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The Knowledge, Attitude, and Self-Reported Behaviors of Psychiatric Nurses Towards Obese Psychiatric Patients on Atypical Anti-Psychotic Medications

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THE KNOWLEDGE, ATTITUDE, AND SELF-REPORTED BEHAVIORS OF PSYCHIATRIC NURSES TOWARDS OBESE PSYCHIATRIC PATIENTS ON ATYPICAL ANTI-PSYCHOTIC MEDICATIONS

By

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Abstract

Marcia D. Williams-Hailey, PhD

The knowledge, attitudes, and self-reported behaviors of psychiatric nurses towards obese psychiatric patients on atypical anti-psychotropic medications

Background/Purpose: Obesity has continued to increase over the years with increase in morbidity and mortality. The advancement of psychiatric treatment has resulted in a higher prevalence of obesity among the psychiatric population related to the side-effects of the newer atypical anti-psychotics. This study addresses nurses' attitudes towards obesity and people who are obese, focusing on psychiatric patients. Negative attitudes and low knowledge about psychiatric patients on atypical anti-psychotics can interfere with psychiatric nurses' therapeutic potential to support patients with health promotion behaviors. The purpose of this study was to develop an instrument to measure the knowledge, attitudes, and self-reported behavior of psychiatric nurses towards the mentally ill obese patient. The secondary purpose was to determine if psychiatric nurses' knowledge, attitudes and behaviors are different when the patient is obese versus normal weight.

Methods: This study uses a descriptive and comparative design with two phases to develop and psychometrically test one instrument that can be used in future studies. In phase one existing instruments were adapted using 6 expert panelists for content validity. The instrument consists of four subsections; the knowledge (NKAAM), general attitudes towards obesity (NATOP), intrinsic attitudes (IATOP), and the self-reported behaviors (SRBTOP) subsections. In the second phase, the instrument was given to a national sample ($n= 149$) of psychiatric nurses. Two developed vignette scenarios, of an obese and a normal weight individual with severe mental illness, were randomly assigned to the participants via on-line survey questionnaire or sealed

non-identifying paper questionnaires. Data analysis include instrument testing (content validity index, reliability), parametric testing, t-test, ANOVA, and chi square.

Results: Reliability could not be obtained for the instrument as a whole. Findings indicate the nurses were generally knowledgeable about the medications and their side-effects but unknowledgeable about dosages. Positive correlation was found between years of psychiatric experience (*p*=.015) and participant's weight to thinking that obese patients are aware of associated health risks. A t-test found significance between the 2 groups on items "*strong-willed….weak-willed*", "*sociable….not sociable*", "*attractive….unattractive*", and "*trusting….suspicious*" with more biased responses from the obese patient vignette. ANOVA and post-hoc tests found more bias in the older nurses towards the obese patient. On the SRBTOP subsection significance was found between the 2 groups (*p*=.000) on the mean scores and several of the items indicating bias towards the obese patient in the vignette.

Conclusions and Implications: This instrument is a step towards measuring the negative attitudes nurses may have towards psychiatric patients who are obese. Also, understanding nurses' underlying knowledge and attitude will help educators to identify and direct educational needs of psychiatric nurses, as students and nurses in the clinical areas.

Dedication

To my beloved mother, Clarice Viola Williams (nee Douglas), who left us much too soon to reside in heaven. You are my inspiration and the guiding light in my life. I love you, miss you and think of you always.

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CHAPTER 1

INTRODUCTION

The United States (U.S.) has made notable contributions to the advancement of medical science. However, despite successes in medical science and technology, the health of Americans was rated poorest among other large nations in 2002 (Reid, 2010). This rating was impacted by factors such as the rising rate of obesity and diabetes mellitus in the U.S., as compared to the other nations. Obesity has been identified as a leading factor in chronic medical conditions that is largely affected by eating habits and activity levels of individuals. Americans tend to make poor eating choices and are more likely to be sedentary. In acknowledgment of the poor state of the health of Americans and of the underlying cause being obesity, the U.S. government has taken action to stem the rising rate of obesity. However, as alarming as the state of America's health is among the general population, the severely mentally ill population bears special attention due to the significantly higher rates of obesity among this group related to lifestyle factors and side-effects of newer more commonly used anti-psychotic medications.

The treatment of individuals with severe mental illness has evolved greatly over the years. Historically, the older anti-psychotic medications used in the treatment of schizophrenia were accompanied by many visible undesirable and uncomfortable side-effects. The high risk and occurrence of the side-effects of abnormal body movements, such as irreversible Tardive Dyskinesis (TD), uncontrollable restlessness of akathisia, and the absence of physical movement of akinesia, often exposed the individual with schizophrenia to ridicule and bias. With the advent of the newer "atypical" anti-psychotic medications, the risk of these side-effects is greatly reduced which has resulted in a decline in the use of the older anti-psychotics (Vasudev & Martindale, 2010). However, these atypical anti-psychotics, so called because they do not have

the usual or "typical" side-effect profile as the older anti-psychotics, while being just as effective in relieving the psychotic symptoms of mental illness, brought with them the more health threatening side-effect of obesity, a common precursor and companion to other chronic medical conditions (Roberts & Bailey, 2011).

According to the Office of Mental Health (OMH, 2010), there is a significantly higher rate of morbidity and mortality in individuals with severe mental illness, with these individuals dying 25 years younger than the general American population. Contributors to this statistics are life-style factors and the common side-effects of the newer, atypical anti-psychotic medications of obesity, diabetes mellitus, and high cholesterol, commonly known as the metabolic syndrome (Roberts & Bailey, 2011). Roberts and Bailey (2011) further reported on studies supporting the positive effects of the combination of healthy dietary practices and a regular exercise program. The importance of health promotion is increasingly being addressed and is having positive health benefits (Phelan, Strandins, & Morrison, 2001).

Obesity, often considered preventable, has reached epidemic proportions worldwide, including the U.S., and is one of the leading factors in chronic medical conditions, including cardiovascular disease and diabetes. This has resulted in obesity being the number one challenge to implementation of the Affordable Care Act (ACA) which includes initiatives directed towards reducing the rate of obesity and diabetes among the American population (Alliance for Health Reform, 2010). To achieve this goal, the focus of treatment has shifted towards preventing obesity and diabetes through educating individuals about healthier lifestyle versus treating these illnesses after they occur. In Bloomgarden's (2008) American Diabetes Association (ADA) conference report, multiple studies related to Type 2 Diabetes Mellitus (T2DM) were presented. In these studies, patients showed the benefits to life-style modification of dietary changes and

increased physical activity, with lowered T2DM morbidity, reduced onset of T2DM in high-risk individuals, and weight loss in the obese. Similar studies were also done with individuals who had anti-psychotic medication-induced weight gain with similar positive findings (Roberts & Bailey, 2011).

Obesity has been identified as one of the leading preventable factors contributing to the rising morbidity and mortality rate among the mentally ill population (Auquier, Lancon, Rouillon, Lader, & Holmes, 2006; White, Gray, & Jones, 2009). Despite concerns about the obesity rate among the general American population, the rate is even higher among the mentally ill population who are impacted by poor life-style choices, motivation challenges, and obesity as a common side-effect of the newer, atypical anti-psychotic medications (Roberts & Bailey, 2011). Statistics indicate that the mortality rate among the severely mentally ill is 2-3 times that of the general population (Auquier et al., 2006; White et al., 2009) with obesity and chronic medical conditions being major factors.

There are wide variations reported in the literature in relation to the range in decreased longevity among the mentally ill with some authors reporting a 10 -15 year decrease in lifespan (White et al., 2009) while others report the difference in longevity as high as 25 years less than the general population (Parks, Svendsen, Singer, & Foti, 2006; Parks, Radke, & Mazade, 2008). However, with studies supporting the positive effects of the combination of healthy dietary practices and regular exercise program, making life-style changes is an achievable goal in combating this obesity side-effect. Also, in keeping with the goal of improving America's health in general, and that of the mental health population in particular, health promotion is increasingly being addressed and reported as having positive health benefits in reducing morbidity and mortality (Mangurian, Miller, Jackson, Li, Essock, & Sederer, 2010; Parks et al., 2006).

Health Promotion Related to Obesity

Health promotion activities, while proving to be very effective in the fight against obesity, are also challenging for individuals. Support and positive reinforcement is integral to the success of any life-style change. Nurses are in pivotal positions to inspire and support change in patients' health practices. Studies have shown that nurses' attitudes affect patients' compliance with treatment including participation in life-style changes (Byrne, Deane, & Coombs, 2005; Roberts & Bailey, 2011). With nurses having key roles in educating and supporting patients in adopting and maintaining healthy life-style changes, the subtle attitudinal nuances and behaviors of nurses that impact the patient's response to care needs to be understood in order to improve nursing's approach and intervention.

The Research Problem

Obesity, though not outwardly as disfiguring as the movement disorder side-effects of the older anti-psychotics, is associated with society's biases and negative attitudes (Puhl & Brownell, 2001). Furthermore, Puhl and Brownell (2001) state that society's negative attitudes and biases towards obesity are also found to be present in healthcare providers. In addition, Ekpe (2001) and Puhl and Brownell (2001) state these negative attitudes affect decision making behaviors and found that in the treatment of obesity, nurses often delay early preventive interventions, including teaching life-style modification, until co-morbid diseases occurred. Treatment issues also result in patients battling with the trade-off between the side-effect of obesity from the newer atypical anti-psychotics and the disfiguring side-effects of the older anti-psychotics, along with the negative attitudes and biases they perceive in their relationship with healthcare providers.

In addition to the common inherent challenges to life-style modification, Texeira and Budd (2010) identified another significant barrier for patients as the attitude and perception of healthcare providers. Studies have shown that the attitudes of health care providers, including nurses, affect patients' compliance with treatment and participation in life-style changes (Byrne et al., 2005; Roberts & Bailey, 2011). This is significant since nurses have key roles in educating and supporting patients in adopting and maintaining healthy life-style changes and they are in highly influential positions to affect these changes.

Purpose of the Study

The purpose of this study is two-fold. (1) To develop and test an instrument to assess the knowledge, attitude, and self-reported behavior of psychiatric nurses towards obese psychiatric patients on atypical anti-psychotic medications. (2) To describe the knowledge and attitudes of the psychiatric nurse towards patients on atypical anti-psychotic medications.

The study will be designed in two phases to develop and test an instrument that can be used in future studies: (1) Phase one will collect core items for the instrument and determine its psychometric properties; (2) Phase two will use the instrument to determine if psychiatric nurses respond with negative attitudes and bias to patients on atypical anti-psychotics who are obese versus comparable normal weight patients.

Significance of the Study

This study forms the basis of development of an approach to address obstacles that affect treatment of mentally ill patients who are also obese. It will contribute to designing interventions aimed at improving the health and well-being of the patient with mental illness who is being treated with the needed anti-psychotic medications. The role of the nurse is a key factor in working effectively with patients to promote healthy life-style changes and ultimately improve

the physical health of people with mental illness. Understanding the nurses' underlying knowledge and attitudes is imperative to providing education and efforts to mitigate negative or biased attitudes in caring for psychiatric patients who are obese or at high risk of becoming obese.

Research Questions

Level 1 question: What are the knowledge, attitudes, and self-reported behaviors of psychiatric nurses towards patients on atypical antipsychotic medications?

a) What do nurses know about the treatment of mentally ill patients in relation to atypical anti-psychotic medications?

How much do they know about the common side-effects of atypical antipsychotics?

How do they address side-effects?

How does the patient teaching differ from patients taking older typical anti-psychotics?
What do they expect in the patient's response to treatment?
Can they identify the common side-effects seen in their patients?
Do they incorporate health promotion?

b) What are the nurses' attitudes about taking care of psychiatric patients on atypical anti-psychotic medications?

What are the self-reported behaviors towards patients who are overweight in general?

c) What are the nurses' self-reported behaviors towards patients who are overweight and are being treated with atypical anti-psychotic medications?

Level 2 Question: Do nurses discriminate in their approach or treatment behaviors for mentally ill patients who are obese and are being treated with atypical antipsychotic medications compared to normal weight mentally ill patients?

a) Are there discriminatory or bias tendencies in the nurses' behaviors towards caring for obese mentally ill patients?

b) Are there differences in the psychiatric nurses' intrinsic attitudes toward obese mentally ill patients versus to comparable normal weight mentally ill patients?

Sub-Questions

a) Will psychiatric nurses respond differently if the patient is obese versus a patient of normal weight?

Are requests for special consideration treated differently?

Does the obese patient have to request special consideration because of size?

b) Given a behavior situation, will the response to an obese patient differ from the response to an average weight patient?

Is response to inappropriate behavior, such as requesting phone calls outside of unit's protocol, treated differently?

Are rewards for good behavior given differently?

Definitions of Terms

1) Knowledge – Familiarity, awareness, or understanding gained through experience or study (The American Heritage Dictionary, 2012).

2) Attitude – A long-standing point of view that guides or influences one's behaviors (Davis, 2009).

3) Bias behaviors – Showing preference or inclination that inhibits impartiality; Prejudice (The American Heritage Dictionary, 2012).

4) Discriminatory behaviors – Making decisions on the basis of preference or prejudice (The American Heritage Dictionary, 2012).

5) Atypical – Not usual (The American Heritage Dictionary, 2012).

6) Antipsychotic – A medication to treat psychosis (Davis, 2009).

7) Atypical antipsychotic medication – Medications effective for a broader range of symptoms in patients with schizophrenia than the typical dopamine receptor antagonist antipsychotic agents, such as Haldol, and are at least as effective as Haldol and cause few, if any, extrapyramidal symptoms (rigidity, tremors, uncontrolled restlessness and Parkinson-like symptoms) (Sadock & Sadock, 2003).

8) Psychosis – A mental disorder in which there is a severe loss of contact with reality, evidenced by delusions, hallucinations, disorganized speech patterns, and bizarre behavior (Davis, 2009).

Summary

Attention to the improvement of America's health has become a primary focus of the U.S. government in an era of health reform. The approach to a solution of this problem has been directed towards some common preventable risk factors, including obesity. Obesity is a known preventable risk factor and major contributor to the increase in chronic medical illnesses and mortality of the American people and the rates of obesity are greatly increased in the mentally ill population. Common contributors to the obesity epidemic are poor eating habits with poor food choices and sedentary life-styles. In addition to these factors, the severely mentally ill population is also faced with another now common contributor of obesity, which is a side-effect of the newer anti-psychotic medications.

The impact of health promotion with dietary changes and increased physical activity has been documented as having positive results in counteracting obesity, even among individuals taking atypical anti-psychotic medications. The greater challenge is educating, motivating, and

encouraging patients to adopt and sustain life-style changes, which is where the role of the nurse becomes pivotal. Studies have shown that the attitude of healthcare workers, including the nurse, is very important in influencing the relationship that is desired to engage patients into treatment and affects compliance. Consequently, the knowledge, attitude, and behavior of psychiatric nurses towards the mentally ill obese patient on the weight inducing anti-psychotic medications require special attention to assist in reversing the high mortality rate in this population and is a focus of this study.

CHAPTER 2

LITERATURE REVIEW

Over the past several years, attention to the state of America's health has been growing with obesity being identified as a major contributor in America's poor health. In this study attention is given to obesity, with focus on the psychiatric population, due to the higher prevalence of obesity in this population. This literature review will discuss the following concepts: obesity, the impact of obesity on health and economics, attitudes towards obesity of society, medical professions and nurses, mental illness and obesity resulting from atypical antipsychotics, the impact of life-style changes on atypical anti-psychotic induced (API) obesity. Bandura's social-cognitive theory will also be discussed as an underlying framework for the study.

Definition and Measurement of Obesity

An association has been made between the decline of America's health and the increase in obesity. Therefore, more attention has been focused on the rise in obesity, a common precursor to many chronic medical illnesses, such as type two diabetes mellitus (T2DM) and cardiovascular diseases (CVD) (National Institute of Health [NIH], 1998) and ways to combat this rise. Obesity is most commonly defined as excess body fat (Li & Cheung, 2009; Ogden, Yanovski, Carroll, & Flegal, 2007). However, Ogden et al. (2007) state that the "excess" is not clearly defined, partly from difficulty in measuring actual fat (p. 2087).

There are a few instruments available to measure actual body fat but they tend to be expensive and not easily available for clinical use (NIH, 1998). In using the widely used body mass index (BMI) that measures body weight in relation to height, the practical definition of obesity is excess body weight rather than body fat (Ogden et al., 2007). BMI is said to be correlated to the amount of body fat for most adults and is a useful tool (Weight-Control

Information Network [WIN], NIH, & US Department of Health and Human services [USDHHS], 2012). BMI is calculated using a person's weight in kilograms (kg) divided by their height in meters squared (m²) (Ogden et al., 2007; NIH, 1998; Yanovski & Yanovski, 2011). A BMI greater than or equal to 30 is considered obese in adults, with variations according to age and sex. In children and adolescents a BMI greater than a specified reference point is considered overweight (Ogden et al., 2007). Concern has risen as the rate and incidence of obesity have continued to increase over the last twenty years.

Obesity Statistics

Since 1960, The National Health and Nutrition Exam Survey (NHANES) has been used to track trends in obesity in the United States and is calculated based on height and weight measurements (NIH, 1998). Data collected from 1988 to1994 indicate an 8% increase in obesity when compared with 1976 to1980 (Flegal, Carroll, Kit, & Ogden, 2012). The data also showed significant increases in obesity between the 1988 to1994 and 1999 to 2000 periods, except in men between 40 to 59 years of age (Flegal, Carroll, Ogden, & Curtin, 2010). In addition, Flegal et al. (2010) state that as the obesity trend continued to increase up to the period 2007 to 2008, there was no significant change when compared to differences in the prevalence between 2003 to 2004 and 2005 to 2006. Similarly, the prevalence of overweight and obesity remained fairly stable between 1960 and 1980 (Flegal, 2005; Flegal et al., 2012). Despite some variation in blocks of time periods, Flegal (2005) also reported the same 8% increase in prevalence in obesity between 1988 and 1991as Flegal et al. (2010) reported between 1988 and 1994. Also, statistics from National Health Center Statistics (NHCS) of Maryland indicated that more than 31% of adults between ages 20 to 74 were obese and more than 16% of teenagers 12 to 19 years old were overweight between 2003 and 2004 (Ogden et al., 2007).

Prevalence in obesity remains over 30% in most age groups and among both sexes in the U.S. (WIN et al., 2012) except among men 20 to 39 years old (Flegal et al., 2010). From the Behavioral Health Risk Factor Surveillance Survey (BHRFSS) a State-wide self-reported survey, Finkelstein (2014) also reports the obesity prevalence exceeding 30% in most States. According to Ogden et al. (2007) statistics showed an 18% increase in prevalence of obesity in adults between 1980 and 2004. Yanovski and Yanovski (2011) also report a 1.1% national increase in the prevalence of obesity among American adults between 2007 and 2009, which is equivalent to an additional 2.4 million adults who are obese. Finkelstein (2014) compared data from National Health Exam Survey (NHES) from 1960 to 1962 and NHANES from 2009 to 2010 and found an increase in the obesity rates from 31.5% to 36.1% of the population. There was also 6% increase in extreme obesity, a BMI greater than 40, from less than 1% between 1960 and 1962 to 6.6% between 2009 and 2010. In addition, the rate of extreme obesity was 8.5% among females (Finkelstein, 2014).

There was a significant increase between 1999 and 2010 among men, non-Hispanic Blacks, and Mexican-American women (Flegal et al., 2012). In early 2011, 29.5% of American adults twenty years and older were obese, showing an increase of 10% since 1997 (Center for Disease Control (CDC), 2011). As recent as 2014, statistics still support cause for continued concern at the increasing rate and prevalence of obesity remaining over 30% in the U.S. (CDC, 2014).

Impact of Obesity

Obesity has been found to be associated with and often a precursor to many medical illnesses. There is also a positive relationship between the rising prevalence of obesity and medical conditions, such as T2DM, CVD, and some cancers (Finkelstein, 2014). Hubert, Feinleib, McNamara, and Castelli (1983) did a longitudinal study in Framingham, Massachusetts

(MA) over twenty-six years, starting in 1948, with over five thousand men and women between ages 28 to 62 years old, looking at obesity as a single risk factor for CVD. The findings indicated a pre-mature pre-disposing risk factor for CVD in this cohort, especially among the fifty year old and younger group. In addition, the incidence of CVD did not emerge until the eight year follow-up. In a study on preventable deaths in the U.S., Danaei, Ding, Mozaffarian, Taylor, Rehm, and Murray (2009) found that overweight and obesity was responsible for one in ten deaths, affecting females more than males. They further stated that obesity was the cause of more deaths than hypertension.

Obesity is a global problem with similar concerns worldwide (Samaranayake, Ong, Leung, & Cheung, 2012). In the Netherlands, U.S. guidelines were used to assess obesity and its impairment on health and quality of life (QOL) and found significantly higher risk effects of CVD in men and higher risks of T2DM, low back pain, and respiratory problems in females, who were all obese (Lean, Han, & Seidell, 1999). A possible identified weakness of the study was that the age limit excluded some post-menopausal women. According to Samaranayake et al. (2012), as recently as 2008, there were 300,000 obesity-related deaths annually. This statistic has been constant since the early 21st century.

The morbidity associated with obesity results in costly annual medical expense for the United States. The NIH (1998) reported that up to 1995 the U.S. spent $99.2 billion on medical care and disability related to obesity. Approximately $51 billion of those dollars were used for the cost of diseases directly associated with obesity. Another $48 billion went towards indirect obesity related conditions. This was over 15 years ago and a fraction of costs associated with obesity today. In 2006, the annual U.S. medical expenditure for obesity-related diseases remained exorbitant with the annual medical expenditure increasing to more than $147 billion (Finkelstein,

2014). The results of a regression study done by Finkelstein, Flebelkorn, and Wang (2003) matched other cited studies with a 37% increase in the annual medical expenditure, solely on obesity-related diseases. According to Finkelstein (2014) the best way to avoid the adverse effects associated with obesity is to maintain a normal weight throughout adulthood. Finkelstein et al. (2003) further predicted that if programs directed at reducing the rise in obesity were not successfully implemented, the medical expenditure for obesity-related diseases would continue to increase. With obesity being strongly associated with increased morbidity and mortality, it has been predicted that if trends continue to increase, the obesity rate will be 42% and extreme obesity will be 11.1% by 2030 (Finkelstein, 2014).

Since 2007, special attention has been given to the psychiatric population which has a higher prevalence of obesity than the general population (Parks et al., 2008). As obesity and obesity-related illnesses continue to rise in the U.S., public health agencies have emphasized efforts directed towards incorporating health promotion geared at preventing and reducing obesity for all Americans. The mentally ill population is a unique subset of an already vulnerable group of individuals who are obese.

Society's Attitudes Towards Obesity

Historically, in Western or North American society, obesity has always been associated with negative attitudes (Puhl & Heuer, 2010) that produce strong emotional reactions in individuals. These negative attitudes arise from the common stereotypical thinking that obese individuals tend to be lazy, unsuccessful, weak-willed, unintelligent, and lacking self-discipline or willpower (Puhl & Brownell, 2001). DeJong (1993) did a study to investigate if the cause of obesity contributes to the attitude towards the task performance of an obese person. Contrary to previous studies on obesity, videotapes, rather than pictures, were shown of an obese or normal

weight girl playing a game. Half of the 168 subjects, who were high school girls, were told that

the obesity was due to an endocrine problem. The findings showed the subjects without

explanation of the obesity, rated the obese girl as lacking will-power and less active than the girl

with the normal weight and the girl with the explained obesity. DeJong (1993) also found that,

consistent with his earlier study in 1980, there was no evidence that the subjects held the belief

that people who were obese were "jolly" people (p. 969) contrary to only two of many studies

with this finding.

Puhl, Andreyeva, and Brownell (2008) did a nationally representative self-reported study

on the perceptions of height and weight discrimination as compared to race and gender

discrimination in America. In this study, data was obtained from the National Survey of Midlife

Development (NSMD) in the U.S. 1995-1996, which was released in 2006. The NSMD is a

national self-reported study of the predictors, patterns, and effects of midlife health and well-

being. The sample consisted of more than three thousand American males and females between

25 to 74 years old. Over sampling of individuals between 65-74 years of age and males, in

Atlanta, Chicago, Boston, Phoenix, and San Francisco, was done to achieve a more

representative sample. Perceived discrimination due to weight and height was found to be

common among Americans with the prevalence rates among females being similar to the

prevalence rates of race discrimination (Puhl et al., 2008). The study also found that women were

more susceptible to weight/height discrimination than men and supported existing data on gender

differences. According to Puhl et al. (2008) despite the known limitations of self-reported data,

studies observing people's reaction to stigmatizing situations are needed to be able to make

comparisons. In this study, weight was not separated from height and being self-reported may

contain underestimation of weight and overestimation of height. However, the overall findings

indicated that there is a high prevalence rate of weight/height discrimination in the U.S.,

comparable to the rates of racial discrimination among Americans (Puhl et al., 2008).

Medical Profession's Attitude Towards Obesity

Over the years, several studies reported healthcare providers' attitudes toward obesity, as a

group and across individual disciplines, and its impact on patients. Puhl and Brownell (2001)

extensively reviewed findings on discriminatory attitudes and behaviors towards the obese

patient in society, in medical and health care settings, and its effect on clinical judgment. The

findings indicated that clinical judgment was possibly affected along with the negative impact of

the obese person avoiding treatment, but more extensive studies with a larger, more diverse

population is needed. Many of these studies were done with physicians, medical students,

teachers and students with high levels of bias and negative attitudes reported (Puhl & Brownell,

2001). Medical students were frequently selected due to the belief that these students may hold a

high level of negative attitudes toward obesity and obese people (Pantenburg, Skorski, Luppa,

Schomerus, Konig, & Werner et al., 2012). One study of medical students during their medical

rotation indicated that the same negative attitude and perceptions did not change when they later

worked with obese patients in their psychiatric rotation, so setting was not a factor (Puhl &

Brownell, 2001). However, although there is some indication of consistency in the pattern of

discrimination against the obese particularly among health care providers, a more systematic

study needs to be done (Puhl & Brownell, 2001).

In a global study with medical students in Germany on attitudes towards overweight and

obese individuals, a comparison was made to findings from other countries, including the United

States (Pantenburg et al., 2012). This was a cross-sectional survey first using vignettes of a forty-

two year old female, one at normal weight and the other obese, followed by the completion of

the Fat Phobia Scale (FBS). Using a semantic differential scale immediately following a vignette is a more direct method of assessing attitudes as compared to the more direct approach, frequently used, requiring a response of agree or disagree to general statements about obesity and people who are obese. The findings were consistent with other studies and confirmed the presence of stigma and bias towards obesity among medical students. In addition, the negative attitudes were found to be at a similar level as that of the general population. However, there were lower levels of bias among female participants. Perhaps this may be gender related or a result of the same gender vignette assessment. There were some limitations in this study. For example, there were no males in the vignette so it is not known if attitude differs based on the gender of the obese individual. In addition, the study utilized self-reported data, which is known for the possible flaw that respondents may not be completely truthful but provide socially acceptable responses (Pantenburg et al., 2012).

Teachman and Brownell (2001) did a study looking at whether implicit negative attitudes and beliefs towards overweight and obese people exist in health professionals specializing in obesity treatment and made comparison to those attitudes of the general population. The findings showed clear evidence of strong implicit bias in attitudes and perceptions of healthcare workers, though lower than the bias in the general population. According to Teachman and Brownell (2001), although healthcare workers are a part of society, the negative attitudes towards obesity are surprising as healthcare workers should be more aware than the general population of the negative health consequences associated with obesity. Moreover, the negative attitudes of healthcare workers tend to not only be directed towards obesity as a health condition but also against the individuals who are obese (Teachman & Brownell, 2001).

In a similar study with healthcare professionals specializing in obesity, the level of obesity bias in healthcare workers was compared to that of the general population while identifying certain personal characteristics, with similar findings of implicit and explicit biases (Schwartz, O'Neal Chambliss, Brownell, Blair, & Billington, 2003). In this study, lower level of bias was found in older males who were themselves overweight and who had friends who were also obese. Sabin, Marini, and Nosek (2012) examined implicit and explicit bias towards obesity in a large sample of medical doctors by looking at BMI, race, and gender with findings of strong anti-fat bias in most of the subjects, both implicitly and explicitly. These findings suggest that health care providers whose roles should be supportive, specifically physicians, hold intrinsic attitudes that are negative about obese patients. However, more study is needed on how the negative attitude will affect the quality of care to the obese patient, and if other providers, such as nurses, also share these attitudes.

In a cross-sectional study of physicians' attitudes about obesity and association to competency and specialty, more than 40% of physicians had a negative attitude towards obese patients but 56% felt competent to treat obesity (Jay, Kalet, Ark, McMacken, Messito, Richter et al., 2009). The study did not look at the impact of these negative attitudes on patient care. In another study looking at physicians' attitude towards obesity, its cause, and treatment, more than 505 of the 620 subjects thought the obese patient was ugly, unattractive, non-compliant, and awkward. The subjects also thought that obesity treatment was less effective than treatment for most other chronic conditions (Foster et al., 2003). This study identified the need for more awareness of negative views and attitudes towards obesity and developing ideas on how to better address the treatment of obesity.

A study done with 122 physician assistants (PA), in New York State (NYS), on their attitude towards obesity and obese individuals remained consistent with studies of other healthcare professional, such as undergraduate nurses, registered nurses (RN), PA students, and dietetic students, displaying similar negative attitudes (Wolf, 2012). Physician assistants older than fifty-one years old had less bias. The results have led to a proposal for obesity stigma to be included as a part of cultural competency in educational courses. Puhl and Brownell (2001) also note that physicians' attitudes and impact on practice were most often studied, while other disciplines were not studied in detail.

Nurses' Attitudes Towards Obesity

Many studies on attitudes towards obesity have been done with doctors and medical students. Watson, Oberle, and Deutscher (2008) were amazed that there is very little research done on nurses' attitudes toward obesity considering the very significant role they have to care for their patients. The few studies on nurses' attitude towards obesity and the obese patient show a propensity towards negative attitudes and biases which affect patients' engagement in treatment. However, Brown (2006) reviewed these studies and found weaknesses in the sampling and measurement procedures. Being a global issue, Zhu, Norman, and While (2013) did a study in the United Kingdom (UK) on nurses' self-efficacy and practices relating to weight management in adult patients and found that although the nurses' attitudes were favorable, many expressed lack of confidence in their ability to manage the obese patient which was consistent to their below standard weight management practices. However, the study did not look at how negative attitudes among healthcare providers affected their confidence level or ability to provide care to the obese patient. Other studies with nurses focused on the nurse's perception of specific medical and nursing tasks.

In a qualitative study with registered nurses (RN), the attitudes of RNs toward bariatric patients on the effectiveness of bariatric educational programs were assessed (Zuzelo & Seminara, 2006). The study sample consisted of 119 RNs employed in acute rehabilitation, medical centers, and skilled nursing facilities. In the findings, although RNs' attitudes towards bariatric patients who were obese were mostly positive, there were some differences between the nurses from the medical setting and those in rehabilitation. The differences were thought to be related more to work load and length of stay concerns. The nurses were more concerned with having to move the patient, avoiding injury to themselves and the patients, and the amount of time required to provide care. The study also found that while nurses recognized the link between lifestyle, eating, and obesity, they were reluctant to blame the patients for their obesity. As a result, the manner in which diet was addressed during hospitalization was not unified. According to Zuzelo and Seminara (2006), with no clear direction for nursing care of these patients, the inconsistencies will continue to increase. This study also found that the nurses showed little interest in participating in the development of an educational program for this population, because they often did not consider bariatric nursing as being unique or different from fundamental nursing as it relates to activities of daily living and mobility.

In a qualitative study looking at the impact of the double stigma of obesity and serious mental illness (SMI) on promoting health and recovery, traditional medical approaches were compared to the perspectives of acceptance of obesity in people with SMI (Mizock, 2012). The study found that more than weight monitoring is needed in the mentally ill population to address the high prevalence of obesity. Another study with nurses and physicians assessed attitude toward long-acting anti-psychotic medications (Geerts, Martinez, & Schreiner, 2013) but did not assess their attitudes towards the medication itself, the side-effects, or the patients with the

common side-effect of obesity. So, the results were more indicative of the nurses' preference in oral versus intramuscular medication administration. There are no studies to date looking from the perspective of the nurse's attitude towards obese patients in a psychiatric setting, which is important given the rapidly increasing occurrence of obesity as an all too common side-effect of their anti-psychotic medications.

Watson and colleagues (2008) did a study to develop and test an instrument to measure nurses' attitudes toward obesity and obese patients. The purpose of the study evolved from the author's firsthand clinical experience of negative views about the obese patients they care for. Also, there is a concern that the negative attitudes of nurses will negatively affect patients and deter them from seeking treatment (Puhl &Brownell, 2001). In the study by Watson et al. (2008), an existing instrument was adapted and other items added. The questions represented the attributions and values on obesity, in general, specific to obese patients, and to those caring for the obese patient. The scale items addressed multidimensional concepts on attitudes toward obesity and obese patients. The Likert scale items response choices were agree/disagree or seldom to often (Watson et al., 2008). A limitation of the study was the high educational level of the nurses that may have impacted their responses. The instrument was shown to have very good reliability, internal consistency, and construct validity. The instrument met acceptable psychometric measures and will assist in studying the attitude on nursing care. Development of the instrument could help to direct interventions toward the negative attitudes and behaviors in nurses and direct educational programs (Watson, et al., 2008).

Mental Illness and Obesity

The treatment of mental illness has evolved over the past twenty years since the introduction of the first atypical antipsychotic medication. Success has been achieved in

relieving the psychotic symptoms with less risk of abnormal movements. Over the past several years, the use of atypical antipsychotics has become the more common form of treating psychosis in the mentally ill (American Diabetic Association [ADA], American Psychiatric Association [APA], American Association of Clinical Endocrinologists [AACE], & North American Association for the Study of Obesity [NAASO], 2004) and also used as adjunctive treatment in severe depression.

While having success in treating psychosis in illnesses like schizophrenia, there has been an increase in obesity, diabetes mellitus (DM), and other chronic medical conditions leading to the increased incidence of morbidity and mortality (ADA et al., 2004). The condition precipitated by the side-effect of the atypical antipsychotics in which obesity, hyperlipidemia, and diabetes mellitus occur is referred to as the metabolic syndrome. There is significant evidence of the association between treatment with atypical anti-psychotics and rapid weight gain (OMH, 2010; Parks et al., 2006) in the first few months of treatment, continuing even after one year of treatment (ADA et al., 2004). Although the mechanism responsible for weight gain with the atypical antipsychotics is unknown, the weight is explained by a disproportionate calorie or energy intake to calorie or energy used (ADA et al., 2004). Therefore, to control weight gain, intake and expenditure need to be balanced to maintain weight with health promotion activities being a very important intervention.

In a report of the ADA et al. (2004) it was stated that in the findings from limited studies of individuals with schizophrenia, the evidence is not definitive as to atypical anti-psychotics being the sole cause of metabolic syndrome in this population. The OMH (2010) states that, despite other contributory factors, there is a clear connection between the prescribed medications and increasing rates of co-occurring medical conditions and reduced quality of life. Findings

from most of the studies indicate a 1.5 to 2 times higher prevalence of diabetes and obesity with individuals with schizophrenia than the general population (ADA et al., 2004). According to Parks et al. (2006) since the introduction of the first atypical anti-psychotic medication in 1991, there has been a very high association with the increasing prevalence of weight gain and some chronic medical conditions, such as, diabetes, insulin resistance, and hyperlipidemia. Due to the rising concerns of increasing morbidity and mortality among the severely mentally ill population the Mental Health Services Administration (MHSA) and others took a pledge to adopt wellness approach efforts in 2007, to reduce early mortality in the mentally ill by ten years over a ten year period (Parks et al., 2008).

Impact of Lifestyle Changes on Atypical API-Obesity

There have been numerous studies indicating the positive effects of life-style changes on weight management. In addition, research indicates that the same life-style changes for the general population are also effective for weight gain resulting from atypical anti-psychotics. The obstacles to successful weight management are highlighted in these studies and are applicable to all individuals. Skrinar, Huxley, Hutchinson, Menninger, and Glew (2005) did a study on the role of fitness intervention with people with SMI. The sample size was small but provided evidence of greater weight loss in the group that had the fitness intervention versus the group without the intervention. According to Skrinar et al. (2005) who did not disclose the actual p value result, the difference though not statistically significant, failing to reach the predicted p value of 0.05, showed a tendency for weight loss with regular exercise. The study acknowledged obstacles unique to this population, including symptoms and social factors, as limitations to participation and success of any exercise intervention. The study further identified attitudes toward weight as an obstacle that needs to be addressed by both, the individual and the

professional, from the start. In addition, a supportive attitude by the professional was said to be very important in facilitating adherence in life-style changes and an exercise program (Skrinar et al., 2005). Presently, there is no existing research on the nurse's perspective or perception of psychiatric patients with this recent, increasing phenomenon of obesity and associated medical diseases.

Existing Instruments Measuring Attitudes Towards Obesity

Over the years, a few instruments have been developed to address obesity as a public health issue with the goal of improving the patient's experience and health outcomes. Bagley, Conklin, Isherwood, Pechiulis, and Watson (1989) developed one of the first instruments to measure the attitudes of nurses toward obese patients and obesity. The instrument was developed because of concerns about the rising incidence of obesity and how nurses cope with mobility and safety issues while providing treatment. There was existing research leading to the premise that the increased challenges of caring for an obese patient brought with it negative feelings and attitudes in nurses, which may affect how care is given. The goal was to assist nurse educators in addressing negative attitudes as reported in other research and develop an instrument to specifically measure attitudes towards obese patients and obesity, in a systematic manner (Bagley et al., 1989).

Using methods from previous attitudinal research, two instruments using semantic differential measures were developed and tested. A 15-item nursing management and a 13-item Personality and Lifestyle instruments were developed and tested with registered nurses (RN) in three urban hospitals in Canada. The combined testing of the two instruments found older nurses had more negative views towards obesity and obese patients, whereas nurses with more years of nursing education had less negative attitudes. It was also found that individuals who were

dissatisfied with their own weights had negative attitudes towards obese patients, regardless of age or years of education (Bagley et al., 1989). In addition, the strong correlation between the two instruments on the presence of negative attitudes in nurses towards obese patients and obesity indicated a need for educators to continue to address this issue in nursing schools.

With the continued rise of obesity and the need to address negative attitudes associated with it, Allison, Basile, and Yuker (1991) did a study with the intent of developing a psychometrically reliable instrument to measure the attitudes towards, and belief about, obese individuals and how they are related. Two instruments were developed and tested. The "Attitudes Towards Obese Persons (ATOP)" instrument is a 20-item Likert scale, adapted from the "Attitudes Towards Disabled Persons Scale (ATDP)" (p. 602). The second instrument, the "Beliefs About Obese Person Scale (BAOP)" is a 10-item Likert instrument that measures the extent to which an individual believes an obese person has control over their state of obesity (Allison et al., p. 602, 1991). Some items on the BAOP instrument were adopted from other unstated sources and others constructed by the authors. Need for instrument development was based upon poor or unreported reliability of previous instruments measuring attitudes towards obese people.

The instruments were tested with graduate and undergraduate students and members of the National Association to Advance Fat Acceptance (NAAFA). There was found to be a strong positive correlation between ATOP and BAOP, consistent with existing negative attitudes and beliefs (Allison et al., 1991). The findings also indicated that attitudes were more positive towards obese patients when it was thought that the obesity was beyond their control. It was recommended that further study should be directed towards utilizing valid and reliable

instruments among diverse groups, exploring other variables, and clarifying the relationship between attitudes and beliefs towards obese people (Allison et al., 1991).

In another study, the "Nurses' Attitudes Toward Obesity and Obese Patients Scale (NATOOPS)" was developed and psychometrically tested (Watson et al., 2008, p. 587). Since the existing data supported negative attitudes and beliefs among nurses there was indication for the need to be able to measure these variables. The earlier instrument developed by Bagley et al. (1989) was adapted within the conceptual framework of attribution theory (Watson et al., 2008).

The sample was diverse with nurses working in many varied practice areas. The respondents were predominantly from medical/surgical care, community outreach, education, critical care, and emergency care areas, respectively, with the majority being experienced nurses, working 10-35 years in nursing. Item construction, testing methods, and results were disclosed and were acceptable. There was a high response rate of 46.1% to the study which the authors assumed indicated the topic was of interest to nurses. The support of the attribution theory suggested further study into factors affecting nurses' responses. The findings supported earlier findings of negative attitudes among Alberta nurses and nurses in the U.S. In addition, the importance of an instrument to measure caregivers' attitudes is crucial as the findings indicate that attitudes may affect the quality of care provided (Watson et al., 2008). The NATOOPS, though timely given the significance of obesity and its perceived impact on nursing care, did not include psychiatric nurses or psychiatric patients. Since obesity is a growing concern among the psychiatric population that can affect care in an already emotionally fragile population, it is important to include this group in ongoing research related to nurses' attitudes towards obesity.

Existing Instrument Measuring Nurses' Knowledge of Anti-Psychotic Medications

A study examining the nurses' knowledge and belief about medications was done in an effort to identify strategies to improve treatment adherence in psychiatric patients. The rationale for this study was based on previous research done on treatment adherence, which indicated that nurses' knowledge, beliefs, and attitudes about treatment influence treatment outcomes, but little research on how these variables relate to specific behaviors in the clinical area had been done (Byrne, Deane, & Coombs, 2005). A knowledge instrument "Knowledge of Neuroleptic Medications (KNM)" was developed specifically for this study (p. 519). Items for the KNM were developed from information obtained from the Early Psychosis Prevention and Intervention Centre (EPPIC) along with informational leaflets provided with Risperdal and Zyprexa containers, but no information on the psychometric development of the instrument was provided. The KNM consist of 12 true or false items about atypical anti-psychotics, which also form a group of neuroleptics. The study also used another instrument to measure difficulty implementing known adherence strategies. The findings support a positive relationship between knowledge and attitudes, so that the more knowledgeable the nurse was the more positive the attitude and ease in implementing adherence strategies with patients (Byrne et al., 2005). The KNM could be adopted for this study, following psychometric testing.

Theoretical Framework

Albert Bandura's (1998) theoretical framework of health promotion from the social cognitive theory perspective is used to guide this study. Bandura's (1998, 2004) health promotion theory purports multiple causal factors in which self-efficacy beliefs work along with identified goals, perceived environmental challenges, facilitators, and anticipated outcomes to achieve motivation and action of the individual. According to Bandura (1998) this theory focuses on health

promotion and disease prevention using life-style changes. The social-cognitive aspect works on keeping people motivated to sustain healthy habits (Bandura, 1998). This theoretical framework was chosen based on the researcher's experience, the literature review, and data gathered all leading to the importance of health modification of the obese person.

The goal of social cognitive theory is to educate individuals on health risks and benefits as a condition for change. The premise is that in order for individuals to change harmful behaviors or conditions, they have to be educated on the negative health impact of their life-style habits to foster a desire to change (Bandura, 2004). Bandura (2004) further states that if individuals are not informed about how poor lifestyle habits affect their health they will not be inclined to make any effort to change these habits. In addition, a belief in personal ability to effect the life-style change is a central core to social cognitive theory. So, unless individuals believe they can produce the desired change by their actions they will lack the incentive or desire to change. According to the most recent Gallup survey (2012) nursing is the most trusted profession, eleven of the twelve years in the survey with high to very high rating on honesty and morality. Nursing was second to fire-fighters only in 2001, following the September 11th terrorist attacks. The finding that nurses are consistently rated as the most trusted profession, based on public opinion, place nurses in an influential position to support and encourage individuals in this process.

From the perspective of social cognitive theory, health behaviors are affected by the outcomes people expect from their actions. The outcomes are results that can take several forms, such as physical, social, and self-evaluative forms. The physical outcomes can have pleasurable or aversive effects from the behavior and can result in gains and losses (Bandura, 2004). A gain might be achieving weight loss through adopting healthy eating. On the other hand, a loss might be financial and the consequence of overeating, with a need for increased spending to purchase

proper fitting clothing. According to Bandura (2004) a social outcome would be the choice of health behavior made through the interpersonal interaction with others and that is greatly impacted by social approval or disapproval. This is where the nurse's role as a change agent becomes important. To counteract society's biased attitude towards obesity, a positive and trusting relationship with individuals can serve to empower and support life-style modification. According to Mason, Leavitt, and Chaffee (2012) in keeping with the ACA plan for health care homes, nurses are appropriately placed to influence life-style changes. In a 2012 article in *Medscape Medical News,* the president of the American Nurses Association (ANA) was quoted stating the result of the Gallup survey (2012) indicates that people trust and connect with nurses. This position of trust therefore puts nurses in a very influential role with patients.

Self-evaluation outcomes are influenced by the perceived positive and negative results that individuals have of their health status or health behavior. People adopt or change behaviors based on their own self-evaluations and tend to adopt behaviors that give them self-satisfaction versus dissatisfaction (Bandura, 2004). In addition, Bandura (2004) states that motivation can be enhanced by helping individuals to see how the changed behavior can bring about overall health benefits that are in their best interest. Here the nurse's role in health education and motivation efforts is very important. The social cognitive theory, while having long term goals toward achieving personal change, also includes setting and celebrating small achievable goals to help individuals to succeed.

Another major aspect of the social cognitive theory is the perceived facilitators and obstacles that will determine the success in adopting healthy habits (Bandura, 2004). Some obstacles could be personal and interfere with the individual performing or adopting the healthy behavior. The impediment to change can be varied and not just limited to personal or situational obstacles

(Bandura, 2004). The obstacle could be the responses and attitudes of others, real or perceived, such as the negative attitudes encountered by individuals who are overweight or obese. Perceived facilitators could be the positive responses and attitudes of others towards the health behavior. So, a careful assessment of an individual's self-efficacy belief must be done (Bandura, 2004). The self-efficacy assessment is measured against various levels of challenges and the person's belief of imminent success despite those challenges. Examples of this include maintaining an exercise routine in spite of challenges, such as job stress, feeling tired, or bad weather.

Implementation of the social cognitive theory in health promotion utilizes a 3-step approach (Bandura, 2004). The levels are based on the self-efficacy measurements which identify the level and type of guidance and support, individual's self-management abilities, and motivational readiness to achieve the desired change. Individuals at the first level have high self-efficacy, high motivation, and expect positive outcomes from the changed behavior. They require little guidance in achieving change. At the second level self-efficacy and motivation is moderate. Individuals will have some doubts about their ability to change a behavior or benefit from any attempt they may make to achieve change. These individuals are easily deterred by obstacles that will interfere with successful behavior change and require extra support and guidance than individuals at the first level. Individuals at the third level believe they have no control over their health habits and require considerable support and guidance. At this level, each small success strengthens the individual's self-efficacy, belief in his or her ability to control behavior, and sustain change while overcoming obstacles. Individuals with serious mental illness, such as schizophrenia, will more often be between levels two and three with limited motivation and self-management abilities requiring considerable support and guidance. The role of the nurse as an effective facilitator requires providing considerable support and guidance to psychiatric patients

in helping to improve their self-efficacy level and ultimately bring about positive health changes. Therefore, it is imperative that support and guidance from the nurse not be impaired by their intrinsic biases. Progress to level one is dependent on the individual's readiness to change and is not time limited.
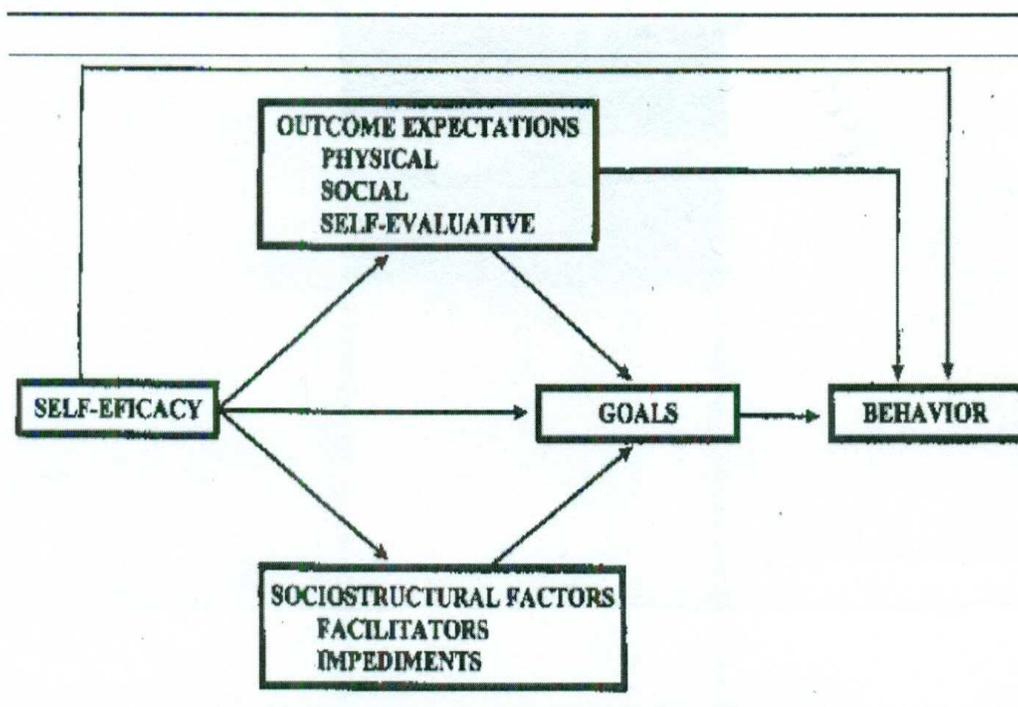
Figure 1. Structural paths of influence wherein perceived self-efficacy affects health habits both directly and through its impact on goals, outcome expectations, and perception of sociostructural facilitators and impediments to health-promoting behavior.

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education & Behavior, 31*(2), 143-164.

Summary

Obesity has continued to increase over the years with increase in morbidity, mortality, and medical expenditure. There is a higher prevalence of obesity among the psychiatric

population than the general population related to the side-effect of the newer anti-psychotic medication being a major contributing factor. Most of the research done related to medical professionals' attitude towards obesity and people who are obese indicate similar negative attitudes to Western society's views and attitudes towards obesity. Existing instruments have not been tested with psychiatric nurses and the psychiatric population which may have other unique variables that need to be measured and tested. The NATOOPS is a good starting point to provide the basis of an instrument development or adaptation combined with the knowledge instrument on nurses' knowledge about the anti-psychotic medications.

Research supports life-style changes as an approach to combating the rise in obesity, including obesity induced by the atypical anti-psychotics used in the mentally ill population. As supported by the social cognitive theoretical framework, life-style change is a difficult process that requires support and a positive attitude to help individuals achieve and maintain the change. Negative attitudes from professionals may be an environmental challenge that should be removed. Being perceived as honest and trusted puts the nurse strategically in an influential role of facilitator in assisting patients to realize their goals toward lifestyle changes.

CHAPTER 3

METHOD

This chapter describes the research design, operational definitions, study population, sample, and the sample size and power estimation. Human rights protection, benefits of the study, and methodology, including the use of vignettes are described. Instrumentation, data collection and plans for data analysis are also described.

Design

This is a quantitative study using a descriptive comparative design. There was available literature on the variables and existing instruments to measure the variables, although they had not been used with the population of this study and needed further testing. The purpose of this study was two-fold: to describe the knowledge and attitude of the psychiatric nurse towards patients on atypical anti-psychotic medications, and to develop and test an instrument to assess the knowledge, attitude, and behavior of psychiatric nurses towards obese psychiatric patients on atypical anti-psychotic medications. Development of a valid and reliable instrument will contribute to constructing interventions aimed at improving the health and well-being of the patient with mental illness who may be taking the needed anti-psychotic medications and at a high risk for obesity. This design is appropriate since there is not much information available about the provider population of interest; and, the purpose of the study is to gather more information about nurses' knowledge, attitudes, and behaviors working with this vulnerable group for potential intervention.

Following a literature review, an existing instrument measuring attitudes of physicians towards obese patients and an instrument measuring nurses' knowledge of atypical anti-psychotics were found. The study was designed in two phases to develop one measurement

instrument combining variables that can be used in future studies. In phase one existing instruments were adapted, with permission from the authors, by first using expert panelists for content validity. Then the psychometric properties of the instruments were determined. In the second phase, the instrument was given to psychiatric nurses who were at least six months to three years in practice, via an e-mail list obtained from the National Student Nurses Association (NSNA). With the goal of obtaining a national sample, the study was limited to registered nurses (RNs), with at least 6 months experience in psychiatry, working in the clinical setting with mentally ill adults who are on atypical psychiatric medications. Additional subjects were recruited at an American Psychiatric Nurses Association (APNA) conference, in Upstate New York.

Research Hypotheses

The hypotheses developed for this study are based on the two research questions and are derived from the literature.

Research Question 1. What are the knowledge, attitudes, and self-reported behaviors of psychiatric nurses towards patients on atypical antipsychotic medications and/or patients who are obese? This warrants a descriptive analysis of nurses' knowledge about atypical antipsychotic medications, and nurses overt attitudes and nurses self-reported behaviors in situations where the patient is obese. Demographic variables will be tested for associations. Hypotheses are stated in the null:

H0: There are no associations in psychiatric nurses' knowledge about atypical antipsychotic medications based on gender, experience or age.

H0: There are no associations in psychiatric nurses' attitudes about obesity based on gender, experience, age or weight.

Research Question 2: Do psychiatric nurses discriminate in their attitudes about or treatment

behaviors for mentally ill patients who are obese and are being treated with atypical

antipsychotic medications compared to normal weight mentally ill patients? Hypotheses are

stated in the null:

H0: There are no differences in psychiatric nurses' attitudes toward mentally ill patients who are obese and being treated with atypical antipsychotic medications compared to those who are normal weight.

H0: There are no differences in psychiatric nurses' self-reported behaviors toward mentally ill patients who are obese and being treated with atypical antipsychotic medications compared to those who are normal weight.

Operational Definitions

Knowledge About Antipsychotic Medications (KAAM) – For the purpose of this study, knowledge is defined as the score on the items specifically selected on "knowledge" from an existing knowledge instrument. The scale was utilized to measure psychiatric nurses' familiarity, awareness, or understanding of the atypical antipsychotic medications that cause few, if any extrapyramidal symptoms, used to treat patients with schizophrenia. Haldol will not be part of the antipsychotics knowledge measure as it is not atypical.

Nurses Attitudes Toward Obese Patients (NATOP) – Psychiatric nurses' long-standing points of view that guide or influence their behavior towards patients on atypical antipsychotic medications were measured by the score on items specifically selected on "attitudes" from an existing instrument used with physicians modified for use with nurses. These measured overt attitudes about obesity (i.e. attitudes expressed in declarative sentences about obesity).

Intrinsic Attitudes Toward Obese Patients (IATOP) – Additional intrinsic attitudes toward a patient with obesity was defined as the score on a newly created semantic differential scale, using different patient descriptions in vignettes to elicit differences in internalized attitudes.

Self-Reported Behaviors Toward Obese Patients (SRBTOP) (i.e. discriminatory/ bias tendencies) – A newly created attitudinal scale was used to measure psychiatric nurses' decision-making on the basis of preference or showing preference or inclination that inhibits impartiality based on specifically designed vignette situations. The vignettes elicited subjects' self-reported behaviors that are designed as responses to the vignette. The scores were calculated from the items as a sum total that reflect how the subjects responded with bias or without bias tendencies.

Psychiatric Nurse – A registered nurse (staff nurse) in active clinical practice, working with adults with a diagnosis of a mental disorder, such as, schizophrenia. The psychiatric nurses recruited for the study will be relatively novice in practice to focus on early career educational needs rather than the range of experiences that may complicate analyses.

Study Population

The National Student Nurses Association (NSNA), a nonprofit organization, was founded in 1952 for the advocacy, mentorship, and promotion of skills development of nursing students (NSNA, n.d.). Membership is approximately 60,000 and extends from the 50 states in the U.S. to include Puerto Rico, Guam, District of Columbia, and the U.S. Virgin Island. Students enrolled in associate, diploma, baccalaureate, and generic graduate programs are eligible for membership.

Enrollment into NSNA is voluntary with four main categories of membership. To be eligible for active membership, pre-nursing and nursing students must be enrolled in state-approved nursing programs leading to licensure as a RN or leading to a baccalaureate degree in nursing. Associate members are pre-nursing students enrolled in college or university programs designed to prepare students for entrance into an associate or baccalaureate nursing program. Pre-nursing student membership are for students enrolled in state-approved programs leading to licensure as a RN, who are identified by the schools as pre-nursing, but not yet in the nursing major program. Finally, individual membership is for students enrolled in a state-approved nursing program leading to RN licensure or baccalaureate degree in nursing in a State where there is no school chapter or state association.

The American Psychiatric Association (APNA) is an independent organization that has been in existence for many years (APNA, n.d.). It is the largest psychiatric-mental health nursing organization with more than 40 chapters, nationally and internationally. APNA has more than 10,000 members who work in a variety of settings including inpatient, outpatient, prisons, private practice, education, and the military. The education level ranges from basic psychiatric nursing to the doctoral level. Full-time students and retired registered nurses are also eligible for membership.

The NSNA and APNA are national organizations with extensive national representation. Obtaining a sample from the NSNA and APNA population provided diversity in geographical and individual characteristics in the sample.

Sample

The primary sample recruited for this study was drawn from a national pool of registered nurses who indicate they work with adult psychiatric patients in the U.S., who were volunteer subjects. The nurses are psychiatric nurses with at least six months of experience or more generated from a list provided by NSNA. The nurses were contacted via e-mail, via NSNA, pursuant to their agreement to complete a follow-up survey via SurveyMonkey®.

A second sample was recruited for this study at a national APNA conference in Upstate New York on May 2015. The nurses are psychiatric nurses, working as staff nurses, with at least 6 months of experience in psychiatry who volunteered to participate. The nurses were provided with a paper copy of the survey in a sealed envelope that was returned sealed after completion. An additional 2 subjects were obtained through snowball sampling technique from a local hospital in Long Island to supplement the sample. These 2 nurses each had at least 10 years of psychiatric experience and volunteered to do a paper copy of the survey. Sealed envelopes were also provided.

Panel of Experts

In the first phase of the study, a select group of experienced nurses comprised the expert panelists for the content validity phase. Six experienced psychiatric nurses, with at least a baccalaureate degree level of nursing education and more than five years of clinical experience, were invited to serve as panelists. This group comprised of recommended colleagues who were contacted by mail or phone and invited to participate.

The experts were chosen specifically based on their training and experience in the areas of psychiatry and psychiatric nursing. Expert A is a psychiatric nurse with more than 20 years clinical experience with a baccalaureate degree in nursing. Expert B is a psychiatric nurse practitioner with 13 years of psychiatric experience. Expert C is a registered nurse with a baccalaureate degree in nursing and 27 years of psychiatric nursing experience. Expert D is also a registered nurse with a baccalaureate degree in nursing and 19 years of psychiatric nursing experience. Experts E and F are adult and family nurse practitioners, respectively, with doctor of nursing practice (DNP) degrees working with psychiatric in-patients. Expert E still maintains clinical experience as a psychiatric registered nurse and has 25 years psychiatric nursing experience. Expert F has 40 years of nursing experience with more than 30 in psychiatry. The researcher convened the expert panelists at a mutually agreed upon social setting, offering some privacy, and the instruments, vignettes, and research questions were provided for content validity. They were instructed on their roles to review and assist in modifying, if necessary, the vignette and items selected to be incorporated into the instrument for use in this study.

In the second phase of the study, a survey instrument was assembled from the items and vignettes and distributed to a convenience national sample of nurses who met the criteria of the study. In this phase, participants were randomized to receive one of two vignettes to test their responses to specifically manipulated patient descriptions. The survey instrument was distributed via email and paper questionnaire. Participation was voluntary and anonymous.

Sample Size and Power Estimation

Power analysis was used to estimate the size of the sample needed to reduce the risk of a type II error (which does not find a significant effect, difference or relationship when, in fact, one does exist) to strengthen the validity of the study (Polit & Beck, 2012). To avoid a type II

error the significance criterion, which is α, an estimated effect size, and the power of the study (1- β), must first be established. The effect size is "the magnitude of the relationship between the research variables" (Polit & Beck, 2012, p. 423). The stronger the relationship between the variables, the easier it is to detect significance even with small sample sizes. Based on similar studies with other professionals and Western society, in general, showing strong relationships between the research variables, there is good indications that the relationship will also be strong in this study. The estimation for this study used the conventional standards of α ≤ .05 and the power set at .80 for a moderate effect size of .35 (Polit & Beck, 2012).

Parametric testing was done on one part of the attitude instrument which required ≥30 for the acceptable power of .80. The semantic differential portion of the attitude instrument and the Knowledge of Neuroleptic Medication (KNM) items, required 5 – 10 subjects for each item which gives a range of 60 – 120 subjects needed to meet the standards set for this study (Tinsley & Tinsley, 1987). Therefore, a minimally sufficient number of subjects was set at 120.

Human Rights Protection

Institutional Review Board (IRB) approval was obtained from Molloy College. Survey procedures provided anonymity for the respondents. Approval of the method, procedures for collection and protection of the data, and analysis procedure were included. Participation in this study was voluntary and participants were allowed to withdraw at any time. There was no foreseeable risk of harm to the participants. For the survey, invitations were sent online and anonymity was offered via survey-monkey, with an option to include an email for follow-up or eligibility for a $100 gift card incentive to be sent. The researcher convened the panel of experts at a mutually agreed on place and time of their choosing, or in a select few situations, responded in writing to the investigator. For the paper version, a general public invitation was made to the

attendees at the APNA conference. The survey was provided and returned in sealed envelopes, to maintain anonymity. These participants were also eligible for the $100 gift card incentive by later providing an e-mail contact to the researcher on-line. Consent was presumed based on participants' willingness to complete the survey.

Benefits of the Study

The benefits of this study were to develop a valid and reliable instrument and technique that will allow for the measurement of the subtle negative attitudes nurses may have towards psychiatric patients who are obese in the clinical setting. This instrument will assist in understanding the nurses' underlying knowledge and attitudes while identifying and directing educational needs of psychiatric nurses. In addition, the instrument will aid efforts to mitigate negative or biased attitudes in caring for psychiatric patients who are obese or at high risk of becoming obese. It is known that negative attitudes affect the therapeutic relationship and how patients become engaged in and maintain treatment (Varcarolis & Halter, 2010). For psychiatric patients who are at a high risk of obesity with the atypical anti-psychotics, the nurse-patient relationship is very important in working effectively with patients to promote healthy life-style changes and ultimately improve the physical health of people with mental illness. By participation in the study, the participants will have the opportunity to gain some insight into their own attitudes and knowledge about the atypical anti-psychotic medications in a safe environment.

Methodology

Following the outcome from the experts, the psychometrically tested instrument was provided to the nurses who met the criteria for the sample. One of two similar vignettes about an individual with a severe mental illness was provided to the participants who were randomly

assigned with the only difference being the weight of the character in the vignette. Vignette A describes a character depicted as obese and vignette B describes a character of average-size. The vignettes preceded the on-line survey questions which related to the vignette. The sample was split in half by birth dates (one half of the sample with birth dates 1/1 - 6/30 received vignette A, the second half of the sample with birth dates from 7/1 - 12/31 received vignette B) via SurveyMonkey® logic allowing respondents to jump to questions based on their responses to their birth month. This provided an online randomized distribution to participants of one of the two vignettes and identical questions based on the vignette.

Vignettes

The subtle negative attitudes and biases towards obesity and the mentally ill are often difficult to detect as individuals are sensitized to know what acceptable behaviors are to such stigmatized groups and do not readily admit to these behaviors (Martin, Pescosolido, & Tuch, 2000). According to Hughes (1998) vignettes are stories about individuals and situations which make reference to significant aspects in the study of perceptions, attitudes, and belief. In vignettes, participants are asked to respond to stories with what they would do or how they think a third party should respond to a particular situation (Hughes, 1998). Therefore, a vignette approach to elicit the knowledge, attitude, and self-reported behaviors of psychiatric nurses to obese mentally ill patients was used in this study.

Data Collection and Handling

Prior to the implementation of the study, the panel of experts was asked to assess the instrument. Each session lasted 1 - 2 hours. The Knowledge of Neuroleptic Medications (KNM), the adapted *Physicians' Attitude Towards Obesity Treatment* instruments and the vignettes were provided to the experts for discussion as a group or individually with the researcher.

Initially, the expert panel addressed the establishment of content validity of the instruments to measure the psychiatric nurses' knowledge of the atypical neuroleptic medications and attitude toward patients who are obese and who are receiving atypical psychiatric medications. The discussion was used to generate or modify items for a single instrument that would assess psychiatric nurses' knowledge and attitude as it impacts the nurses' effectiveness in empowering patients to combat their increased health risks, secondary to the atypical medications. The experts were also used to estimate the length of time it would take to complete and test the survey. The times ranged from 11 to 14 minutes with an average time of 12 minutes. Therefore the time of approximately 20 – 25 minutes was noted in the survey distributed to the participants.

Following the recommendations of the experts, the instruments were randomly assigned to the two groups by birth date and the jump logic of SurveyMonkey® (i.e. participants who click on one of two responses are directed to the two different sequences of questions). These were distributed on-line via SurveyMonkey® and via sealed paper copies to nurses who self-identified as psychiatric nurses. The on-line survey was distributed to the NSNA convenience sample of new graduates from three previous years who agreed at that time to be followed up by survey in the future. The instructions stated that it would take approximately 20 to 25 minutes to complete, based on a conservative estimate of the experts' average completion time of 12 minutes. Invitations were sent out to 919 nurses and data collected over a period of six weeks with reminders sent out after two weeks. The survey response dwindled when the survey was left open an additional week with tapering of responses and respondents with non-psychiatric experience. There were 231 potential participants to the on-line survey at the end of six weeks giving a response rate of 25%. The paper version of the survey was provided by the researcher at

the APNA conference, Upstate New York, and locally to the two nurses who self-identified as psychiatric nurses, in sealed envelopes without identifiers. This method was selected as it provided a national sampling of psychiatric nurses with at least six months of psychiatric nursing experience. The researcher did not have access to names or contact information. The collected data will be kept secure for five years, as recommended (Creswell, 2009).

Data Analysis Plan

Following the recommendations of the expert panel and the review of the literature that support measuring the attributes of the concept, the single survey instrument was finalized with modifications of items as needed. Approximately 35 items were constructed or re-constructed, reflecting the behavioral, affective, and cognitive domains of the three study variables, to provide 34 items, most representative of the concepts identified. The 34 items were then added to the 12 existing knowledge items. Items were later removed from each subsection during analysis, as recommended by the results of the SPSS analysis.

To get evidence of content validity in the attitude items, the conceptual definition of each concept variable, and a grid with a rating scale of the items from the instruments was given to the 6 experts on the panel. The content validity index (CVI) is based on how much the experts agree on the rating of the relevance of each item to the objectives. A 4-point rating scale was used: (1) "not representative"; (2) "needs major revision to be representative"; (3) "needs minor revision to be representative"; (4) "is representative."

The CVI is the proportions of items given a rating of "1 or 2" or "3 or 4" by the experts on the 4-point scale. The CVI will be calculated using the number of expert judges rating an item "3" or "4" over the number of judges. For example, if the 6 experts gave a rating "3" or "4" to an item, then 6/6 = 1, an ideal CVI. The items with ideal CVIs also indicate perfect inter-rater

agreement. Revised items and rationale for the revision was based on the feedback provided by the experts. The content validity of the whole instrument (S-CVI) was calculated using the Average Method where the individual CVIs of each item in the instrument are averaged for a scale CVI (S-CVI). The closer the S-CVI is to 1, the more powerful the content validity (Polit & Beck, 2012; Waltz, Strickland, & Lenz, 2010).

Testing the reliability of this instrument when used with the sample provided information on its consistency in measuring the identified concept. So, in testing the internal consistency to ensure that the test items are representative of each of the variables, the Cronbach's Alpha (α) test (coefficient alpha) was used to test reliability within each variable since there is no "right" or "wrong" answers on the scale. Based on the 20/25 items being measured on a 4-point Likert scale, the potential scores would range from 20/25 – 80/100. Cronbach's Alpha looks at the correlation of the score for each item with the total score for each of the subject. It is expected that the subject with a high total score should also have high scores on each item. The Cronbach's Alpha range is 0.00 - (+)1.0 and the closer to (+)1.0 the greater the internal consistency. SPSS allows for each of the items within the scales to be assessed and their contribution to the Cronbach's alpha is determined. Items can be removed when the overall internal consistency improves if the content of the items is determined to be unclear in relation to the variable. These are reported in the results section.

Instruments - Measures

1. Measuring Nurses' Knowledge of Atypical Antipsychotic Medications (NKAAM)
   The knowledge measure (items) for this study derives from an existing instrument

reported by Byrne, Deane, and Coombs (2005). This study, assessing the correlation between psychiatric nurses' knowledge, beliefs, and self-reported behavior in relation to patient's

adherence with treatment, used a convenience sample. The knowledge instrument was developed specifically for that study but permission has been granted for use in this study. The items were focused on the most commonly and frequently used atypical medications and formulated from pharmacological product information and early medication studies with these medications. There is no mention of the use of experts or measures to ensure reliability and validity in constructing the instrument and little psychometric information. Since the responses are dichotomous, item analysis to differentiate the individual items and the Kuder Richardson test were done on the sample in the study to assess its reliability and reported in the results section.

2. Measuring Nurses' Attitudes Toward Obese Patients Instrument (NATOP)

The attitudes measure (items) for this study derives from an existing instrument reported by Foster and colleagues (2003). A study of physicians in primary care was conducted using a survey method to examine the attitudes of physicians towards obesity and its treatment. It assessed five different domains. The domains were: (a) causes of obesity, (b) attributes of obese individuals, (c) beliefs about treatment, (d) weight loss outcomes, and (e) the relative efficacy of treatment. The instrument was piloted and modified prior to being used. The survey style used by Foster et al. (2003) included questions using both Likert scale and semantic differential styles. The survey takes ten minutes to complete. Permission has been granted for use of this instrument in this study, which will include a combination of items from the study that will be modified for nurses.

The Likert-style scale using items to measure physicians' attitude about the personal attributes of obese individuals and the five-point Likert scale used to measure physicians' attitude towards obesity treatment were adapted for nurses in this study and renamed the *Nurses' Attitude Towards Obese Patients* (NATOP) (See appendix A). The NATOP has 14 items. These

items were assessed for content validity by the panel of experts. Six of the items received ideal

content validity index (CVI) of 1 and 8 received CVIs of 0.83. A coefficient alpha of .03

determined from the sample (n= 143) in the study, examined the internal consistency for the

modified version of the physician scale and reported in the results section.

3. Semantic Differential Scale – Intrinsic Attitudes Toward Obese Patients (IATOP)

In addition to the attitudes scale adapted for nurses, this study added a semantic

differential scale to elicit psychological responses from subjects in response to vignettes. Ten bi-

directional adjectives were used to measure the nurses' psychological attitudes toward the

psychiatric patients in the vignettes. These items did undergo a reliability test of internal

consistency (coefficient alpha) .47 on the final sample (n= 143). Concurrent validity using the

physician-modified measure for nurses (NATOP) as the corresponding measure related to

attitudes was also done. These are further discussed in the results section.

4. Self-Reported Behaviors Toward Obese Patients Instrument (SRBTOP)

A measure for nurses' self-reported behaviors was used in this study. This newly

developed scale designed for the study includes an additional 10 items that use a five-point

Likert-style scale to measure the self-reported behaviors of the psychiatric nurses towards

patients in the vignette presented. The responses were examined for statistically significant

differences in responses to vignette A or B which might indicate a difference between the nurse's

attitude and the vignette character's weight. The Likert-style scale measures were: (1) unlikely;

(2) somewhat unlikely; (3) sometimes likely; (4) more often likely; and (5) most likely.

The modified instrument was given to the expert panelists to elicit responses to the items.

Further modification was done as indicated by the experts before adapting the instrument,

ensuring content validity. Similar steps were taken as described for the data analysis, to obtain

the CVI. Data were analyzed using the Statistical Package for the Social Sciences (SPSS) 22.0.

The Cronbach's Alpha was calculated to test reliability of the instrument. Descriptive statistics

were calculated to provide the mean, median, and standard deviation (s.d.) of independent

variables such as age, gender, years of experience and educational level. A t-test and analysis of

variance (ANOVA) were done to compare differences in means across age and education level.

Chi square tests were done on variables that do not meet parametric assumptions.

Vignettes Developed for the Study

A vignette approach was used as it allows for the investigator to manipulate hypothetical

narratives and elicit response from the subjects in a way that minimizes response-set bias

(Martin, Pescosolido, & Tuch, 2000). The following vignette was developed specifically for the

study by the researcher to keep constant all aspects of the clinical symptoms of the

patient/character, but allowing the manipulation of the weight (size) of the character in the story.

Vignette A and Vignette B are identical in gender, symptoms and behaviors, with the exception

of the patient anthropomorphic measures: one character is normal weight; the other is 250

pounds.

Vignette A. A 22 year old female, with history of a prior admission 8 months ago, has
been admitted to your unit with a diagnosis of schizophrenia. Her family had called 911 due to
reports of increasingly strange behavior over the past 3 weeks with the patient becoming more
and more suspicious of others, including the family. She has stopped eating meals prepared by
others only using packages that have been sealed and tamper proofed. She feels she is being
watched through the windows, though there are blinds and curtains, and feels she is being
tracked by a chip in her head. She believes people also know what she is thinking and she hears
voices telling her to do things and where to go. She has become isolative from friends and family
and spends most of the time in her room. She has no known history of drug or alcohol abuse. Her
urine toxicology was negative on admission. She does not smoke cigarettes. There is no known
history of medical illnesses or allergies. She lives with both parents and a 15 year old brother.
She is not involved in any intimate relationship presently, having broken up with boyfriend of 2
years, 1 month ago. It is unclear at this time who initiated the break-up or why. She has no work
history and is in her 2nd year in college. Leisure activities are reading, playing video games, and
going to the movies. She is 5' 4" tall and weighs 250 lbs. She is appropriately dressed. She has

been keeping to herself on the unit and is often seen looking furtively around the unit. She has been re-started on Risperdal 1 mg twice daily po and Cogentin 1 mg po at bedtime.

Vignette B. A 22 year old female, with history of a prior admission 8 months ago, has been admitted to your unit with a diagnosis of schizophrenia. Her family had called 911 due to reports of increasingly strange behavior over the past 3 weeks with the patient becoming more and more suspicious of others, including the family. She has stopped eating meals prepared by others only using packages that have been sealed and tamper proofed. She feels she is being watched through the windows, though there are blinds and curtains, and feels she is being tracked by a chip in her head. She believes people also know what she is thinking and she hears voices telling her to do things and where to go. She has become isolative from friends and family and spends most of the time in her room. She has no known history of drug or alcohol abuse. Her urine toxicology was negative on admission. She does not smoke cigarettes. There is no known history of medical illnesses or allergies. She lives with both parents and a 15 year old brother. She is not involved in any intimate relationship presently, having broken up with boyfriend of 2 years, 1 month ago. It is unclear at this time who initiated the break-up or why. She has no work history and is in her 2nd year in college. Leisure activities are reading, playing video games, and going to the movies. She is 5' 4" tall and weighs 124 lbs. She is appropriately dressed. She has been keeping to herself on the unit and is often seen looking furtively around the unit. She has been re-started on Risperdal 1 mg twice daily po and Cogentin 1 mg po at bedtime.

Instrumentation Summary to Answer the Research Questions: Items on the Survey

The following table formed the basis of the analysis based on the results from the expert panel review. Items on the instrument(s) were identified for each of the variables of interest including: Nurses' Knowledge of Atypical Antipsychotic Medications (NKAAM); Nurses' Attitudes Toward the Obese Patient (NATOP) Scale; Intrinsic Attitudes Toward the Obese Patient Scale (IATOP – Semantic Differential Scale); Self-Reported Behaviors Toward the Obese Patient (SRBTOP) Scale.

Specific levels of analyses were determined after the instrument was assessed by the expert panel and tested to determine if they meet assumptions for parametric or nonparametric hypotheses. Appropriate statistical testing was done (SEE APPENDIX B).

Summary

This chapter described the methodology that was used to conduct this study of the knowledge, attitudes, and self-reported behaviors of psychiatric nurses working with psychiatric patients who are often obese and at high risk of obesity and other chronic medical conditions. The instrumentation, data collection, and plans for data analysis are also described. A quantitative descriptive design was used in this study. The sample was more than the maximum range needed and composed of nurses through two large national nursing organizations, the NSNA and the APNA.

A data collection inventory was developed specifically for this study and includes the use of vignettes. Six experts in psychiatric nursing were used for content validity and estimated timing prior to data collection. Data were collected via on-line and sealed paper and pencil surveys. Data analysis was done using SPSS.

CHAPTER 4

FINDINGS

The purpose of this study was to develop and test an instrument to measure the knowledge, attitude, and self-reported behaviors of psychiatric nurses toward obese psychiatric patients on atypical anti-psychotic medications and to describe the knowledge and attitudes of the psychiatric nurse towards patients on atypical anti-psychotic medications. This chapter presents the sample characteristics, construct validity and reliability of the measures in the survey instrument including modifications needed for the final analysis. It includes statistical analyses related to the hypotheses along with additional descriptive findings. The findings are presented both in the narrative and in tables.

Sample Characteristics

There were 231 nurses who responded to the e-mail invitation through the National Student Nurses Association (NSNA) to participate in the anonymous on-line survey via SurveyMonkey®. Participants who indicated no psychiatric nursing experience were removed (n=71). After data cleaning, respondents who did not proceed past the demographic questions to the actual study questions (n=25) were removed. There were 6 respondents who answered the knowledge portion of the survey but did not answer questions after the vignette who the researcher kept for analysis of the knowledge and general attitudes towards obesity data only. An additional 14 nurses participated in a paper version of the survey. The sample that participated in the paper version survey included members of the American Psychiatric Nurses Association (APNA) (n=12) solicited at a conference in Upstate New York. Two psychiatric nurses who work in a hospital in the suburb of Long Island also participated. There were a total of 149

participants in the final data set. The demographic characteristics of the study sample (n=149) is

presented in Table 1.

Table 1

Demographics of Study Participants

Demographics	n	%
Gender		
Male	18	12
Female	131	88
Age (in years)		
18 - 25	31	21
26 - 33	50	34
34 – 41	24	16
42 - 49	14	9
> 50	29	20
Missing	1	
Marital Status		
Single	56	38
Married	75	51
Widowed	3	2
Divorced	12	8
Separated	2	1
Missing	1	
Race		
White/Non-Hispanic	116	78
Black/AA/Non-Hispanic	12	8
Hispanic	6	4
Asian	10	7
Other	4	3
Missing	1	
Highest basic nursing degree		
Diploma	5	3
Associate	47	32
Bachelors	85	57
Master's or higher	12	8
Missing	1	
Experience as a RN		
6 months – 1 year	1	1
> 1 yr less than 2 yrs	21	14
> 2 yrs less than 5 yrs	48	32
> 5 yrs	78	53
Missing	1	
Experience as a Psychiatric RN		
6 months – 1 year	1	1
> 1 yr less than 2 yrs	30	20
> 2 yrs less than 5 yrs	56	38
> 5 yrs	62	41

Table 1

Demographics of Study Participants (continued)

Demographics	n	%
Height (in inches)		
< 60 (5' 0")	1	1
60 – 64 (5' 0" – 5' 4")	56	39
65 – 69 (5'5" – 5' 9")	65	45
70 – 74 (5'10" – 6' 2")	18	13
> 75 (6' 3")	3	2
Missing	6	
Weight (in lbs)		
< 100	1	1
100 – 110	6	5
111 – 121	7	5
122 – 132	20	15
133 – 143	15	11
144 – 154	10	8
155 – 165	16	12
> 166	58	44
Prefer not to answer	13	
Missing	3	

The 149 study participants were comprised of 88% females and 12% males. Of these participants, 21% were 18 to 25 years of age, 34% were 26 to 33 years old, 16% were 34 to 41 years old, 9% were 42 to 49 years old, and 20% were over 50 years old. Fifty-one percent of the participants were married and 38% were single, accounting for 89% of the sample. The majority of the sample (78%) identified themselves as "White/Non-Hispanic" which is consistent with the national race/ethnicity demographics of RNs in the workforce in 2008 with 83% identified as "White/Non-Hispanic" (Health Resources and Services Administration [HRSA], 2015).

Fifty-seven percent (57%) of participants indicated having a Bachelor's degree as their highest level of nursing education while another 32% indicated having Associate degrees. In this

sample, experience as a registered nurse ranged from 6 months to more than 5 years with 14% having "more than 1 year and less than 2 years", 32% with more than 2 years but less than 5, 53% had more than 5 years, and 1% had less than 6 months nursing experience. Most of the nurses had more than 5 years (42%) of psychiatric nursing experience, while 38% had more than 2 years and less than 5 years of experience, and 20% had more than 1 year but less than 2 years of psychiatric nursing experience.

The height and weight were optional questions with height having missing data from 6 participants. Thirteen participants selected "prefer not to answer" the weight question while 3 participants chose not to answer. Most of the height of the nurses ranged from 5 feet to 5 feet 9 inches with 39% being 5' – 5'4", 45%; 5'5"- 5' 9", and 13% being 5'9" – 6'2". A large percentage (44%) of the sample weighed more than 166 pounds and 1 participant weighed less than 100 pounds.

Analysis of Psychometric Properties

In developing the instrument, the constructs for the intrinsic attitudes and self-reported behavior variables evolved as theoretically defined, rather than based on factor loadings. To get evidence of content validity, the conceptual definition of each variable, with a grid with a 4-point rating scale of the 34 items from the instrument, was given to the 6 experts. The content validity index (CVI) is based on how much the 6 experts agree on the rating of the relevance of each item to the objectives. Items with ideal CVIs also indicate perfect inter-rater agreement. Twenty-five of the items received ideal CVIs of 1.0. Nine of the 34 items received CVIs of 0.83 from the experts indicating that 5 of the 6 experts rated the items "3" or "4" with the content validity at an acceptable level. Item # 25 was revised as recommended and kept, based on the CVI of 0.83.

The revision and rationale based on the experts' feedback are provided on the accompanying grid (see appendix C).

The content validity of the (S-CVI) of the whole instrument was calculated using the Average Method where the individual CVIs of each item in the instrument are averaged for a scale CVI (S-CVI) of 0.95, which is close to 1, a powerful content validity. A power analysis indicated a minimum of 120 participants was needed for sufficient power to detect a medium size effect and this study had 149 participants for the knowledge portion and 143 for the complete study meeting assumptions required to achieve a medium size effect.

The complete *Knowledge Attitude and Self-Reported Behavior Inventory* (KASRBI) consisted of four subsections. The subsections are divided into knowledge of atypical anti-psychotic medications (NKAAM), nurses' attitudes toward obesity (NATOP), nurses' intrinsic attitudes toward obese patients (IATOP) using a semantic differential scale and nurses' self-reported behaviors toward obese patients (SRBTOP). The IATOP and SRBTOP were both administered following a vignette, randomly assigned to respondents. Since sum totals of the first two sub-sections of the instrument were not attainable, Cronbach's alpha of the instrument as a whole was not warranted. However, the Cronbach's alpha reliability was calculated for the remaining subsections of the instrument and adjustments were made.

Data Analysis

This section will describe each of the variables as they were assessed for reliability and related hypotheses for the study.

Nurses' Knowledge of Atypical Antipsychotic Medications (NKAAM)

The Cronbach's alpha for the 12-item knowledge section (NKAAM) was initially -.182. Items 2 and 8 were removed based on the low scoring on both items, to improve reliability, but

ultimately kept in the final instrument. Cronbach's alpha increased from -.182 to zero only after

removing items 10-12, on medication side-effects. There was no alpha coefficient reported in the

original study that developed this portion of the instrument which remained unchanged. Since the

knowledge items as a whole do not achieve an adequate reliability, the items were run separately

and reported descriptively.

Kendall's correlation matrix indicates statistically significant correlations on the final

10-item NKAAM. Knowledge that Olanzapine should be taken with meals was positively

correlated to awareness of postural hypotension as a possible side-effect of Risperidone

(p=.040). Knowledge of whether blockade of dopamine or serotonin causes a reduction in

negative symptoms were correlated positively (p =.014). As a subscale for knowledge of side-

effects, items 10, 11, and 12 were positively correlated (p =.000).

Convergent validity was done through comparisons between scores for nurses in this

sample and the participants using the original knowledge scale, the *Knowledge of Neuroleptic*

Medication (KNM) (Byrne, et al. 2005). On the NKAAM, the mean score for correct responses

was 8.3 (SD = 1.38) out of a possible score of 12 while the mean score on the KNM was 7.39

(SD = 2.09).

Descriptive analysis was done on the 12 items in the knowledge sub-section and the

scores of the NKAAM (*M* =8.3, *SD* = 1.38) indicate that the nurses were fairly knowledgeable

about the medications (see Table 2).

Table 2

Results of Knowledge Questionnaire

Questions	% Correct	% Incorrect
1)The new generation of antipsychotics is the first line treatment for psychosis	71	29
*2) Neuroleptics rather than benzodiazepines should be used for sedation	48	52
3) There is no medication that has demonstrated effectiveness against negative symptoms in psychosis	85	15
4) All first episode clients should have a neuroleptic free period of at least 48 hours	59	41
5) Olanzapine should be taken with meals	70	30
6) Blockade of Dopamine produces a reduction in negative symptoms	54	46
7) Serotonin 5.- HT2 blockage produces a reduction in negative symptoms	56	44
*8) The start dose for Resperidone in first episode psychosis is 1mg twice a day	42	58
9) The recommended dosage for Olanzapine is 5 mg to 20 mg	91	9
10)Patients who have an initial dysphoric response to medication are more likely to adhere to medication	91	9
11) Patients taking Olanzapine are not susceptible to weight gain	91	9
12) Patients starting on Resperidone are susceptible to postural hypotension	75	25

*Items removed for increased reliability

Most of the nurses (71%) responded correctly to question number one on the use of atypical anti-psychotics as "…. first-line treatment for psychosis." Just over half (52%) were unaware that anti-psychotics were preferred over benzodiazepines for sedation. However, the majority of nurses (85%) responded correctly that there is medication available that demonstrates effectiveness against negative symptoms in psychiatry. Fifty-nine percent agreed that "all first

episode clients…" should have at least 48 hours without anti-psychotic medication. In regards to *Olanzapine,* 70% were aware that it does not have to be given with meals. Just under half (46%) incorrectly responded that blocking dopamine reduces negative symptoms while (54%) were correct. Conversely, 56% were correct in their response that blocking serotonin reduces the negative symptoms. More than half of the responses (58%) were incorrect on the starting dose of Risperidone so this item was later removed. The majority of the nurses responded correctly (91%) to the questions on the recommended dose of Olanzapine, expected compliance with medication after a side-effect, and the likelihood of weight gain with Olanzapine. Approximately 75% were aware of postural hypotension being a possible side effect when starting Risperidone.

The following analyses tested the first hypothesis related to the first research question: Namely, that there would be an association in psychiatric nurses' knowledge about atypical antipsychotic medications based on gender, experience or age. Due to the poor reliability on the total scale scores, individual items were tested.

There were too few males in the sample to test the association of gender and knowledge. Since years of experience is usually correlated with age, the variable of age was not tested. Cross tabulations were done on the knowledge items on the NKAAM and level of psychiatric experience. A statistical significance ($p = .006$) was found with item number two on the use of neuroleptics rather than benzodiazepines for sedation. Twenty-four percent of the nurses with more than 5 years experience (41%) and 23% of those with "*more than 2 years, less than 5 years*" (40%) who responded, answered incorrectly. Of the nurses with more than one year but less than two years experience, 14% of these 19% respondents answered correctly, possibly due to fairly recent graduation from nursing school. Since more nurses gave incorrect responses than

those who answered correctly, this item was removed for increased reliability but ultimately kept in the final instrument.

A One-way ANOVA was conducted to compare scores on the NKAAM with years of RN experience (>1 yr - < 2 yrs; >2 yrs <5 yrs; & >5yrs), psychiatric experience (>1 yr - < 2 yrs; >2 yrs <5 yrs; & >5yrs), age (18-25, 26-33, 34-41, 42-49, & >50), and level of education (Diploma, Associate, Bachelor's, & Master's or higher). There was no significance between nursing degree, age, RN experience and the NKAAM items at the $p < .05$ level set for this analysis. However, similar to the results of the cross tabulation test, significance was found between years of psychiatric experience of the sample and the scores for item number 2 above [F = (3, 145) = 4.78, p = .002]. The significance was between the group of nurses with "*more than one year, less than two years*" and those with "*more than two years and less than five years*" and also between the groups with "*more than two years and less than five years*" and the group of nurses with more than five years psychiatric experience. Post Hoc analysis using the Bonferroni procedure for comparison indicated that the mean score for the group with psychiatric experience "*more than one year, less than two years*" (M = .77, SD = .43) compared to the group with experience level "*more than two years, less than five years*" (M = .39, SD = .49), and the "*more than two years, less than five years*" group compared to the nurses with more than five years psychiatric experience (M = .42, SD = .50) were significantly different for item number 2.

Nurses' Attitudes Toward Obese Patients (NATOP)

The authors of the obesity subsection that was adapted for nurses did not report on reliability of their instrument. A true reliability of the NATOP subsection was not possible since a sum total was not attainable because the items reflected different aspects. However, through initial reliability testing the alpha coefficient result for the 14-item obesity subsection, NATOP,

of this instrument was .03. Items 13 to 18 were removed as they were assessing general

knowledge of obesity rather than attitudes towards obesity and the new alpha coefficient

increased to .11. Deleting item number 19, "*Most obese patients are well aware of the health*

risks of obesity," from the NATOP subscale improved reliability from.11 to .17, but since the

reliability was still poor the item was kept. All results using a total score would be interpreted

with caution and individual items were tested.

Scores closer to zero on the NATOP indicate less biased responses and the further away

from zero the greater the bias. Scores around 0.50 indicate that half the respondents were less

judgmental in their responses while half were more judgmental in their responses. The original

14 item NATOP sub-section of the instrument had a mean score of 10.88 (SD = 1.36). The mean

score for the final 8-item NATOP is 5.86 (SD = 1.18). The physicians' study used a 5-point

Likert scale and provided individual scores for the 14 items ranging from a mean score of 2.0 –

4.5 (SD = ± 0.6 – 1.1) so convergent validity could not be done.

Descriptive analysis was done on the 14 items in the general knowledge and attitude

towards obesity sub-section (NATOP) and presented in Table 3.

Table 3

Descriptive Data from the NATOP Responses

Items	*% Yes*	*% No*
*13. I believe it is necessary to educate obese patients on the health risks of obesity	97	3
*14. Obesity is a chronic disease	91	9
*15. I make accommodations for obese patients	91	9
*16. Obesity is associated with serious medical conditions	99	1
*17. Nurses should be role models by maintaining a normal weight	90	10
*18. I feel compelled to suggest weight loss programs to obese patients	37	63
19. Most obese patients are well aware of the health risks of obesity	47	53
20. Most obese patients could reach a normal weight (for height) if they were motivated	49	51
21. Most obese patients will not lose a significant amount of weight	52	48
22. I have negative reactions towards the appearance of obese patients	15	85
23. For most patients, long-term weight maintenance of weight loss is impossible	25	75
24. It is acceptable to use "scare tactics" to obtain compliance of the obese patient	6	94
25. I feel uncomfortable when providing care to an obese patient	8	92
26. It is difficult for me to feel empathy for an obese patient	5	95

*Items removed from final Instrument

A large proportion of the nurses responded "yes" to items 13 to 17 (90% or higher)
indicating some knowledge of obesity. Ninety percent felt nurses "*should be role models by
maintaining a normal weight.*" The majority of the nurses (63%) indicated feeling "*…compelled
to recommend weight loss programs.…*" to their obese patients while just over half (53%) felt
patients were aware of the health risks associated with obesity. For items 20 "*Most obese*

patients could reach a normal weight...." and 21 "*Most obese patients will not lose a significant amount of weight*" the responses were almost evenly divided between "yes" (49% & 52%) and "no" (51% & 48%) respectively. Eighty-five percent did not have "*…negative reactions….*" to an obese person and 75% did not think long-term weight loss was impossible. The majority of the nurses (94%) did not think it was acceptable to "*….use scare tactics...*" with the obese patient. Most of the nurses also felt comfortable around obese patients (92%) and (95%) were able to empathize with them.

The following analyses tested the second hypotheses related to the first research question: that there would be associations in psychiatric nurses' attitudes about obesity based on gender, experience, age or weight.

There were too few males in the sample to test the association of gender and attitudes. Since years of experience is usually correlated with age, the variable of age was not tested. For the NATOP section relating to nurses attitudes towards obesity, a one-way ANOVA was conducted to compare scores with years of psychiatric experience (>1 yr - < 2 yrs; >2 yrs <5 yrs; & >5yrs), age (18-25, 26-33, 34-41, 42-49, & >50), and level of education (Diploma, Associate, Bachelor's, & Master's or higher). There was no significance between psychiatric experience, age, nursing degree and the NATOP items [F= (3, 145) = 1.87, p=.138], [F= (4, 143) = .726, p= .575], and [F= (3, 145) = .705, p= .551], respectively.

The relationship between nurses' general attitudes towards obesity subsection (NATOP) and the participants' weight was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure there was no violation of the assumptions of normality, linearity, and homoscedasticity. There was a significant, positive correlation between item 19 "*Most obese patients are well aware of the health risks of obesity*"

and the participants' weight, $r = .21$, $n = 133$, $p < .015$. There was also significant positive correlation between item 19 above and psychiatric nursing experience, $r = .17$, $n = 149$, $p < .037$.

Intrinsic Attitudes Towards Obese Patients (IATOP)

The initial Cronbach's alpha for the 10-item intrinsic attitudes section (IATOP) was .47 for the whole subsection and specifically .41 for vignette A and .52 for vignette B. Items 32 "*Clumsy………Not Clumsy*" and 36 "*Sloppy……..Neat*" were removed from the final version of the instrument to improve reliability. The final Cronbach's alpha achieved for the whole subsection was .63 with .62 for vignette A and .64 for vignette B which is closer to .7 recommended for reliability. This resulted in a reduced scale of 8 items by removing those items and the increased reliability justifies its use for subsequent analyses, using caution in the interpretation of results.

The following analyses tested the second hypothesis related to the first research question: that there are differences in psychiatric nurses' attitudes toward mentally ill patients who are obese and being treated with atypical antipsychotic medications compared to those who are normal weight.

The IATOP consists of items relating to responses to the two vignettes of patients varying in size, for comparison of the two study groups. The scoring range for this semantic differential portion of this instrument was from 1 to 5. Mean scores closer to one on the IATOP indicate less bias responses and the further away from one the greater the bias. Scores above 3.00 suggest more biased attitude (Table 4).

Table 4

Intrinsic Attitude Items Used from the 2 Groups by Vignettes*

Items #	Variables				
27	In Control	Somewhat In control	Neutral	Somewhat Acting out	Acting out
28	Compliant	Somewhat Compliant	Neutral	Somewhat Noncompliant	Noncompliant
29	Industrious	Somewhat Industrious	Neutral	Somewhat Lazy	Lazy
30	Strong-Willed	Somewhat Strong-Willed	Neutral	Somewhat Weak-Willed	Weak-Willed
31	Pleasant	Somewhat Pleasant	Neutral	Somewhat Unpleasant	Unpleasant
33	Sociable	Somewhat Sociable	Neutral	Somewhat Not Sociable	Not sociable
34	Attractive	Somewhat Attractive	Neutral	Somewhat Unattractive	Unattractive
35	Trusting	Somewhat Trusting	Neutral	Somewhat Suspicious	Suspicious

*Vignette A has the obese patient while vignette B has the normal sized patient
** Items 32 and 36 were removed for increased reliability

The means score of the IATOP scale with reduced items for vignette A (Obese Patient) was 3.34 (SD = .508) and the mean score for vignette B (Normal Weight) was 3.25 (SD = .509). Although the scores reflect the expected biased direction, there was no statistically significant difference; $t = (141) = 1.01$, $p = .31$, indicating more bias from the responses to vignette A with the obese patient. However, several of the items were tested to see if they reflected expected biased attitudes.

Cross Tabulation calculation and chi-square analysis was done on the intrinsic attitudes items on the IATOP scale and responses from the 2 groups viewing vignettes A or B. Significance ($p = .042$; .036; .006; and .045 respectively) was found in the responses between the two groups on items 30 "*strong-willed....weak-willed*", 33 "*sociable....not sociable*", 34 "*attractive....unattractive*", and 35 "*trusting....suspicious*" (see Table 5).

Table 5

Chi Square and CrossTab Results of IATOP Between the 2 Groups and the vignettes

Items #	Variable	Vignette A *		Vignette B*			
		n	%	n	%	χ^2	p
30	Strong-Willed	4	3	8	5	7.23	.042
	Somewhat Strong-Willed	11	8	27	19		
	Neutral	41	29	35	24		
	Somewhat Weak-Willed	7	5	7	5		
	Weak-Willed	1	1	1	1		
33	Sociable	1	1	0	0	6.79	.036
	Somewhat Sociable	2	1	3	2		
	Neutral	10	7	5	3		
	Somewhat Not Sociable	29	20	30	21		
	Not sociable	22	15	40	28		
34	Attractive	1	1	3	2	10.39	.006
	Somewhat Attractive	5	3	11	8		
	Neutral	52	36	64	45		
	Somewhat Unattractive	4	3	0	0		
	Unattractive	3	2	0	0		
35	Somewhat Trusting	3	2	1	1	4.07	.045
	Neutral	8	5	5	3		
	Somewhat Suspicious	17	12	17	12		
	Suspicious	37	29	55	38		

*Vignette A has the obese patient while vignette B has the normal sized patient

A large percentage of nurses were inclined to give neutral responses except in items 33 and 35. For item 30 nurses that viewed vignette B thought the average-sized patient was "somewhat strong- willed" (19%) to "strong-willed" (5%) compared to those nurses who viewed the vignette of the obese patient, 8% and 3%, respectively. On item 33 approximately 20% in both groups thought the patient was "somewhat sociable" but 28% of respondents to vignette B, the average-sized patient, saw the patient as "not sociable" to the 15% with vignette A. The majority of nurses gave neutral responses for item 34 "attractive or unattractive." One percent thought the patient in vignette A was "attractive" and 3% thought the patient was "somewhat attractive" while 2% of nurses with vignette B thought the patient was "attractive" and 8% saw the patient as "somewhat attractive." However, none of the nurses with vignette B thought the

patient was "somewhat unattractive" or "unattractive" while 3% of the nurses with vignette A thought the patient was "somewhat unattractive" and 2% thought "unattractive." On item 35, 12% of nurses in both groups thought the patient was "somewhat suspicious" and almost 40% of nurses with vignette B thought the average sized patient was suspicious to 30% with vignette A.

To test if age was related to the nurses intrinsic attitudes towards obese patients, a One-way ANOVA was conducted to compare scores on the IATOP with age (18-25, 26-33, 34-41, 42-49, & >50 at the $p < .05$ level set for this analysis. There was a significant difference in the score for item number 35 by age group, "*trusting....suspicious*" [F = (4, 137) = 2.43, $p = .002$]. Post Hoc analysis using the Bonferroni procedure for comparison indicated that the mean score for the age group "18-25" (*M = 4*.3, *SD* = .897) to the ">50" group (*M* = .49, *SD* = .35) and the "26-33" group (*M* = 4.2, *SD* = .96) to the ">50" group was significantly different for item number 35.

Self-Reported Behaviors Toward Obese Patients (SRBTOP)

The Cronbach's Alpha of the 10-item self-reported behavior sub-section (SRBTOP) was initially 0.51. The SRBTOP consists of items 37 to 46 on the complete survey also analyzed by the two different vignettes of patients varying in size. Each item uses likert-type choices. Scores closer to zero on the SRBTOP indicate less biased responses and the further away from zero the greater the bias. SPSS was run on the separate items to determine their individual contribution to the reliability of the scale. The results suggested to delete items 38 "*How likely are you to excuse this patient from community meeting due to fatigue?*"; 42 "*How likely.....to give in to this patient's request for extra food?*"; and 44 "*How likely...... to feel annoyed at having to care for this patient?*" from the SRBTOP subscale and increased the Cronbach's alpha to 0.65 for the

whole subscale with .58 for vignette A and .67 for vignette B, strengthening the reliability of this

sub-scale and the whole inventory scale (Table 6).

Table 6

Self-reported Behavior Items Used for the 2 Groups After reading the Vignettes

*Items #	Variables				
	How likely are you to:				
37	Extend phone privilege to this patient in a non-emergency situation?				
	Unlikely	Somewhat Unlikely	Sometimes Likely	More Often Likely	Most Likely
39	Invite this patient to help in serving food at special occasion parties on the unit?				
	Unlikely	Somewhat Unlikely	Sometimes Likely	More Often Likely	Most Likely
40	Select this patient as your partner in a doubles game of ping-pong?				
	Unlikely	Somewhat Unlikely	Sometimes Likely	More Often Likely	Most Likely
41	Select this patient to lead morning exercise/physical activity group?				
	Unlikely	Somewhat Unlikely	Sometimes Likely	More Often Likely	Most Likely
43	Teach about health promotion:				
	Unlikely	Somewhat Unlikely	Sometimes Likely	More Often Likely	Most Likely
45	Ensure available armless seating at each encounter?				
	Unlikely	Somewhat Unlikely	Sometimes Likely	More Often Likely	Most Likely
46	Think this patient is experiencing common side-effects of the medication:				
	Unlikely	Somewhat Unlikely	Sometimes Likely	More Often Likely	Most Likely

*Items 38, 42, and 44 were removed from final instrument

The following analyses tested the third hypothesis related to the first research question:

namely that there would be differences in psychiatric nurses' self-reported behaviors toward

mentally ill patients who are obese and being treated with atypical antipsychotic medications

compared to those who are normal weight.

To test for differences in psychiatric nurses' self-reported behaviors toward patients who

are obese, t-tests were done on the mean score of the reduced scale (remaining seven variables)

and a significant difference was found in the responses of nurses who viewed the obese patient in

vignette A compared to the nurses who viewed the average-sized patient in vignette B, as seen in

Table 7. There was significant difference in the mean scores for nurses who viewed vignette A

(M = 3.38, SD = .66) and vignette B (M = 3.00, SD = .63; t (141) = 3.66, p = .000, two-tailed).

Table 7

Mean Scores Responses by Vignettes for SRBTOP Items

Items #	Variable	Vignette A *			Vignette B*		
		n	M	SD	n	M	SD
	How likely are you to:						
37	Extend phone privilege to this patient in a non-emergency situation:	65	3.80	1.17	78	3.47	1.18
39	Invite this patient to help in serving Food at special occasion parties on the unit:	65	3.15	1.37	77	2.79	1.23
40	Select this patient as your partner in a doubles game of ping pong:	62	3.32	1.21	78	3.26	1.10
41	Select this patient to lead morning exercise/physical activity group:	65	2.77	1.23	78	2.56	1.11
43	Teach about health promotion:	65	4.22	1.05	78	3.88	.897
45	Ensure available armless seating at each encounter:	65	3.20	1.25	77	2.56	1.08
46	Think this patient is experiencing common side-effects of the medication:	65	3.22	1.14	78	2.40	1.01
	Total Mean Score:	65	3.39	.661	78	2.99	.627

*Vignette A has the obese patient while vignette B has the normal sized patient

To further examine individual items, a t-test for independence was also done on each.

Significance for each vignette was seen on item 43 (p = .04) and (p = .048) for responses to

vignettes A and B respectively, in the direction of more bias, on how likely the nurses were to

"*Teach about health promotion*" (see Table 8).

Table 8

T-test Results of SRBTOP Between the 2 Groups and the vignette

Items #	Variable	Vignette A *			Vignette B*				
		n	*M*	*SD*	n	*M*	*SD*	*t*	*p*
	How likely are you to:								
43	Teach about health promotion	65	4.2	1.05	78	3.9	.90	2.03	.044
45	Ensure available armless seating at each encounter	65	3.2	1.25	77	2.6	1.08	3.27	.001
46	Think this patient is experiencing common side-effects of the medication	65	3.2	1.13	78	2.4	1.01	4.55	.000

*Vignette A has the obese patient while vignette B has the average sized patient

A larger percent (20%) of nurses who viewed vignette B the averaged sized patient to 11% that viewed vignette A were "*somewhat unlikely*" while 24% of the nurses indicated that it was "*unlikely*" that they would teach health promotion to the obese patient in vignette A to 15% who viewed vignette B. There was also significance on item 45 (*p* = .001 & *p* = .002 respectively) with twice as many nurses (16%) who viewed vignette B to 8% who viewed vignette A indicating they would be "*more often likely*" to "*ensure available armless seating…*". In addition, more nurses who viewed vignette A indicated being "*somewhat unlikely*" (10%) or "*unlikely*" (8%) to provide special seating to their patient compared to 9% and 4%, respectively, viewing vignette B. The significance on item number 46 was the same for both groups (*p* = .000). The nurses in both groups were almost even in their responses with approximately 19% indicating that they would be "*sometimes likely*" to think the patient was experiencing side-effects to the medication. However, a larger percent of nurses viewing vignette A indicated being

"*somewhat unlikely*" (11%) or "*unlikely*" (6%) than the other group, 6% and 1% respectively, to think the patient was experiencing medication related side-effects.

A Cross tabulation and Chi-square test were done on the groups and items 43, 45, and 46 that were significant on the t-test (see table 9). A Chi-square test for independence followed the cross tabulation test on items 43, 45, and 46. The Chi-square test indicates significant association between responses to the vignettes on item 43, 13.0 (4), $p < .05$); item 45, 11.8 (4), $p < .05$); and item 46, 21.4 (4), $p < .05$).

Table 9

Cross Tabulation Results of SRBTOP Between the 2 Groups and the vignette

Items # Variable	Vignette A *		Vignette B*		
	n	%	n	%	χ^2
How likely are you to:					
43 Teach about health promotion:					
Most Likely	2	1	1	1	13.0†
More Often Likely	3	2	2	1	
Sometimes Likely	9	6	24	17	
Somewhat Unlikely	16	11	29	20	
Unlikely	35	25	22	15	
45 Ensure available armless seating at each encounter:					
Most Likely	7	5	14	10	11.8†
More Often Likely	12	9	23	16	
Sometimes Likely	19	13	27	19	
Somewhat Unlikely	15	11	9	6	
Unlikely	12	8	4	3	
46 Think this patient is experiencing common side-effects of the medication:					
Most Likely	7	5	18	13	21.4†
More Often Likely	6	4	22	15	
Sometimes Likely	27	19	28	20	
Somewhat Unlikely	16	11	9	6	
Unlikely	9	6	1	1	

*Vignette A has the obese patient while vignette B has the average sized patient †*p<.05*

Additional analyses were done on select demographic variables. A One-way ANOVA was conducted to compare responses on the SRBTOP section relating to nurses self-reported behaviors, with age (18-25, 26-33, 34-41, 42-49, & >50) at the $p < .05$ level set for this analysis. There was a significant difference for mean scores by age groups on item number 37, "*How likely are you to extend phone privilege….in non-emergent situations*" [F = (4, 137) = 4.27, $p =$ .015], and item 41 "*How likely….to select this patient to lead morning exercise….*" [F = (4, 137) = 2.64, $p = .036$]. A Bonferroni Post hoc analysis for comparison indicated that the mean score for the age group "18-25" (*M = 3.3, SD* = 1.05) compared to the ">50" group (*M = 4.2, SD =* 1.01) and the "26-33" group (*M = 3.4, SD* = 1.15) compared to the ">50" group was significantly different for item number 37. The mean scores for the age group "18-25" (*M = 2.4, SD* = 1.12) and the ">50" group (*M =3.2, SD =* 1.27) were also significantly different for item number 41. Older nurses were least likely to extend phone privilege or select the patient to lead morning exercise.

The relationship between the participants' weight and their responses to items on the self-reported behavior subsection (SRBTOP) was investigated using Pearson product-moment correlation coefficient. The test was done first with all participants and then controlled for females only. Neither tests showed any significant correlations between the individual items on the SRBTOP or weight of males and females together or separate.

Descriptive Research Questions

To answer the additional questions and the sub-questions of the study, additional analyses were conducted. The research questions related to the variables of knowledge, attitudes and behaviors are addressed by the subscales NKAAM, NATOP, IATOP, and SRBTOP using the summarized instrumentation described in chapter 3. Items were grouped to answer specific

research questions as they relate to the variables of knowledge, attitude, and self-reported

behaviors.

Level 1 Question: What are the knowledge, attitudes, and self-reported behaviors of psychiatric nurses towards patients on atypical antipsychotic medications?

   a) What do nurses know about the treatment of mentally ill patients in relation to atypical anti-psychotic medications?
How much do they know about the common side-effects of atypical antipsychotics?
How do they address side-effects?
How does the patient teaching differ from patients taking older typical anti-psychotics?
What do they expect in the patient's response to treatment?
Can they identify the common side-effects seen in their patients?

   b) What are the nurses' attitudes about taking care of psychiatric patients on atypical anti-psychotic medications?
What are the self-reported behaviors towards patients who are overweight in general?

   c) What are the nurses' self-reported behaviors towards patients who are overweight and are being treated with atypical anti-psychotic medications?

The knowledge sub-section (NKAAM) of the instrument reflects the research questions

on nurses' knowledge of the atypical antipsychotics and their ability to recognize side-effects.

Question (a) "What do nurses know about the treatment of mentally ill patients in relation to

atypical anti-psychotic medications?" is addressed by the first 7 items on the NKAAM, labeled

1-9. The questions "How much do they know about the common side-effects of atypical

antipsychotics? and "Can they identify the common side-effects seen in their patients?" are asked

on items 10-12 on the final NKAAM. A correlation test found that the nurses' knowledge of

medication was positively correlated to the knowledge of medication side-effect items. No

correlation was found between RN or psychiatric nursing experience and knowledge of

medication side-effects (see Table 10 below).

Table 10

Items Used To Assess Nurses' Knowledge of Atypical Anti-psychotic Medications

Questions	% Correct	% Incorrect
1)The new generation of antipsychotics is the first line treatment for psychosis	71	29
3) There is no medication that has demonstrated effectiveness against negative symptoms in psychosis	85	15
4) All first episode clients should have a neuroleptic free period of at least 48 hours	59	41
5) Olanzapine should be taken with meals	70	30
6) Blockade of Dopamine produces a reduction in negative symptoms	54	46
7) Serotonin 5.- HT2 blockage produces a reduction in negative symptoms	56	44
9) The recommended dosage for Olanzapine is 5 mg to 20 mg	91	9
10)Patients who have an initial dysphoric response to medication are more likely to adhere to medication	91	9
11) Patients taking Olanzapine are not susceptible to weight gain	91	9
12) Patients starting on Resperidone are susceptible to postural hypotension	75	25

*Items 2 and 8 removed for increased reliability

The research question on nurses' attitudes toward obesity and the obese patient, "What are the self-reported attitudes towards patients who are overweight in general?" are addressed by the NATOP items 19 to 26 (see Table 11 below).

Table 11

Descriptive Data from the Nurses' Attitudes Towards Obesity Responses

Items	% Yes	% No
19. Most obese patients are well aware of the health risks of obesity	47	53
20. Most obese patients could reach a normal weight (for height) if they were motivated	49	51
21. Most obese patients will not lose a significant amount of weight	52	48
22. I have negative reactions towards the appearance of obese patients	15	85
23. For most patients, long-term weight maintenance of weight loss is impossible	25	75
24. It is acceptable to use "scare tactics" to obtain compliance of the obese patient	6	94
25. I feel uncomfortable when providing care to an obese patient	8	92
26. It is difficult for me to feel empathy for an obese patient	5	95

*Items 13-18 removed from final Instrument

The IATOP items with responses to the vignettes were used to detect intrinsic attitudes toward the vignette and compare the two study groups for differences. The IATOP items, 27 to 35, were used to answer the questions "What are the psychiatric nurses' perceptions of obese psychiatric patients compared to normal weight mentally ill patients?" and "Are there differences in the psychiatric nurses' intrinsic attitudes toward obese mentally ill patients?" Descriptive analyses were done on the scaled items and comparison of psychiatric nurses' intrinsic attitudes toward obese mentally ill patients yielded significant findings discussed earlier.

The SRBTOP items reflect the self-reported behaviors/attitudes of nurses in specific situations, as provided in the vignettes, for comparison of the responses of both groups for differences. Items are grouped to reflect specific research questions. Items 37 to 45 address the

research questions "What are the nurses' attitudes about taking care of psychiatric patients on atypical anti-psychotic medications?"; "What are the nurses' self-reported behaviors towards patients who are overweight and are being treated with atypical anti-psychotic medication?" Along with items on the knowledge subsection relating to the research question "Can they identify the common side-effects seen in their patients?" item 46 on the SRBTOP also addresses this question.

SRBTOP 43 relates to patient teaching of psychiatric patients on atypical anti-psychotics in both vignettes and addresses the question "Do they incorporate health promotion?" Items 37 to 43 and 45 to 46, address the question "Are there discriminatory or bias tendencies in the nurses' behaviors towards caring for obese mentally ill patients?" Items 37, 43, and 45 address the questions, "Will nurses respond differently if the patient is obese versus a patient of normal weight?" and "Are requests for special consideration treated differently?" Items 37 and 45 also address the question "Does the patient have to request special consideration?" Item 37 is used to answer the following research question of possible difference in response to inappropriate behavior or rewards for good behavior and reads "Given a behavior situation, will the response to an obese patient differ from the response to an average weight patient?"; "Is response to inappropriate behavior, such as requesting phone calls outside of unit's protocol, treated differently?"; and "Are rewards for good behavior given differently?" The results are reported in Table 12.

Table 12

Frequencies of Responses by Vignettes for SRBTOP Items

Items # Variable	Vignette A *		Vignette B*	
	n	%	n	%
How likely are you to:				
37 Extend phone privilege to this patient in a non-emergency situation:				
Most Likely	3	2	7	5
More Often Likely	9	6	6	4
Sometimes Likely	7	5	25	17
Somewhat Unlikely	25	18	23	16
Unlikely	21	15	17	12
39 Invite this patient to help in serving Food at special occasion parties on the unit:				
Most Likely	12	9	16	11
More Often Likely	7	5	14	10
Sometimes Likely	18	13	22	15
Somewhat Unlikely	15	11	20	14
Unlikely	13	9	5	3
40 Select this patient as your partner in a doubles game of ping pong:				
Most Likely	7	5	7	5
More Often Likely	6	4	9	7
Sometimes Likely	20	14	28	20
Somewhat Unlikely	18	13	25	18
Unlikely	11	8	9	6
41 Select this patient to lead morning exercise/physical activity group:				
Most Likely	11	8	16	11
More Often Likely	16	11	20	14
Sometimes Likely	24	17	28	20
Somewhat Unlikely	5	3	10	7
Unlikely	9	6	4	3
43 Teach about health promotion:				
Most Likely	2	1	1	1
More Often Likely	3	2	2	1
Sometimes Likely	9	6	24	17
Somewhat Unlikely	16	11	29	20
Unlikely	35	25	22	15
45 Ensure available armless seating at each encounter:				
Most Likely	7	5	14	10
More Often Likely	12	9	23	16
Sometimes Likely	19	13	27	19
Somewhat Unlikely	15	11	9	6
Unlikely	12	8	4	3
46 Think this patient is experiencing common side-effects of the medication:				
Most Likely	7	5	18	13
More Often Likely	6	4	22	15
Sometimes Likely	27	19	28	20
Somewhat Unlikely	16	11	9	6
Unlikely	9	6	1	1

*Vignette A has the obese patient while vignette B has the normal sized patient

Level 2 Question: Do nurses discriminate in their approach or treatment behaviors for mentally ill patients who are obese and are being treated with atypical antipsychotic medications compared to normal weight mentally ill patients?

a) Are there discriminatory or bias tendencies in the nurses' behaviors towards caring for obese mentally ill patients?
b) Are there differences in the psychiatric nurses' intrinsic attitudes toward obese mentally ill patients versus to comparable normal weight mentally ill patients?

Sub-Questions

a) Will psychiatric nurses respond differently if the patient is obese versus a patient of normal weight?
   Are requests for special consideration treated differently?
   Does the obese patient have to request special consideration because of size?
b) Given a behavior situation, will the response to an obese patient differ from the response to an average weight patient?
   Is response to inappropriate behavior, such as requesting phone calls outside of unit's protocol, treated differently?
c) Are rewards for good behavior given differently?

Level 2 Questions and Sub-questions were answered by hypothesis testing of the scores of

the IATOP and SRBTOP scales as well as the individual items tested in the previous analyses

along with the scale descriptions and psychometric properties. The results yielded a variety of

statistically significant findings that are summarized below. The technique of using a vignette

approach to determine the overt and underlying attitudes and behaviors of psychiatric nurses

toward obese patients being treated with atypical antipsychotic medications has provided useful

information to validate the use of the total inventory. The complete *Knowledge Attitude and

Self-Reported Behavior Inventory* (KASRBI), with its four subscales reduced as determined by

the analysis, can differentiate attitudes that are overt and intrinsic that would otherwise be

difficult to capture with ordinary questionnaire methods.

Summary

This chapter discussed the results of the statistical analyses performed in this study. There

were 149 participants, 135 being graduates who were NSNA members who agreed to a follow-

up survey through NSNA, 12 were members of APNA, and 2 self-identified as local psychiatric nurses. The instrument was first given to six panel experts for content validity, timing, and testing of the instrument. 9 of the 34 items received CVIs of 0.83 with the content validity at an acceptable level. Item # 25 was revised as recommended and kept, based on the CVI of 0.83. The content validity of the (S-CVI) of the whole instrument was 0.95, a powerful content validity. Convergent validity was done through comparisons between scores for nurses in this sample against the results of the original knowledge scale.

Since reliability was not acceptable for the knowledge and general attitudes towards obesity subsections, it was not feasible to use the whole instrument as a single scale. However, Cronbach's alpha reliability was performed on each subsection. Items were dropped from each subsection to strengthen reliability. Eliminating items resulted in a10-item knowledge of medication (NKAAM) subsection, an 8-item general attitude towards obesity (NATOP) subsection, an 8-item semantic differential intrinsic attitudes (IATOPI) subsection, and a 7-item self-reported behavior toward obese patients (SRBTOP) subsection. Items were grouped to answer specific research questions and outlined in the instrumentation.

Descriptive analysis was done on the NKAAM and the scores indicate that the nurses were fairly knowledgeable about the medications. Cross tabulation test was done on the knowledge items on the NKAAM and psychiatric experience. A statistically significant association ($p = .006$) was found with item number two on the use of neuroleptics rather than benzodiazepines for sedation. This item was also later removed from the final instrument since more nurses gave incorrect responses than those who answered correctly and based on the results in the SPSS analysis to strengthen reliability of the instrument suggesting that newer nurses simply guessed at the answer. A One-way ANOVA was conducted to compare scores on the

NKAAM to years of RN experience, psychiatric experience, age, and level of education and no significance was found.

Descriptive analysis was also done on the general attitudes towards obesity (NATOP) subsection. In addition, a One-way ANOVA was conducted on the NATOP to compare scores with years of psychiatric experience, age, and level of education. There were no significant findings for psychiatric experience, age, or nursing degree and the NATOP items. The relationship between nurses' general attitudes towards obesity subsection (NATOP) and the participants' weight was investigated using Pearson product-moment correlation coefficient. A strong, positive correlation was found between item 19 "*Most obese patients are well aware of the health risks of obesity*" and the participants' weight. There was also a significant positive correlation between item 19 and psychiatric nursing experience ($p = .015$).

A t-test analysis showed significant differences between nurses who viewed the obese patient in vignette A compared to the nurses who viewed the average-sized patient in vignette B. Cross Tabulation test was done on the intrinsic attitudes items on the IATOP scale and the 2 groups viewing vignettes A or B. Significance was found in the responses between the two groups on items 42 "*strong-willed....weak-willed*", 45 "*sociable....not sociable*", 46 "*attractive....unattractive*", and 47 "*trusting....suspicious*" demonstrating more biased attitudes toward the obese patient in the scenario.

A One-way ANOVA was conducted to compare responses on the IATOP with age and there was a significant difference on the scores for item number 35, "*trusting....suspicious*" to age [$F = (4, 137) = 2.43$, $p = .002$]. Post Hoc analysis using the Bonferroni procedure for comparison indicated that the mean scores for the age group "18-25" to the ">50" group and the

"26-33" group to the ">50" group were significantly different for item number 35. Older nurses were generally more biased toward the obese patient than younger nurses.

For the self-reported behaviors subsection (SRBTOP), t-test and chi-square analyses were done on the remaining seven variables and significant differences were found in the responses of nurses who viewed the obese patient in vignette A compared to the nurses who viewed the average-sized patient in vignette B. There was significant difference in the mean scores for nurses who viewed vignette A and those who viewed vignette B. Significance was also seen on item 43, on how likely the nurses were to "*Teach about health promotion*" for responses to vignettes A and B. These were in the direction that more biased self-reported behaviors occurred for the obese patient compared to the average weight patient.

A Cross tabulation test was done on the groups and items 43, 45, and 46. There was also significance on item 45 with twice as many nurses who viewed vignette B to those who viewed vignette A indicating they would be "*more often likely*" to "*ensure available armless seating…*" In addition, more nurses who viewed vignette A indicated being "*somewhat unlikely*" or "*unlikely*" to provide special seating to their patient compared to those viewing vignette B. Item number 46 was also significant between groups ($p = .000$). The nurses in both groups were almost even in their responses indicating that they would be "*sometimes likely*" to think the patient was experiencing side-effects to the medication. However, a larger percent of nurses viewing vignette A indicated being "*somewhat unlikely*" (11%) or "*unlikely*" (6%) than the other group, 6% and 1% respectively to think the patient was experiencing medication related side-effects.

A one-way ANOVA was conducted on the SRBTOP section with a significant effect on scores for item number 37, "*How likely are you to extend phone privilege….in non-emergency*

situations", item 41 *"How likely….select this patient to lead morning exercise…."* A Bonferroni

Post hoc analysis indicate significant difference in the score for the age group "18-25" to the

">50" group and the "26-33" group to the ">50" group for item numbers 37 and 41. Older nurses

were generally least likely to extend phone privilege in non-emergency situations or select the

obese patient to lead morning exercise. Although age was found to be associated with some of

the self-reported behaviors toward obese patients, no correlation was found between the

individual items on the SRBTOP and weight when controlled for males and females together or

females only.

CHAPTER 5

DISCUSSIONS AND RECOMMENDATIONS

The purpose of this study was to first develop and test an instrument to assess the knowledge, attitude, and self-reported behavior of psychiatric nurses towards obese psychiatric patients on atypical anti-psychotic medications and to describe the knowledge and attitudes of the psychiatric nurse towards patients on atypical anti-psychotic medications. This chapter presents a discussion of the inventory development, statistical analyses findings, instrumentation of research questions results, limitations, future research, and implications for practice.

The physical health of people with mental illness has become a rising concern since the development of the commonly used atypical anti-psychotic medications and the common obesity side-effect (OMH, 2010; Parks et al., 2008). Following the Office of Mental Health's (OMH) mandate to improve the health and longevity of the psychiatric population, many facilities have taken measures to monitor the weight of patients on atypical anti-psychotics (2010). However, there are very few mental health programs directing efforts at proactively assisting the patient to address life-style changes as a means of improving their general health and controlling their weight.

Multiple studies have also emerged on how to improve patients' adherence with medication as another area of concern. Byrne et al. (2005) found an association between negative attitudes towards anti-psychotic medications and nurses being able to enhance medication compliance in their patients using the original *Knowledge of Neuroleptic Medications* (KNM). The KNM was used with nurses so it was adapted (NKAAM) and used in this study to measure nurses' knowledge of the atypical medications.

The NATOP was adapted from Foster et al. (2003) study of primary care physician's attitude about obesity and treatment of obesity in which they found that physicians held similar negative stereotypical views on the personal attributes of people who are obese. Some of the intrinsic attitude semantic differential items on the IATOP adapted from Foster and colleagues' (2003) instrument also found an association between negative attitudes and the treatment of obesity. In addition, they believed that the physicians' negative views of obesity distanced them from their obese patients and impaired interactions. The items adapted from the obesity study with physicians were used in this study to get information on psychiatric nurses' general and intrinsic attitudes toward obesity and obesity in their obese patient.

Inventory development

In adapting the knowledge (NKAAM) and the general attitudes towards obesity (NATOP) measures, the content validity index (CVI) for each item ranged from very good to ideal with perfect inter-rater agreement among the experts. However, preliminary Cronbach's alpha reliability testing resulted in negative values for the NKAAM and very low values on the NATOP subsections. Since the sample size for this study was larger than indicated by power analysis as necessary for a medium size effect and reverse items were carefully coded, these do not offer an explanation for the negative or low Cronbach values. A possible explanation could be that there is little or no correlation among the items used in the scales and the dependent variables being measured. Therefore, interpretation of results must be cautious.

Cronbach's alpha could not be attained for the whole inventory, the Knowledge Attitudes and Self-Reported Behavior Inventory (KASRBI), as a sum total could not be obtained for the adapted knowledge and general attitudes towards obesity subsections, making it an unreliable measure. Preliminary reliability statistics for the overall scale was low with the intrinsic attitudes

and self-reported behaviors subsections having higher reliability statistics. Preliminary testing indicates that with further refinement the KASRBI may be a valid and reliable instrument in assessing psychiatric nurses' negative intrinsic attitudes and biases towards psychiatric patients who are obese and on atypical anti-psychotic medications. More revision, possibly using factor analysis, is needed for the knowledge and general attitudes towards obesity subsections to achieve acceptable reliability of this inventory as a whole. Moreover, the items were useful in soliciting information. Development of the inventory for this study is a step towards having a comprehensive measure for psychiatric nurses' knowledge of the psychiatric medications and detection of negative attitudes in nurses, an obstacle to compliance with treatment and the psychiatric therapeutic relationship. This inventory will also direct education for the psychiatric nursing population.

This study had more participants than indicated through power analysis for sufficient power to detect a medium size effect. The sample consisted of nurses who were recent past members of the National Student Nurses Association (NSNA) and members of the American Psychiatric Nurses Association (APNA) which are both national organizations. An additional 2 participants are nurses locally in Long Island, New York (NY). Using this sample from the NSNA and APNA population provides diversity in geographical and individual characteristics in the sample, allowing for generalization of clinical psychiatric nurses. In addition, use of the anonymous on-line survey method allowed for more uninhibited responses. Anonymity of responses was provided in the paper and pencil responses that were in sealed anonymous envelopes.

The sample was disproportionately distributed between genders, with 88% females and 12% males, but this proportion is congruent with the proportion in psychiatric nurses in the

United States (U.S.). As a result, no analysis could be done with gender. The majority of the sample of nurses had either an associate's or bachelor's degree with a large percent having more than five years psychiatric experience. This indicates that the majority of the nurses that participated are experienced psychiatric nurses with more than a basic nursing education. It was interesting that almost half of the participants in the sample weighed over 166 pounds, indicating that a large proportion of the nurses were themselves overweight. However, no correlation was found between the participants' weight and their responses to items on the self-reported behavior subsection (SRBTOP).

Research Questions

Knowledge Questions

In answering the research question, "What do nurses know about the treatment of mentally ill patients in relation to atypical anti-psychotic medications?" the mean score for correct responses were high for the nurses indicating that they were fairly knowledgeable about the medication. However, a large percent of the responses to two items, "*Neuroleptics rather than benzodiazepines should be used for sedation*" and "*The start dose of Risperidone in first episode psychosis is 1mg twice a day*" were incorrect, indicating that the nurses were not so knowledgeable on how the medications are used or the correct dosing. The results also indicated that the nurses with more psychiatric experience were more inclined to incorrectly think that benzodiazepines were preferred over neuroleptics for sedation in psychiatry. This result is possibly due to the nurses with less psychiatric experience having more recent academic education in this area and not yet as strongly influenced by clinical practice. Since nurses have an integral role in medication administration and serve as a safety check-point for patients, they

need to be aware of the medication indications, the starting dosage, and dosing ranges of the medications they administer.

For the questions "How much do they know about the common side-effects of atypical antipsychotics?"; "Can they identify the common side-effects seen in their patients?" the answers show that the nurses were knowledgeable about the potential side-effects of the medications. Consequently, the nurses' knowledge of the medication corresponded to their knowledge of the medication side-effects which is a positive sign.

General Attitudes Towards Obesity

The *Nurses attitude Towards Obese* Patient (NATOP) scale was used to measure general attitudes towards obesity. The NATOP items answered the research question, "What are the self-reported attitudes towards patients who are overweight in general?" Three of the NATOP items showed some bias. In fact, approximately half of the nurses that responded "yes" to feeling most obese patients were "*well aware of the health risks of obesity*"; could not "…*reach a normal weight*…"or be able to "…*lose a significant amount of weight*" indicating bias while the other nurses responded "no", indicating no bias. As a positive sign, most of the nurses responded that they did not have "…*negative reactions*…." to an obese person; did not think long-term weight loss was impossible; did not think it was acceptable to "….*use scare tactics...*" with the obese patient; felt comfortable around obese patients; and were able to empathize with them, also not indicating bias towards obesity with these questions. However, the results also showed that the heavier the nurses were, and the more psychiatric experience they had, the more inclined they were to think that most obese patients are aware of the health risks associated with obesity.

The reliability of this subscale was low and may not have asked the right questions. Though achieving content validity with the experts, the first six items were removed from the

subscale as the researcher thinks they are more related to knowledge of obesity rather than attitudes. This elimination also improved the reliability of this subsection. Concurrent validity could not be done with the original physician's instrument as that instrument used a 5-point Likert scale versus "yes or no" responses on the NATOP and the average mean scores were not given. That study had a low response and most of the physicians also gave favorable responses to the 8 items kept for this study.

Intrinsic Attitudes Questions

The IATOP items were being used to detect intrinsic attitudes in the responses toward the vignettes. The two study groups were compared for differences. Items on the intrinsic subscale (IATOP) were used to answer the research questions, "What are the psychiatric nurses' perceptions of obese psychiatric patients compared to normal weight mentally ill patients?" and "Are there differences in the psychiatric nurses' intrinsic attitudes toward obese mentally ill patients?" Though the result obtained from calculating data from the full scale did not show any significant difference in the mean scores of the two groups, the mean score for the nurses' with vignette of the obese patient was slightly higher in the direction of more bias.

However, some individual items did show significant difference between the groups. The nurses reading vignette B, describing the average sized patient, were more inclined to think that the average-sized patient was "somewhat strong-willed" or "strong-willed"; "somewhat attractive" or "attractive" compared to those with the obese patient. Only the nurses reading vignette A, with the obese patient, thought the patient was "somewhat unattractive" or "unattractive," even though the only physical description provided in the vignette was of the patient's size, indicating bias and the stereotypical thinking evident in society. Similarly, the physicians in the original study with Foster and colleagues (2003) also viewed the obese patient

as being unattractive, ugly, and weak-willed. The results obtained on these items did indicate

differences in the psychiatric nurses' perception and intrinsic attitudes toward obese psychiatric

patients, confirming that there is bias in certain areas towards the obese patient.

Despite the patient's acute symptoms including being "paranoid" and "isolative" it was

surprising that significantly more nurses with the average-sized patient thought the patient was

"not sociable" and "suspicious" compared to the group with the obese patient. The findings on

these two items are opposite to what were predicted and not reflective of society's stereotype of

the obese person. This could also be a result of the general attitudes towards obesity subsection

preceding the vignettes. The results also found that the younger nurses were more inclined to

think the patient was suspicious rather than trusting, possibly indicating that as nurses age they

may be more patient or more inclined to think the patient is trusting.

Self-Reported Behavior Questions

The *Self-Reported Behaviors Towards Obese Patients* (SRBTOP) subsection was used to

answer research questions on the self-reported behaviors/attitudes of nurses in specific patient

situations, as provided in the vignettes, and the group was compared for differences in their

responses. The research questions related to the nurses' self-reported behaviors towards

overweight patients who are being treated with atypical anti-psychotic medications were: can

they identify common medication side-effects in their patients and do they teach health

promotion to all their patients. Also, the items addressed some other research questions for this

subsection on whether there are discriminatory or bias tendencies in the nurses' behaviors

towards caring for obese mentally ill patients; whether or not they respond differently if the

patient is obese versus normal weight, are requests for special consideration treated differently,

do they have to request special consideration, and whether there are differences in response to inappropriate behavior or rewards for good behavior.

It was expected that nurses with the average-sized patient would be less likely to teach health promotion. However, in this study the nurses reading vignette B with the average sized patient were more likely to teach health promotion. Nurses reading vignette A with the obese patient were more unlikely to teach health promotion to their patient indicating bias. This is consistent with the earlier findings by Ekpe (2001) that in obesity treatment nurses tend to delay health promotion until co-morbid diseases occurred. So, besides bias there is some lack of information here and an opportunity to educate nurses on the importance of health promotion to all patients, despite their outward appearance. A qualitative study would be beneficial to exploring the reason for the delay. The nurses being "somewhat unlikely" to teach health promotion to the average-sized patient implies some stereotypical thinking that the average-sized person is already knowledgeable, practicing health promoting behaviors, or not in need of health promotion education. Furthermore, the nurses who viewed the vignette of the obese patient and were "*unlikely*" to teach health promotion to their patient show bias in possibly thinking the patient is not teachable or worth teaching. In psychiatry, all psychiatric patients, regardless of their size, should have health promotion teaching because of the high risk of obesity from the medications and possible need for life-style changes.

However, it was unexpected that more nurses with the average-sized patient would ensure armless seating whereas more of the nurses with the obese patient would not. In this case, the obese patient more often would have to request special consideration. This possibly indicates insensitivity from those nurses with the obese patient and identifies another area for teaching,

possibly in the form of cultural awareness. This could also be a result of the general attitudes

towards obesity subsection preceding the vignettes.

The results further indicate bias in nurses with the vignette of the obese patient being

"*somewhat unlikely*" or "*unlikely*" to think the obese patient was experiencing medication related

side-effects when obesity is a common side-effect of the prescribed medication and can continue

even after one year of starting the medication. The patient in the vignette had started the

medication eight months earlier. In addition, other findings indicate that as nurses age, they may

be less lenient with their patients. However, despite most of the participants in this study being

overweight or obese there is no evidence to support that their weights may have influenced their

responses to these items.

Limitations

The *Knowledge Attitude and Self-Reported Behavior Inventory* (KASRBI) developed for

this study was theoretically driven and not based on factor loadings. A true reliability could not

be obtained for the whole inventory as sum totals could not be attained for the adapted

knowledge and general attitudes towards obesity subsections. Therefore, although the intrinsic

attitudes and self-reported behaviors subscales had acceptable reliability after eliminating items,

removal of the items could not bring the reliability of the total inventory instrument to an

acceptable level. Also, the instrument was tested on the experts for timing purposes but

otherwise no pilot testing was done. It may also have been an unwise choice to place the general

obesity subsection before the vignettes as this may have alerted the participants to the

researcher's underlying inquiries and led to some of the surprising results.

The 12% of males in this study is reflective of the national average of males in nursing,

and analysis with gender could not be performed due to this disproportionate male to female

ratio. In addition, the findings were limited to psychiatric nurses in active clinical practice with

psychiatric patients so generalizations cannot be made to all nurses or all disciplines.

Future Research

This study used a descriptive comparative design to identify differences and possible bias

in psychiatric nurses in caring for psychiatric patients who are obese or at high risk for obesity.

This research should be replicated after re-organization of the subsections with placement of the

general attitudes towards obesity following the vignette instead of preceding it to reduce the risk

of getting politically correct responses. Keeping the changes made for increased reliability and

revising items on the knowledge and general obesity subsection should improve reliability and

sensitivity of those portions of the instrument and should be done before replication.

In addition, this study should be repeated with advanced practice nurses and or a

combination of advanced practice nurses and staff nurses to identify where teaching should be

directed, as needed. Also, the attitudes and self-reported behavior subsections could be replicated

with nurses in other disciplines to see if the results have similar findings of bias. A qualitative

study should also be done to explore the nurses' thinking process behind the elicited biased

responses.

Implications for Practice

Results of this study indicate that bias towards obese patients does exist in the psychiatric

nursing population and can be seen in some intrinsic attitudes and self-reported behaviors of

psychiatric nurses. In addition, the lack of sensitivity of psychiatric nurses in this study being

unlikely to provide accommodation for the obese patient in certain situations, such as not

providing armless seating, can seriously impact the therapeutic nurse-patient relationship. The

therapeutic relationship is very important in psychiatry and this study forms the basis to develop

an approach to address obstacles, such as, negative or insensitive attitudes and behaviors that affect treatment of mentally ill patients who quite often may be obese.

The supportive role of the nurse is also a major factor to working effectively with psychiatric patients to promote healthy life-style changes and ultimately improve their physical health. In addition, the use of Albert Bandura's framework (1998) of health promotion supports the importance of the nurse's supportive role in aiding patients to achieve and maintain life-style changes towards better health and increased longevity. The significant negative attitudes and stereotype responses elicited from this study serves as a starting point in directing education on the awareness and sensitivity towards obesity, as part of the nursing curriculum, at all levels, and for those in the clinical area. Moreover, development of this inventory, with the vignettes, provides an important means of measuring these variables that are often difficult to elicit.

Knowledge of the use of psychiatric medications and dosing range are areas identified for teaching. A serendipitous finding of this study was the lack of knowledge of medication dosing which was significant among the seasoned psychiatric nurses with more clinical experience. It is important for nurses to be knowledgeable about the medications that they have to administer for the safety of their patients. This finding indicates that there is a need for in-service education in the clinical setting and on-going education related to the new medications as they are introduced for use in the clinical setting.

Recommendations

The following are recommendations to:

1. Improve the education of psychiatric nurses by continuously including new medications as they introduced and emphasizing dosage range and side-effects.

2. Add obesity awareness, similar to the concept of cultural awareness, to academic curriculum and on-going in-service education in the clinical setting.

3. Improve nursing procedures that will guide nurses' self-awareness of negative attitudes and perceptions they may have towards obese patients.

Conclusion

Nurses play integral roles in the lives of patients. In psychiatry, the effectiveness of the nurses' role in the treatment of the patient relies heavily on the relationship that is formed. This study has highlighted the presence of bias towards the obese psychiatric patient in certain areas and insensitivity in not making accommodations for the obese patient that may impact the therapeutic relationship. Nurses' lack of knowledge on medication dosages and side-effects was also found to be an area of concern. Although further research is needed in developing a comprehensive, valid, and reliable instrument to measure psychiatric nurses' knowledge, attitudes, and self-reported behaviors towards obesity, the existence of psychiatric nurses' bias towards their obese patient cannot be overlooked. Therefore, nursing education should be focused on detecting and improving nurses' self-awareness of these biases they may have towards their obese patient and improving the knowledge of new medications, as they are developed, especially in the area of dosages and side-effects. Since obesity has become an ever increasing problem in psychiatry, secondary to the commonly used anti-psychotic medications, nurses have a duty to do more than measure the degree of weight gain in their patients but provide support in the necessary life-style changes.

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Appendix A. Instruments for the Study

I. Nurses Knowledge of Atypical Antipsychotic Medications (NKAAM)

How much do you know about atypical anti-psychotics?
Please read each of the following statements and indicate if the statement is true or false by checking (√) the appropriate response.

	True	False
1. The new generation of antipsychotics is the first line treatment for psychosis		
2. Neuroleptics rather than benzodiazepines should be used for sedation		
3. There is no medication that has demonstrated effectiveness against negative symptoms in psychosis		
4. All first episode clients should have a neuroleptic free period of at least 48 hours		
5. Olanzapine should be taken with meals		
6. Blockade of Dopamine produces a reduction in negative symptoms		
7. Serotonin 5.- HT2 blockage produces a reduction in negative symptoms		
8. The start dose for Resperidone in first episode psychosis is 1mg twice a day		
9. The recommended dosage for Olanzapine is 5 mg to 20 mg		
10. Patients who have an initial dysphoric response to medication are more likely to adhere to medication		
11. Patients taking Olanzapine are not susceptible to weight gain		
12. Patients starting on Resperidone are susceptible to postural hypotension		

II. Nurses Attitudes Toward Obese Patients (NATOP)

<u>FEEDBACK SURVEY</u>

Please take a few minutes to fill out this questionnaire. To answer these questions please select the answer that most closely describes you.

Your feedback is important and your answers will be kept confidential. Thank you for your participation.
     Please check (√) yes or no for the first 14 questions.

Statement	Yes	No
13. I believe it is necessary to educate obese patients on the health risks of obesity		
14. Obesity is a chronic disease		
15. I make accommodations for obese patients		
16. Obesity is associated with serious medical conditions		
17. Nurses should be role models by maintaining a normal weight		
18. I feel compelled to suggest weight loss programs to obese patients		
19. Most obese patients are well aware of the health risks of obesity		
20. *Most obese patients could reach a normal weight (for height) if they were motivated		
21. *Most obese patients will not lose a significant amount of weight		
22. *I have negative reactions towards the appearance of obese patients		
23. For most patients, long-term weight maintenance of weight loss is impossible		
24. *It is acceptable to use "scare tactics" to obtain compliance of the obese patient		
25. *I feel uncomfortable when providing care to an obese patient		
26. *It is difficult for me to feel empathy for an obese patient		

*Reverse Code

III. Intrinsic Attitudes Toward Obese Patients (IATOP)

Please take a few minutes to read this vignette and answer the following questions (NOTE: only one of the following vignettes will be presented with the scale):

Vignette A

A 22 year old female, with history of a prior admission 8 months ago, has been admitted to your unit with a diagnosis of schizophrenia. Her family had called 911 due to reports of increasingly strange behavior over the past 3 weeks with the patient becoming more and more suspicious of others, including the family. She has stopped eating meals prepared by others only using packages that have been sealed and tamper proofed. She feels she is being watched through the windows, though there are blinds and curtains, and feels she is being tracked by a chip in her head. She believes people also know what she is thinking and she hears voices telling her to do things and where to go. She has become isolative from friends and family and spends most of the time in her room. She has no known history of drug or alcohol abuse. Her urine toxicology was negative on admission. She does not smoke cigarettes. There is no known history of medical illnesses or allergies. She lives with both parents and a 15 year old brother. She is not involved in any intimate relationship presently, having broken up with boyfriend of 2 years, 1 month ago. It is unclear at this time who initiated the break-up or why. She has no work history and is in her 2nd year in college. Leisure activities are reading, playing video games, and going to the movies. She is 5' 4" tall and weighs 250 lbs. She is appropriately dressed. She has been keeping to herself on the unit and is often seen looking furtively around the unit. She has been re-started on Risperdal 1 mg twice daily po and Cogentin 1 mg po at bedtime.

Vignette B

A 22 year old female, with history of a prior admission 8 months ago, has been admitted to your unit with a diagnosis of schizophrenia. Her family had called 911 due to reports of increasingly strange behavior over the past 3 weeks with the patient becoming more and more suspicious of others, including the family. She has stopped eating meals prepared by others only using packages that have been sealed and tamper proofed. She feels she is being watched through the windows, though there are blinds and curtains, and feels she is being tracked by a chip in her head. She believes people also know what she is thinking and she hears voices telling her to do things and where to go. She has become isolative from friends and family and spends most of the time in her room. She has no known history of drug or alcohol abuse. Her urine toxicology was negative on admission. She does not smoke cigarettes. There is no known history of medical illnesses or allergies. She lives with both parents and a 15 year old brother. She is not involved in any intimate relationship presently, having broken up with boyfriend of 2 years, 1 month ago. It is unclear at this time who initiated the break-up or why. She has no work history and is in her 2nd year in college. Leisure activities are reading, playing video games, and going to the movies. She is 5' 4" tall and weighs 124 lbs. She is appropriately dressed. She has been keeping to herself on the unit and is often seen looking furtively around the unit. She has been re-started on Risperdal 1 mg twice daily po and Cogentin 1 mg po at bedtime.

III. Intrinsic Attitudes Toward Obese Patients (IATOP)

Having read the vignette what adjective do you think best describes your perception of the character in the vignette? Please put an "X" on the line between each of the following adjectives (one per line) that best represent your perceptions.

27. In control   ___ : ___ : ___ : ___ : ___ Acting out

28. Compliant___ : ___ : ___ : ___ : ___ Noncompliant

29. Industrious___ : ___ : ___ : ___ : ___ Lazy

30. Strong willed___ : ___ : ___ : ___ : ___ Weak willed

31. Pleasant___ : ___ : ___ : ___ : ___ Unpleasant

32. Clumsy___ : ___ : ___ : ___ : ___ Not clumsy

33. Sociable___ : ___ : ___ : ___ : ___ Not sociable

34. Attractive___ : ___ : ___ : ___ : ___ Unattractive

35. Trusting___ : ___ : ___ : ___ : ___ Suspicious

36. Sloppy___ : ___ : ___ : ___ : ___ Neat

VI. Self-Reported Behaviors Towards Obese Patients (SRBTOP)

Please take a few minutes to read this vignette and answer the questions that follow.
 (NOTE: only one of the following vignettes will be presented with the scale):
Vignette A

A 22 year old female, with history of a prior admission 8 months ago, has been admitted to your unit with a diagnosis of schizophrenia. Her family had called 911 due to reports of increasingly strange behavior over the past 3 weeks with the patient becoming more and more suspicious of others, including the family. She has stopped eating meals prepared by others only using packages that have been sealed and tamper proofed. She feels she is being watched through the windows, though there are blinds and curtains, and feels she is being tracked by a chip in her head. She believes people also know what she is thinking and she hears voices telling her to do things and where to go. She has become isolative from friends and family and spends most of the time in her room. She has no known history of drug or alcohol abuse. Her urine toxicology was negative on admission. She does not smoke cigarettes. There is no known history of medical illnesses or allergies. She lives with both parents and a 15 year old brother. She is not involved in any intimate relationship presently, having broken up with boyfriend of 2 years, 1 month ago. It is unclear at this time who initiated the break-up or why. She has no work history and is in her 2nd year in college. Leisure activities are reading, playing video games, and going to the movies. She is 5' 4" tall and weighs 250 lbs. She is appropriately dressed. She has been keeping to herself on the unit and is often seen looking furtively around the unit. She has been re-started on Risperdal 1 mg twice daily po and Cogentin 1 mg po at bedtime.
Vignette B

A 22 year old female, with history of a prior admission 8 months ago, has been admitted to your unit with a diagnosis of schizophrenia. Her family had called 911 due to reports of increasingly strange behavior over the past 3 weeks with the patient becoming more and more suspicious of others, including the family. She has stopped eating meals prepared by others only using packages that have been sealed and tamper proofed. She feels she is being watched through the windows, though there are blinds and curtains, and feels she is being tracked by a chip in her head. She believes people also know what she is thinking and she hears voices telling her to do things and where to go. She has become isolative from friends and family and spends most of the time in her room. She has no known history of drug or alcohol abuse. Her urine toxicology was negative on admission. She does not smoke cigarettes. There is no known history of medical illnesses or allergies. She lives with both parents and a 15 year old brother. She is not involved in any intimate relationship presently, having broken up with boyfriend of 2 years, 1 month ago. It is unclear at this time who initiated the break-up or why. She has no work history and is in her 2nd year in college. Leisure activities are reading, playing video games, and going to the movies. She is 5' 4" tall and weighs 124 lbs. She is appropriately dressed. She has been keeping to herself on the unit and is often seen looking furtively around the unit. She has been re-started on Risperdal 1 mg twice daily po and Cogentin 1 mg po at bedtime.

Having read the vignette, how likely will you be to:

Use the following statements below to finish the sentence above.	Unlikely	Somewhat Unlikely	Sometimes Likely	More Often Likely	Most Likely
37. Extend phone privilege due to this patient having an emergency?					
38. Excuse this patient from community meeting due to fatigue?					
39. Invite this patient to help in serving food at special occasion parties on the unit?					
40. Select this patient as your partner in a doubles game of ping pong?					
41. Select this patient to lead morning exercise/physical activity group?					
42. Give in to this patient's request for extra food?					
43. Teach about health promotion?					
44. *Feel annoyed at having to care for this patient?					
45. Ensure available armless seating at each encounter?					
46. Think this patient is experiencing common side-effects of the medication?					

* Reverse coded

Appendix B. Questions, Variables and Measurement Items on Survey

Research Questions	Research Variable	Variable Type	Measurement Instrument Items
Level 1 Ques. What do nurses know about the treatment of mentally ill patients in relation to atypical anti-psychotic medications? How much do they know about the common side-effects of atypical antipsychotics? Can they identify the common side-effects seen in their patients? Do they incorporate health promotion?	Knowledge Knowledge		NKAAM 1,3-7,9 NKAAM10-12 SRBTOP 43
What are the nurses' attitudes about taking care of psychiatric patients on atypical anti-psychotic medications? What are the attitudes towards patients who are overweight in general? What are the nurses' self-reported behaviors towards patients who are overweight and are being treated with atypical anti-psychotic medications? What are the psychiatric nurses' perceptions of obese psychiatric patients compared to normal weight mentally ill patients?	Attitude Self-Reported Attitude/behavior Self-reported behaviors Perception/Belief		SRBTOP 37-45 NATOP 19-26 SRBTOP 37-46 IATOP 27-36
Research Questions **Level 2 Questions** Do nurses discriminate in their approach or treatment behaviors for mentally ill patients who are obese and are being treated with atypical antipsychotic medications? Are there discriminatory or	**Research Variables** Self-reported behaviors/ Bias	**Variable Type** Dependent	**Instrument Items**

			SRBTOP 37-43, 45-46
bias tendencies in the nurses' behaviors towards caring for obese mentally ill patients?	Obesity (Weight Vignettes)	Independent	
Are there differences in the psychiatric nurses' intrinsic attitudes toward obese mentally ill patients?	Attitudes	Dependent	IATOP 27-35
Sub-Questions			
Will psychiatric nurses respond differently if the patient is obese versus a patient of normal weight?	Bias		SRBTOP 37,43,45
Are requests for special consideration treated differently?		Dependent	
Does the obese patient have to request special consideration because of size?	Obesity	Dependent	SRBTOP 37,45
Given a behavior situation, will the response to an obese patient differ from the response to an average weight patient?	Attitude/ Self-reported behaviors	Dependent	SRBTOP 37
Is response to inappropriate behavior, such as requesting phone calls outside of unit's protocol, treated differently?			
Are rewards for good behavior given differently?	} Bias/Behavior	Dependent	SRBTOP 37

Appendix C. Grid of Experts Feedback on the Instruments

Revised Attitudes & Discriminatory Items Based on 6 Experts Feedback	Representativeness		
Conceptual/Theoretical Definition: Attitude – Psychiatric nurses' long-standing points of view that guide or influence their behavior towards patients on atypical antipsychotic medications will be measured on an existing, modified or newly created semantic attitudinal scale. Intrinsic Attitudes – From the inside. It is essential and natural, not merely apparent or accidental. Discriminatory/ Bias Tendencies – An existing, modified, or newly created semantic attitudinal scale will be used to measure psychiatric nurses' making decisions on the basis of preference or showing preference or inclination that inhibits impartiality based on vignette situations.	1 = the item is <u>not representative</u> of persistence 2 = the item needs <u>major revisions</u> to be representative of persistence 3 = the item needs <u>minor revisions</u> to be representative of persistence 4= the item <u>is representative</u> of persistence Content Validity Index (CVI) = # of Experts rated an item 3 or 4 / # of Experts (6)		
	Expert Ratings:	Comments:	CVI
1. I believe it is necessary to educate obese patients on the health risks of obesity.	A - 4 B - 4 C - 4 D - 4 E - 4 F - 4		6/6= 1
Revised item: Same	Rationale: Ideal CVI		
2. Obesity is a chronic disease.	A - 4 B - 4 C - 4 D - 4 E - 4 F - 3		6/6 = 1
Revised item: Same	Rationale : Ideal CVI		
3. I make accommodations for obese patients.	A - 4 B - 1 C - 3 D - 4 E - 4 F - 4	B – "Questions should be focused on opinion and not their reactions to situation"	5/6 = 0.83
Revised item: Same	Rationale: 5 out of 6 Experts rated 3 or 4 which makes it significant enough to be kept.		
4. Obesity is associated with serious medical conditions.	A - 4 B - 4 C - 4 D - 4 E - 4 F - 2		5/6 = 0.83
Revised item: Same	Rationale: 5 out of 6 Experts rated 4 which makes it significant enough to be kept. No suggestions for improvement given.		
5. Nurses should be role models by maintaining a normal weight.	A - 4 B - 4 C - 4		5/6 = 0.83

	D - 4		
	E - 4		
	F - 1		
Revised item: Same	Rationale: 5 out of 6 Experts rated 4 which makes it significant enough to be kept. No suggestions for improvement given.		
6. I feel compelled to suggest weight loss programs to obese patients.	A - 4	C – "I feel it *necessary/ important* to recommend weight loss programs to obese patients"	5/6 = 0.83
	B - 3		
	C - 3		
	D - 3		
	E - 4		
	F - 1		
Revised item: Same	Rationale: 5 out of 6 Experts rated 3 or 4 which makes it significant enough to be kept.		
7. Most obese patients are well aware of the health risks of obesity.	A - 4	C – "*Many* obese patients are aware of the health risk of obesity"	6/6 = 1
	B - 4		
	C - 4		
	D - 3		
	E - 3		
	F - 4		
Revised item: Same	Rationale: Ideal CVI. No changes made.		
8. Most obese patients could reach a normal weight (for height) if they were motivated.	A - 4		5/6 = 0.83
	B - 4		
	C - 4		
	D - 4		
	E - 4		
	F - 2		
Revised item: Same	Rationale: 5 out of 6 Experts rated 4 which makes it significant enough to be kept. No suggestions for improvement given.		
9. Most obese patients will not lose a significant amount of weight.	A - 4		6/6 = 1
	B - 4		
	C - 4		
	D - 3		
	E - 4		
	F - 3		
Revised item: Same	Rationale: Ideal CVI.		
10. I have negative reactions towards the appearance of obese patients.	A - 4	B – "Questions should be focused on opinion and not their reactions…."	5/6 = 0.83
	B - 2		
	C - 4		
	D - 3		
	E - 4		
	F - 3		
Revised item: Same	Rationale: 5 out of 6 Experts rated 3 or 4 which makes it significant enough to be kept.		
11. For most patients, long-term weight maintenance of weight loss is impossible.	A - 3		6/6 = 1
	B - 4		
	C - 3		

	D - 3		
	E - 4		
	F - 3		
Revised item: Same	Rationale: Ideal CVI		
12. It is acceptable to use "scare tactics" to obtain compliance of the obese patient.	A - 4	C – " It is acceptable to use motivational interview technique to increase compliance of the obese patient"	5/6 = 0.83
	B - 4		
	C - 3		
	D - 1		
	E - 4		
	F - 3		
Revised item: Same	Rationale: 5 out of 6 Experts rated 3 or 4 which makes it significant enough to be kept.		
13. I feel uncomfortable when providing care to an obese patient.	A - 4		5/6 = 0.83
	B - 2		
	C - 4		
	D - 3		
	E - 4		
	F - 4		
Revised item: Same	Rationale: 5 out of 6 Experts rated 3 or 4 which makes it significant enough to be kept.		
14. It is difficult for me to feel empathy for an obese patient.	A - 4		6/6 = 1
	B - 3		
	C - 4		
	D - 3		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		
15. In control ___ : ___ : ___ : ___ : ___ Acting out	A - 3		6/6 = 1
	B - 4		
	C - 4		
	D - 4		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		
16. Compliant___ : ___ : ___ : ___ : ___ Noncompliant	A - 4		6/6 = 1
	B - 4		
	C - 4		
	D - 4		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		
17. Industrious___ : ___ : ___ : ___ : ___ Lazy	A - 3		6/6 = 1
	B - 4		
	C - 4		

	D - 4		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		
18. Strong willed___ : ___ : ___ : ___ : ___ Weak willed	A - 3		6/6 = 1
	B - 4		
	C - 4		
	D - 4		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		
19. Pleasant___ : ___ : ___ : ___ : ___ Unpleasant	A - 4		6/6 = 1
	B - 3		
	C - 4		
	D - 4		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		
20. Clumsy___ : ___ : ___ : ___ : ___ Not clumsy	A - 3		6/6 = 1
	B - 4		
	C - 4		
	D - 4		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		
21. Sociable___ : ___ : ___ : ___ : ___ Not sociable	A - 3		6/6 = 1
	B - 3		
	C - 4		
	D - 4		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		
22. Attractive___ : ___ : ___ : ___ : ___ Unattractive	A - 4		6/6 = 1
	B - 3		
	C - 3		
	D - 3		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		
23. Trusting___ : ___ : ___ : ___ : ___ Suspicious	A - 4		6/6 = 1
	B - 4		
	C - 4		

	D - 4		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		
24. Sloppy___ : ___ : ___ : ___ : ___ Neat	A - 4		6/6 = 1
	B - 4		
	C - 4		
	D - 4		
	E - 4		
	F - 3		
Revised item: Same	Rationale: Ideal CVI		
25. Extend phone privilege due to this patient having an emergency?	A - 4	E - "….Phone calls for emergency would possibly be given regardless of size so, not sure this might detect bias"	5/6 = 0.83
	B - 4		
	C - 3		
	D - 4		
	E - 1		
	F - 3		
Revised item: "Extend phone….in a non-emergency situation"	Rationale: 5 out of 6 Experts rated 3 or 4 which makes it significant enough to be kept.		
26. Excusing this patient from community meeting due to fatigue?	A - 4		6/6 = 1
	B - 4		
	C - 4		
	D - 4		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		
27. Invite this patient to help in serving food at special occasion parties on the unit?	A - 3	A – "If on dietary restriction, may or may not…it may be difficult for the patient"	6/6 = 1
	B - 4		
	C - 4		
	D - 4		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		
28. Select this patient as your partner in a doubles game of ping pong?	A - 4		6/6 = 1
	B - 4		
	C - 4		
	D - 4		
	E - 4		
	F - 3		
Revised item: Same	Rationale: Ideal CVI		

29. Select this patient to lead morning exercise/physical activity group?	A - 3		6/6 = 1
	B - 4		
	C - 4		
	D - 4		
	E - 4		
	F - 3		
Revised item: Same	Rationale: Ideal CVI		

30. Give in to this patient's request for extra food?	A - 4		6/6 = 1
	B - 4		
	C - 4		
	D - 3		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		

31. Teach about health promotion?	A - 4		6/6 = 1
	B - 4		
	C - 4		
	D - 3		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		

32. Feel annoyed at having to care for this patient?	A - 4		6/6 = 1
	B - 4		
	C - 4		
	D - 4		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		

33. Ensure available armless seating at each encounter?	A - 4		6/6 = 1
	B - 4		
	C - 3		
	D - 3		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		

34. Think this patient is experiencing common side-effects of the medication?	A - 4		6/6 = 1
	B - 4		
	C - 4		
	D - 4		
	E - 4		
	F - 4		
Revised item: Same	Rationale: Ideal CVI		

APPENDIX D. IRB APPROVAL AND CONSENT/ INSTRUCTIONS

Molloy College

Date:	December 15, 2014
To:	Marcia Williams - Hailey
From:	Kathleen Maurer Smith, PhD
	Co-Chair, Molloy College Institutional Review Board
	Veronica D. Feeg, PhD, RN, FAAN
	Co-Chair, Molloy College Institutional Review Board

SUBJECT: MOLLOY IRB REVIEW AND DETERMINATION OF EXEMPT STATUS

Study Title: The knowledge, attitudes, and self-reported behaviors of psychiatric nurses towards obese psychiatric patients on atypical anti-psychotic medications: A psychometric development.

Approved: December 15, 2014

Dear Marcia Williams-Hailey:

The Institutional Review Board (IRB) of Molloy College has reviewed the above-mentioned research proposal and determined that this proposal is approved by the committee. It is EXEMPT from the requirements of Department of Health and Human Services (DHHS) regulations for the protection of human subjects as defined in 45CFR46.101(b).

You may proceed with your research. Please submit a report to the committee at the conclusion of your project.

Changes to the Research: It is the responsibility of the Principal Investigator to inform the Molloy College IRB of any changes to this research. A change in the research may disqualify the project from exempt status.

Sincerely,

Kathleen Maurer Smith

Kathleen Maurer Smith, PhD

Veronica D. Feeg

Veronica D. Feeg, PhD, RN, FAAN

[E-MAIL SURVEY INVITATION]

Dear Former NSNA Member,

We are inviting your participation in this survey about psychiatric nursing and patients on atypical antipsychotic drugs. We really hope you will take the few minutes to answer these questions.

We are offering participants the opportunity to be part of a drawing for a $100 gift certificate.

Participation is voluntary - but we hope you will spend about 20 minutes for the chance to win the gift certificate - but more importantly, to contribute to what we know about psychiatric patients.

If you have any questions or concerns, please contact me at mwilliams3@lions.molloy.edu.

THANK YOU IN ADVANCE!

To answer this anonymous survey, click on the following link:

https://www.surveymonkey.com/s/PSYCHNURSE

* Additional consent information is provided in the survey

[SURVEY INVITATION]

Dear APNA Member,

I am currently a nursing Doctor of Philosophy (PhD) student at Molloy College in Rockville Center, NY and am conducting a research with registered nurses (RN) in clinical practice.

If you are a RN actively working with adult psychiatric patients I am inviting your participation in this survey about psychiatric nursing and patients on atypical antipsychotic drugs. I really hope you will take the few minutes to answer these questions.

Participation is voluntary - but we hope you will spend about 15-20 minutes for the chance to win a $100 gift certificate - but more importantly, to contribute to what we know about psychiatric patients.

There are no risks in taking this survey and your responses will be kept confidential through the absence of identifiers and the use of sealed envelopes.

If you have any questions or concerns, please contact me at mwilliams3@lions.molloy.edu

THANK YOU IN ADVANCE!