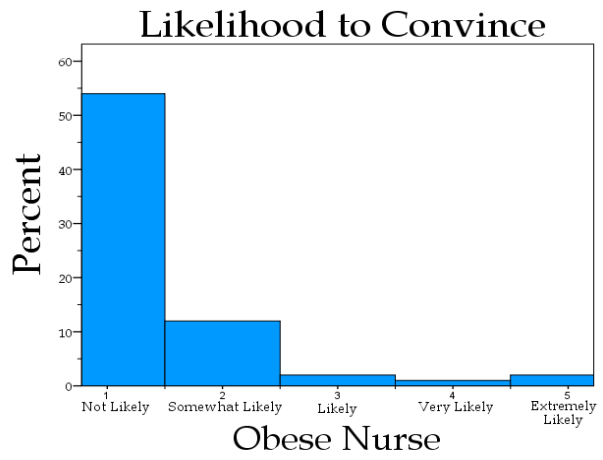
Nurse B. (Figure 2)



Nurse C. (Figure 3)

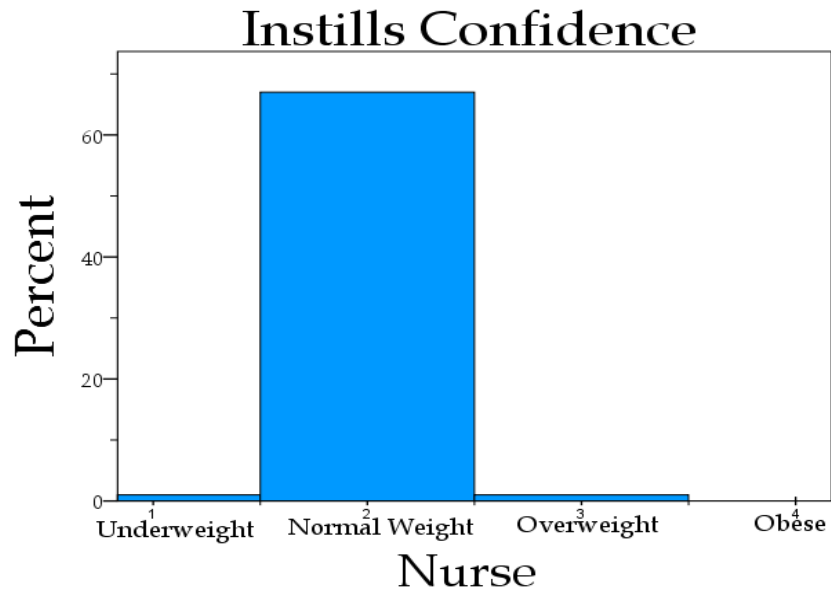


Nurse D. (Figure 4)



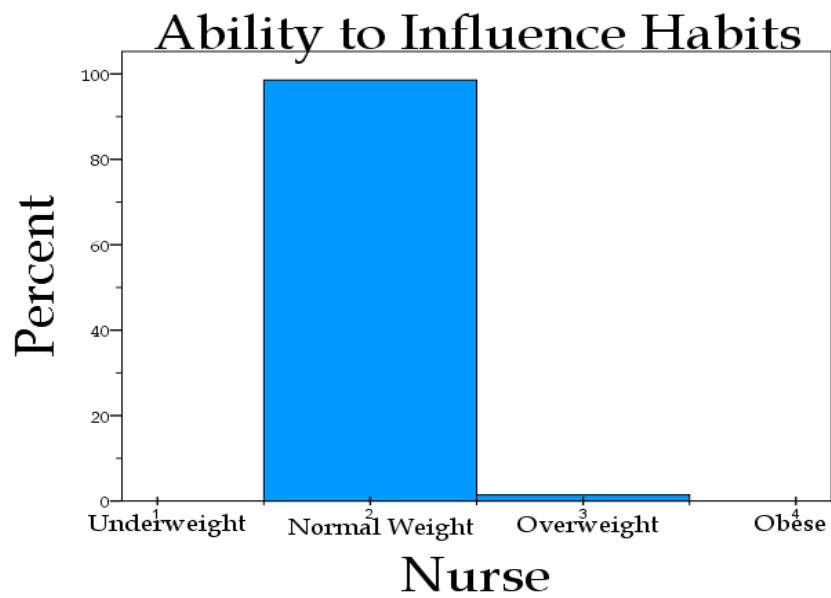
Nurse that Instills the Most Confidence

Figure 5



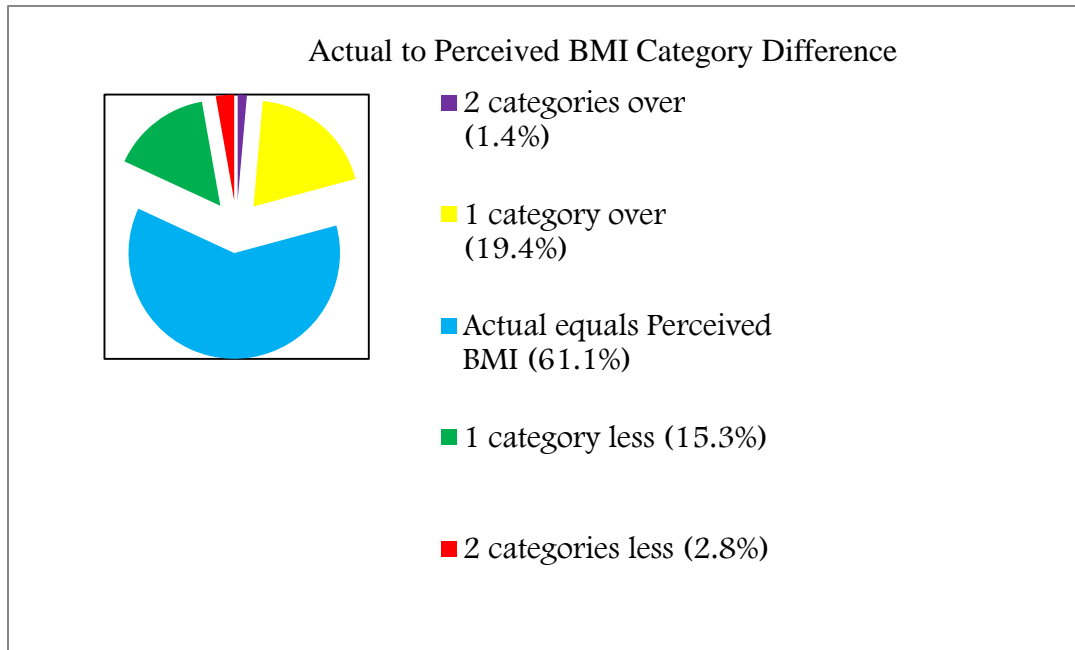
Ability to Change Diet/Exercise Habits

Figure 6



Actual versus Perceived BMI

Figure 7



Appendix B

Recruitment Material

The recruitment process will include distributing the survey via email and social media to men and women over the age of thirty-five, without cognitive disabilities. Convenience sampling will be used to find participants. Information provided will include:

“Hi my name is Erin Spaulding and I am a senior undergraduate nursing student at the University of New Hampshire. I am conducting a study using images to explore perceptions of nurse’s body size on providing effective education on diet and exercise. If you would like to participate the link to the survey is listed below so you can partake at your own convenience. If you have any questions my information is provided below. The survey should take no longer than ten minutes of your time.

Please click on this link to partake in the survey:

https://unh.qualtrics.com/SE/?SID=SV_5Bd6nbRnK56JUcl

Erin Spaulding

(603) 724-0604

emd67@unh.edu”

Appendix C

Informed Consent

Dear Participant:

I am a senior undergraduate nursing student at the University of New Hampshire and I am conducting a research project to explore perceptions of nurse's body size on providing education on diet and exercise using visual images.

I plan to work with approximately fifty participants in this study. You must be at least thirty-five years old to participate. If you agree to participate in this study, you will be asked to complete a web based survey that should take less than ten minutes to complete. You will not receive any compensation to participate in this project.

I do not anticipate any more than minimal risk to you for participating in the study nor do I expect that you will receive any direct benefits from participating. However, you will be contributing to nursing knowledge.

Your participation is strictly voluntary. If you choose not to participate, you will not experience any penalty or negative consequences. If you agree to participate, you may decline to answer any question and/or if you change your mind, you may stop the survey at any time.

I will maintain the confidentiality of all data and records associated with your participation. There are, however, rare instances when I am required to share personally-identifiable information (e.g., according to policy, contract, regulation). For example, in response to a complaint about the research, officials at the University of New Hampshire, designees of the sponsor(s), and/or regulatory and oversight government agencies may access research data. I will keep data on a password protected computer; only I, and my faculty advisors Gene Harkless, DNSc, APRN, FAANP, CNL, Associate Professor and Joyce Cappiello, PhD, APRN-FNP, FAANP, Assistant Professor will have access to the data. The results may be used in reports, presentations, and publications but all data will be de-identified and reported in the aggregate. Any communication via the Internet poses a minimal risk of a breach of confidentiality.

If you have any questions about this research project or would like more information before, during, or after the study, you may contact Erin Spaulding at emd67@unh.edu. If you have questions about your rights as a research subject, you may contact Dr. Julie Simpson in UNH Research Integrity Services at 603-862-2003 or Julie.simpson@unh.edu to discuss them.

By continuing on to the next page, you are giving consent to participate in the survey. Thank you for your consideration.

Sincerely,

Erin Spaulding
Nursing Student
University of New Hampshire

Appendix D

Participant Questionnaire

The research gathered from this survey will be used for Honors Nursing Research at the University of New Hampshire.

Please provide your answer on the line provided or select your answer choice. Please answer all questions to the best of your ability.

1. What is your gender?

- a. Male
- b. Female

2. What is your age?

3. In the space provided below please provide your estimated height.

4. In the space provided below please provide your estimated weight.

5. How would you describe your weight?

- a. Underweight
- b. Just Right
- c. Overweight
- d. Obese

5. Please select any of the following health conditions you have:

- None
- Type II Diabetes
- Hypertension
- Chronic Heart Failure (CHF)
- Chronic Obstructive Pulmonary Disease (COPD)
- Asthma
- Other: _____

6. Have you ever received education on diet/healthy eating habits from a health care professional?
 - a. Yes
 - b. No

7. Have you ever received education on exercise from a health care professional?
 - a. Yes
 - b. No

Please use the pictures below to answer questions 9-12. The nurses depicted in the photos below are generic and represent a specific weight category. The label is above its corresponding picture.

Nurse A.



Nurse B



Nurse C.



Nurse D.



9. For each nurse shown above please select the weight category you feel best applies to that professional.

Nurse A.

- a. Underweight
- b. Normal-weight
- c. Overweight
- d. Obese

Nurse B.

- a. Underweight
- b. Normal-weight
- c. Overweight
- d. Obese

Nurse C.

- a. Underweight
- b. Normal-weight
- c. Overweight
- d. Obese

Nurse D.

- a. Underweight
- b. Normal-weight
- c. Overweight
- d. Obese

10. Select which nurse shown above instills the most confidence in providing education on diet and exercise?

- a. Nurse A.
- b. Nurse B.
- c. Nurse C.
- d. Nurse D.

11. From each image shown above, please indicate how likely that nurse is to convince you to make changes to your diet and exercise habits.

Nurse A.

- a. Not likely
- b. Somewhat likely
- c. Likely
- d. Very likely
- e. Extremely likely

Nurse B.

- a. Not likely
- b. Somewhat likely
- c. Likely
- d. Very likely
- e. Extremely likely

Nurse C.

- a. Not likely
- b. Somewhat likely
- c. Likely
- d. Very likely
- e. Extremely likely

Nurse D.

- a. Not likely
- b. Somewhat likely
- c. Likely
- d. Very likely
- e. Extremely likely

12. Which nurse shown above could best positively influence your habits about diet and exercise?
- a. Nurse A
 - b. Nurse B
 - c. Nurse C
 - d. Nurse D