Therapeutic Non-pharmacological Interventions and PRN Psychotropic Medication Administration Practices of Mental Health RNs

Donna Leckey M.S., RN

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ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346

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Committee Chair: Mary Lou Bost DrPH, RN

Signature: Mary Lou Bost, DrPH, RN

Date: 12/12/14

Interim Dean, College of Health and Wellness: Clare M. Hopkins, PhD, RN

Signature: Clare M Hopkins

Date: 12/16/14

Committee Member Name: Frances Kelley Ph.D.

Signature: Frances A. Kelley

Date: 12/12/14

Committee Member Name: Edward Walsh M.S., RN

Signature: Edward Walsh MS, RN

Date: 12/12/14

Attestation

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Abstract

PRN psychotropic medication administration is a common practice used by psychiatric RNs in acute inpatient mental health settings to manage anxiety and agitation in patients, and as a result, there are high incidences of PRN psychotropic medication administration (Mugoya & Kampfe, 2010). There is limited documentation indicating that therapeutic non-pharmacological interventions are utilized prior to PRN psychotropic medication administration (Curtis et al., 2007). The purpose of this scholarly project was to determine what non-pharmacological interventions are used by mental health RNs prior to or in lieu of administering PRN psychotropic medication to manage anxiety and agitation in adult psychiatric hospitalized patients. Another aim of this project was to determine what factors influence mental health RNs' decisions to administer PRN psychotropic medications. A descriptive study was conducted. Two survey-type self-reporting tools were used. Twenty RNs completed Nursing Surveys. Thirteen RNs completed both Nursing Surveys and Nursing Intervention Tracking Forms. Findings from this study revealed that non-pharmacological interventions successfully resolved problems over 1/3 of the time and may prevent the use of PRN psychotropic medications. In cases where PRN psychotropic medication was not administered, distraction was the non-pharmacological intervention most often used. The most common factor influencing RNs' decisions to administer PRN psychotropic medications was a high level of anxiety persistent after non-pharmacological interventions were used. This study reinforces the importance of RNs using non-pharmacological interventions to manage patients exhibiting signs or symptoms of anxiety or agitation.

Chapter One: Introduction

Providing psychotropic medication on an as needed basis is known as PRN (pro re nata) use and is a common practice used by psychiatric mental health nurses in inpatient mental health settings to manage anxiety or agitation exhibited by patients. As a result, there are high incidences of PRN psychotropic medication administration (Mugoya & Kampfe, 2010). According to Mugoya and Kampfe (2010), "Between 23% and 50% of patients in psychiatric units in the United States of America will receive P.R.N. medications" (p. 37). In many of these situations, nurses may have been able to manage anxiety or agitation exhibited in patients by first utilizing therapeutic non-pharmacological interventions such as de-escalation, counseling, distraction, time out, reality testing, relaxation, or cognitive behavioral therapy (Hilton & Whiteford, 2008). According to the American Nurses Association's *Psychiatric-Mental Health Nursing Scope & Standards of Practice* (2007), "The Psychiatric-Mental Health Registered Nurse provides, structures, and maintains a safe and therapeutic environment in collaboration with patients, families, and other healthcare clinicians" (p. 39). However, the literature suggests that RNs most often do not document utilization of therapeutic non-pharmacological interventions to manage anxiety and agitation that prevented the need to administer PRN psychotropic medications or the non-pharmacological interventions they used prior to patients receiving PRN psychotropic medications (Curtis, Baker, & Reid, 2007; Lindsey & Buckwalter, 2012). The lack of documentation surrounding the use of non-pharmacological interventions creates questions as to whether RNs are using non-pharmacological interventions prior to administering PRN psychotropic medications.

Background of Problem

Reliance on PRN psychotropic medication administration as a first resort to manage anxiety or agitation creates a significant issue for patients, psychiatric-mental health nurses, nurse educators, nursing administration, hospital executives, and performance improvement staff. According to Friedman, Nurenburg, Birnbaum, & Schleifer (2012), "While p.r.n. use may serve as a means of titrating medication to symptoms, perhaps resulting in patients receiving lower doses of regular medications, it may also contribute to clinical problems, such as increased polypharmacy, medication and documentation errors, adverse reactions, and antipsychotic dosing above recommended levels" (p. 381). PRN psychotropic medication may also result in adverse drug interactions, increased morbidity, and "confound the assessment of the efficacy of regular medication" (Hilton & Whiteford, 2008, p. 556). Similarly, reliance on PRN psychotropic medication can cause adverse effects such as hypotension, sedation, restlessness, and agitation (Lindsey & Buckwalter, 2012). According to Baker et al. (2008), use of PRN psychotropic medications can expose patients to unnecessary psychotropic medications. Further, select PRN psychotropic medications have the potential to cause physical and psychological addiction (Hilton & Whiteford, 2008). Reliance on PRN psychotropic medication in lieu of encouraging patients to use coping skills to manage symptoms may make it more difficult for patients to be discharged safely and successfully into the community (Friedman, Nurenberg, Birnbaum, & Schleifer, 2012). Therefore, the common practice of utilizing PRN psychotropic medications as a first-line measure to reduce anxiety and agitation reinforces the need to establish best practice guidelines to reduce unnecessary incidences of PRN psychotropic medication administration.

The prevalence of mental health issues substantiates the unprecedented need for research on PRN psychotropic medication use to lessen the impact on cost nationwide. According to the

World Health Organization (2002), "An estimated 22% of Americans aged 18 and older, about one in five adults, suffer from a diagnosable psychiatric disorder at any given time" (as cited in American Nurses Association, 2007, p. 6). In addition, "major changes in the healthcare delivery system, practice patterns of health professionals, and funding continue to have a profound effect on mental health care and psychiatric-mental health nursing practice" (American Nurses Association, 2007, p. 5). Reliance on PRN psychotropic medication administration as a first resort to manage anxiety and agitation is not cost effective, and by not offering non-pharmacological interventions or aiding the development of coping skills to manage symptoms, patients are receiving less than optimal quality of care. Alarmingly, in a qualitative study, Baker, Lovell, and Harris (2007), found that 57 (97%) out of 59 mental health professionals who participated in the study identified situations where PRN psychotropic medications were used without staff first trying alternative interventions. According to Usher, Baker, Holmes, & Stock (2009), clinical decision-making surrounding PRN psychotropic medication administration is guided by custom, practice, and nurses' personal protocols rather than by evidence or practice guidelines. With the lack of documentation regarding use of non-pharmacological interventions, it is difficult to determine if mental health RNs are using non-pharmacological interventions prior to administering PRN psychotropic medications. Although the literature supports non-pharmacological interventions being effective in decreasing incidences of PRN psychotropic medication and addresses the most frequent interventions used by RNs, there is a lack of research studies that discuss non-pharmacological interventions used that prevented the need for PRN psychotropic medication administration. Moreover, it is evident from the literature that many factors impact RNs' decisions to administer PRN psychotropic medications. Hence, the available research reflecting the ease of administering psychotropic medication "as needed"

reinforces the need for additional research to determine if RNs are using non-pharmacological interventions first to manage patients with symptoms of agitation or anxiety and, if they are, to determine what non-pharmacological interventions are used prior to or in lieu of patients receiving PRN psychotropic medications. Additional research is also needed to gain a better understanding of factors influencing mental health RNs' psychotropic medication administration practices.

Purpose/Statement of Problem

In acute inpatient mental health settings, a common practice used by mental health RNs to manage anxiety and agitation in patients is PRN psychotropic medication administration. This results in high incidences of PRN psychotropic medication administration (Mugoya & Kampfe, 2010). However, there is limited documentation indicating that therapeutic non-pharmacological interventions are utilized prior to PRN psychotropic medication administration (Curtis et al., 2007). The aim of this project was to determine what non-pharmacological interventions are used by mental health RNs prior to or in lieu of administering PRN psychotropic medication to manage anxiety and agitation in adult psychiatric hospitalized patients. In addition, there are many extraneous factors impacting RNs' decisions to administer PRN psychotropic medication such as the skill level of RNs, level of patient distress, patients' history, and staffing levels. Another aim of this project was to determine what factors influence mental health RNs' decisions to administer PRN psychotropic medications to manage anxiety and agitation in adult psychiatric hospitalized patients.

Research Questions

What non-pharmacological interventions are used by mental health RNs prior to or in lieu of administering PRN psychotropic medications to manage anxiety and agitation in adult

psychiatric hospitalized patients? What factors influence mental health RNs' decisions to administer PRN psychotropic medications to manage anxiety and agitation in adult psychiatric hospitalized patients?

Theoretical Foundation

Identified theoretical/conceptual framework.

Although none of the articles reviewed identify a specific underlying theoretical or conceptual framework guiding the authors' research studies, Mullen and Drinkwater (2011) discuss the importance of nurses establishing therapeutic relationships with patients, engagement, and client-nurse collaboration, all of which are considered useful in planning care and in the effectiveness of treatments. Similarly, O'Brien and Cole (2004) discuss the importance of nurses establishing therapeutic relationships with patients and also discuss factors such as therapeutic engagement and communication which nurses identified as important when caring for patients in close-observation areas. Price and Baker (2012) emphasize the importance of staff maintaining effective therapeutic relationships in all interactions with patients. Likewise, Thomas, Jones, Johns, and Trauer (2006) briefly discuss how interactions between clients and staff should be an active therapeutic process in which there are frequent verbal contacts. As previously mentioned, even though no prior research has identified an underlying theoretical or conceptual framework, Peplau's theory of interpersonal relations is one theory applicable to the aforementioned studies.

Peplau's Theory of Interpersonal Relations in Nursing.

Hildegard Peplau's theory of interpersonal relations in nursing focuses on the interpersonal process and therapeutic relationship that develops between the nurse and patient. The purpose of Peplau's theory of interpersonal relations is to establish quality nurse-patient

interactions in order to promote patients' well-being (Gastmans, 1998). Peplau believed there is a need for the development of a relationship or partnership between the nurse and patient as opposed to the patient passively receiving treatment and having no input into his or her care. According to Peplau (1992), the nurse-patient relationship is the foundation of nursing practice. Although Peplau's theory of interpersonal relations is applicable in several areas of practice, it is most applicable to psychiatric nursing (Gastmans, 1998). Patients with psychiatric disorders often have alterations in cognition, mood, and reality-testing that result in difficulty in communication, socialization, and overall functioning. Nurses assist patients throughout the phases of the nurse-patient relationship in recognizing and developing solutions to their problems (Peplau, 1992). Likewise, nurses provide patients with sufficient information in order to promote autonomy by encouraging them to make their own decisions, to assist patients in taking responsibility for their choices, to explore alternatives with patients, and to identify possible consequences associated with their choices (Gastmans, 1998).

Concept of interpersonal relationships.

The concept interpersonal relationships originated from the research of Harry Stack Sullivan, a psychiatrist who, along with other neo-Freudian psychiatrists (e.g. Horney, Erikson, Fromm, Fromm-Reichmann), developed an interpersonal relationship theory. In turn, Hildegard Peplau, a psychiatric nurse and student of Sullivan's work, further defined interpersonal relationships including interpersonal relations and the nurse-patient relationship (Nelson, 2011). Concepts such as interpersonal relations, therapeutic relationships, and nurse-patient relationships are often used interchangeably when discussing interpersonal relationships.

Interpersonal relationships as defined by Peplau (1992) are "relations, connections, and linkages between two or more persons involved in the interaction" (p. 17). According to Peplau

(1992), nurses can use interpersonal techniques such as verbal interventions "during nurse-patient relationships aimed at accomplishing problem resolution and competence development in patients" (p. 18). Forchuk (1991) defines interpersonal relationships as "any processes occurring between two or more persons" (p. 55). According to Forchuk (1991), "the nurse-patient relationship is the specific interpersonal relationship that develops between a nurse and a patient" (p. 55). Whereas, Dearing and Steadman (2011), use Sullivan's definition of interpersonal relationships from the Interpersonal Theory of Psychiatry and define interpersonal relationships as "a way for clients to develop insight in order to meet personal needs, decrease anxiety, and sustain health" (p. 176). Accordingly, Dearing and Steadman (2011) explain that "an effective interpersonal relationship between a nurse and a client is a critical component of quality nursing care" (p. 176).

Theoretical/conceptual framework and research studies.

Similar to Peplau's theory of interpersonal relations, Mullen and Drinkwater (2011) reviewed PRN medication use in a psychiatric intensive care unit and concluded that it is important to establish therapeutic relationships and develop partnerships between nurses and patients when planning care and reinforcing rules successfully. In this study, rather than repeatedly reiterating rules, nurses focused on limit setting through collaborative negotiations with patients. To establish therapeutic nurse-patient relationships, several nurses administered medications including PRN psychotropic medications to assigned patients rather than having only one nurse administer medications to all patients. This change in practice increased the amount of time nurses were spending with patients and thus promoted greater opportunities for nurse-patient collaboration when planning care (Mullen & Drinkwater, 2006). The joint effort of nurse-patient interaction promotes identifying, understanding, and finding solutions to patients'

problems (Peplau, 1992). Likewise, developing professional yet therapeutic relationships with patients, as defined by Peplau, promotes patients' well-being (Gastmans, 1998).

Similarly, Price and Baker (2012) identified key components of de-escalation techniques and emphasized the importance of developing therapeutic relationships between patients and nurses when de-escalating aggression exhibited by patients. Specifically, these researchers discuss how developing effective therapeutic relationships decreases incidences of escalating behaviors (Price & Baker, 2012). Correspondingly, Peplau (1992) encouraged utilization of interpersonal techniques and verbal interventions during nurse-patient relationships to promote problem resolution and competence development by assisting patients in recognizing their increasing anxiety and interventions they can use to reduce anxiety.

Likewise, Thomas, Jones, Johns, and Trauer (2006) discuss how interactions between patients and nurses on a psychiatric high-dependency unit should be a therapeutic process and how using therapeutic activities contributes to this interaction and thus, management of problematic behaviors exhibited by patients. Through nurse-patient interactions, nurses can help patients recognize, understand, and develop solutions to their problems. Accordingly, "Aiding the patient toward awareness of dysfunctional patterns of behavior and toward the development, testing, and adoption of more useful growth-continuing patterns are the nurse's work" (Peplau, 1992, p. 15).

Definition of Terms

PRN psychotropic medication.

"PRN medications, referring to 'as required' or 'pro re nata' medications, are provided to patients in psychiatric facilities on an as-needed basis for the treatment of anxiety, problematic behaviors, or other mental health needs (along with pain and other medical conditions)" (Silk,

Watt, Pilon, & Draper, 2013, p. 30). Psychotropic medications are administered PRN or as needed by mental health nurses to manage psychiatric symptoms (e.g. depression, anxiety, hallucinations, delusions) and behavioral symptoms (e.g. wandering, relentless pacing, agitation, aggression, alteration in sleep patterns). PRN or pro re nata, meaning as circumstances require or as occasions arise, psychotropic medications are administered by nurses to manage a host of psychiatric symptoms, including anxiety and agitation, in patients (Mugoya & Kampfe, 2010).

Agitation.

Agitation is defined as social inappropriateness, inappropriate or non-purposeful motor and vocal behavior, excessive motor and vocal behaviors, and strong emotions (Kopecky, Kopecky, & Yudofsky, 1998). Characteristics of agitation include excessive motor or verbal activity, irritability, uncooperativeness, threatening gestures, and assaultiveness. In addition, restlessness, excessive or semi-purposeful motor activity, irritability, and heightened responsiveness to internal and external stimuli are typical features exhibited by patients experiencing agitation (Zeller & Rhoades, 2010). Rating scales for agitation are not typically utilized in clinical care.

Anxiety.

Anxiety is defined as "subjective symptoms manifested through a variety of somatic complaints expressed by patients" (Kopecky et al., 1998, p. 304). These include apprehensiveness, fear, nervousness, and distractibility. Additional complaints include difficulty concentrating, insomnia, headaches, and nausea (Kopecky et al., 1998).

Therapeutic non-pharmacological interventions.

Therapeutic non-pharmacological interventions or alternatives to PRN psychotropic medication include psychological treatments such as de-escalation, counseling, distraction, time

out, reality testing, relaxation, and cognitive behavioral therapy (Geffen et al., 2002; Hilton & Whiteford, 2008). Curtis, Baker, and Reid (2007) identify talking, distraction, seclusion, and time out as therapeutic interventions used by psychiatric nurses. Additional examples of therapeutic non-pharmacological interventions used by psychiatric nurses include counseling, limit setting, and encouraging patients to rest (O'Brien & Cole, 2004). Cognitive behavioral therapy, in particular, can be used as a non-pharmacological intervention. Du Plessis and Brennan (2012) define cognitive behavioral therapy as a psychological intervention used to assist patients in identifying strategies and goals to overcome behavior problems by collaborating with clinicians to develop psychological and practical skills.

De-escalation techniques focus on psychosocial techniques to decrease violent and aggressive behavior by using verbal and non-verbal communication (Price & Baker, 2012). In addition, de-escalation techniques include verbal and non-verbal strategies to reduce aggression and agitation in patients by acknowledging patients' concerns and by using reflective listening. Additional de-escalation techniques include displaying a calm demeanor, maintaining non-invasive eye contact, being non-confrontational, and expressing a desire to help patients regain control (Curtis et al., 2007). De-escalation techniques are used to establish a rapport with patients, gain patients' trust, and maintain patients' self esteem (Price & Baker, 2012).

Mindfulness.

According to Bos et al. (2013):

> Mindfulness is the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment. The practice of mindfulness includes observing and attending to internal and external experiences as they occur in the here and now

> and cultivating a non-evaluative and open attitude to these experiences. Increased mindfulness is thought to improve psychological functioning, presumably by promoting an adaptive form of self-focused attention that reduces rumination and emotional avoidance and improves behavioral self-regulation. (p. 60).

Meditation is a mindfulness technique that can be employed to decrease mood disturbance and stress and has been effective in improving patients' symptoms of anxiety and depression (Kneisl & Trigoboff, 2013). The four requirements of meditation include a quiet place, a comfortable position, an object or thought to focus on, and a non-judgmental attitude. Ideally, the environment should be a quiet place to minimize distractions. With a passive attitude, one understands that thoughts and distractions will occur but can be "cleared from the mind" (Kneisl & Trigoboff, 2013, p. 727).

Chapter Two: Review of the Literature

Surprisingly, there is not much literature surrounding the use of therapeutic non-pharmacological interventions and incidences of PRN psychotropic medication administration. Of the available literature, research studies have found that behavioral interventions and therapeutic non-pharmacological interventions are effective in decreasing PRN psychotropic medication administration (Baker et al., 2007; Donat, 2006; Hilton & Whiteford, 2008; Jarrett et al., 2008; Mullen & Drinkwater, 2011; Thomas et al., 2006). Some research studies discuss the use of alternative interventions to decrease reliance on PRN psychotropic medication administration (Curtis et al., 2007; Hilton & Whiteford, 2006; Jarrett et al., 2008; Mugoya & Kampfe, 2010). In several studies, the focus is exploring the factors influencing the PRN psychotropic medication administration practices of mental health RNs in acute psychiatric settings (Baker et al., 2007; Curtis et al., 2007; O'Brien & Cole, 2004; Stewart et al., 2012; Usher et al., 2009). Moreover, in a few studies, researchers discuss the need for guidelines and policies to be established for the administration of PRN psychotropic medication (Curtis et al., 2007; Hilton & Whiteford, 2006; Mugoya & Kampfe, 2010).

Critique and Synthesis of Previous Research

As previously mentioned, there is a lack of literature surrounding the use of therapeutic non-pharmacological interventions and incidences of PRN psychotropic medication administration. Nevertheless, after reviewing the literature, it is evident that PRN psychotropic medication administration remains a common practice mental health RNs use to manage anxiety and agitation in patients. However, in many of these situations, nurses may have been able to use non-pharmacological interventions such as de-escalation or distraction to decrease agitation and anxiety instead of immediately resorting to administering PRN psychotropic medication as a

first line measure (Hilton & Whiteford, 2008). In addition, there is a lack of literature surrounding what non-pharmacological interventions are used by mental health RNs prior to or in lieu of administering PRN psychotropic medications. Moreover, the literature suggests that many factors influence RNs' decisions to administer PRN psychotropic medications. Several studies have contributed to gaining a better understanding of mental health RNs' PRN psychotropic medication administration practices (Baker et al., 2007; Curtis et al., 2007; O'Brien & Cole, 2004; Stewart et al., 2012; Usher et al., 2009).

Evidence-Based Practice

Significant disparities exist between evidence-based research recommendations and common practices occurring in mental health settings (Jung & Newton, 2009). The majority of the literature reviewed indicates that PRN psychotropic medication administration is not evidence-based practice. Instead, PRN psychotropic medication administration is based on clinical experience and habit instead of quality evidence (Baker et al., 2007). Clinical decision-making surrounding PRN psychotropic medication administration is guided by custom, practice, and nurses' personal protocols rather than by evidence or practice guidelines (Usher et al., 2009). It is possible that by relying on customs and habits and not evidence-based practice, nurses are not providing their patients with the highest quality of effective care. Nevertheless, patients are entitled to receive evidence-based treatment. Consequently, the lack of evidence supporting PRN psychotropic medication administration demonstrates a need to establish best practice guidelines and an evidence-based protocol to guide PRN psychotropic medication administration (Hilton & Whiteford, 2008).

There are a few articles (Baker et al., 2007; Hilton & Whiteford, 2008) discussing PRN psychotropic medication administration in relation to evidence-based practice. Hilton and

Whiteford (2008) reviewed the evidence for PRN psychotropic medication administration in relation to recommendations for evidence-based practice, current mental health policies, and professional ethics established by the World Health Organization and National Standards for Mental Health Services. They found that with PRN psychotropic medication administration, nurses are not consistently meeting the nursing standard to "document assessment results, health care/treatment plan, strategies for care and outcomes of care" (Hilton & Whiteford, 2008, p. 558). These researchers also found that PRN psychotropic medication administration does not "significantly change patient long-term or short-term outcomes" (Hilton & Whiteford, 2008, p. 561). The lack of evidence supporting PRN psychotropic medication administration reinforces the need for additional research to establish best practices for PRN psychotropic medication administration.

Clinical Effectiveness of PRN Psychotropic Medications

A literature review by Mugoya and Kampfe (2010) determined there is lack of evidence supporting the clinical effectiveness of using PRN psychotropic medications as evidenced by the lack of high quality randomized trials. Moreover, the outcome of PRN psychotropic medication administration is poorly documented. Despite the lack of clinical effectiveness of PRN psychotropic medication administration, this remains a common nursing practice (Mugoya & Kampfe, 2010).

Until recently, there were no tools in the literature to evaluate the effectiveness of PRN psychotropic medications. Accordingly, Silk, Watt, Pilon, and Draper (2013) developed a psychotropic PRN medication tool to evaluate the effectiveness of PRN psychotropic medication administration. This tool compares agitation or other behavioral symptoms exhibited by patients pre and post PRN psychotropic medication administration and consists of a baseline/triggers

form, a PRN effectiveness checklist, and a medication administration record. The psychotropic PRN medication tool provides a comprehensive means to evaluate the clinical effectiveness of PRN psychotropic medication administration (Silk et al., 2013). Likewise, "this tool has improved patient outcomes through the reduction of unnecessary and/or ineffective PRNs by providing a more thorough assessment of the effectiveness of PRN medications and thereby reducing subjective and ambiguous language" (Silk et al., 2013, p. 29). Nevertheless, although the literature depicts a lack of clinical effectiveness of PRN psychotropic medication administration, the psychotropic PRN evaluation tool may provide some standardization for nurses to determine the effectiveness of PRN psychotropic medication administration.

Indications for PRN Psychotropic Medication Administration

PRN psychotropic medications are administered by psychiatric nurses to manage depression, anxiety, hallucinations, delusions, wandering, pacing, agitation, aggression, and sleep disturbance (Lindsey & Buckwalter, 2012). In addition, PRN psychotropic medications are administered for patient distress and prevention and management of aggression or hostility (Hilton & Whiteford, 2008). Further, threatening behavior towards others is another reason for administering PRN psychotropic medication (Curtis et al., 2007; Hilton & Whiteford, 2008; Jarrett et al., 2008). Moreover, PRN psychotropic medications can be administered when patients decline their regularly scheduled medications (Stewart, Robson, Chaplin, Quirk, & Bowers, 2012). The most common reason for PRN psychotropic medication administration is agitation (Baker et al., 2010; Baker, Lovell, & Harris, 2007; O'Brien & Cole; 2004; Smith et al., 2008; Stein-Parbury et al., 2008).

Behaviors (e.g. agitation, anxiety) for which PRN medications are ordered lack objective definitions and, as a result, are poorly defined (Mugoya & Kapfe, 2010). Likewise, agitation is

not clearly defined and consequently is difficult to uniformly assess in clinical practice. For example, one side effect of select PRN psychotropic medications (typically first and second generation antipsychotics) is akathisia, defined as motor restlessness. Signs and symptoms include feelings of apprehension, irritability, inability to sit or stand still for more than a few seconds, and pacing (Kneisl & Trigboff, 2013). Akathisia could be misidentified as agitation due to over-lapping similarities in exhibited behaviors (restlessness, emotional distress, anxiety, etc). Again, nurses in the clinical setting do not routinely utilize rating scales that might decrease subjectivity in assessment. Use of an instrument such as the Overt Agitation Severity Scale may better define and objectively rate agitation. The Overt Agitation Severity Scale measures the severity of agitation based on "objectifiable vocalizations and motoric upper and lower body movements" (Yudofsky, Kopecky, Kunik, Silver, & Endicott, 1997, p. 546).

Although prescribers' orders are written for PRN psychotropic medication to be administered for a select target symptom, nurses may administer it for other symptoms of concern (Baker et al., 2008). Hence, patients may receive PRN psychotropic medications for other behaviors not intended by prescribers (Geffen et al., 2008). Care needs to be taken by nurses to ensure they are administering PRN psychotropic medications for behaviors indicated by prescribers' orders.

Several studies (Baker et al., 2010; Baker, Lovell, & Harris, 2007; O'Brien & Cole; 2004; Smith et al., 2008; Stein-Parbury et al., 2008) support agitation as being the most prevalent reason for PRN psychotropic medication administration. However, some researchers (Baker et al., 2010; Lindsey & Buckwalter, 2012; Stein-Parbury et al., 2008) have based the rationale for PRN psychotropic medication administration on retrospective data (e.g. chart audits) documented by nurses. This is problematic since nurses are not always documenting the reason

for PRN psychotropic medication administration (O'Brien & Cole, 2004; Stein-Parbury et al., 2008; Thomas et al., 2006). Therefore, it is evident that nurses are not documenting the rationale for PRN psychotropic medication administration nor the response to the medication on every occasion. Correspondingly, Lindsey and Buckwalter (2012), while conducting a retrospective chart audit of two acute care geropsychiatric units, discovered there was no documented rationale in the nursing notes for PRN psychotropic medication administration in 81.3% of patients at Site A and 55.3% of patients at Site B. Nevertheless, despite the poor documentation and several other behaviors precipitating the need for PRN psychotropic medication administration, agitation was the most common reason for PRN psychotropic medication administration.

Reliance on PRN Psychotropic Medication Administration

Reliance on PRN psychotropic medication to manage psychiatric behaviors is a common practice among mental health professionals (Baker et al., 2007; Jarrett et al., 2008; O'Brien & Cole, 2004; Smith et al., 2008). As a result, there are high incidences of PRN psychotropic medication (Baker et al., 2007; Curtis et al., 2007; O'Brien & Cole, 2004; Thomas et al., 2006). Advantages of PRN psychotropic medication administration include rapid administration of medications during psychiatric emergencies and decreased use of more invasive measures (e.g. physical restraint) (Hilton & Whiteford, 2008). Another advantage is prevention or containment of physical aggression and violence in an attempt to maintain a safe environment. Increased incidences of PRN psychotropic medication administration could also be due to regularly scheduled psychotropic medications not effectively managing patients' behaviors (Stein-Parbury et al., 2008).

However, written PRN psychotropic medication orders "may expose psychiatric inpatients to unnecessary psychotropic medication" (Thapa et al., 2003, p. 1282). Thapa et al.

(2003) evaluated whether writing PRN psychotropic medication orders exposed patients to unnecessary PRN psychotropic medications. These researchers found that after implementing a policy to eliminate written PRN psychotropic medication orders and thus requiring RNs to contact prescribers for "now orders," PRN psychotropic medication administration decreased by 47% (Thapa et al., 2003).

Health Professionals PRN Psychotropic Medication Administration Practices

Relying on use of PRN psychotropic medication as a primary means to manage anxiety and agitation in patients is not providing patients with therapeutic care. In studies by Baker et al. (2007) and O' Brien and Cole (2004), data was obtained through interviews with nurses to gain a better understanding of factors influencing usage of PRN psychotropic medications. These include the skill level of nurses, level of patient distress, patients' history, and whether nurses had previously been assaulted or experienced an adverse event. Additional factors include differences in philosophy of care among nurses and being influenced by prescribers or patients to administer PRN psychotropic medication. In other studies (Curtis et al., 2007; Stein-Parbury et al., 2008), researchers relied on data obtained from retrospective audits which are impacted by nurses' documentation practices to determine RNs' use of PRN psychotropic medications. Another study by Stewart et al. (2012) which relied on data obtained from medical and nursing notes, found that nurses' knowledge of pharmacology, interpersonal skills, and patients' current level of risk could affect nurses' decisions to administer PRN psychotropic medication. Undeniably, many factors impact nurses' usage of PRN psychotropic medication. Nevertheless, despite researchers using different measures to gain a better understanding of factors influencing nurses' usage of PRN psychotropic medication, it is evident that PRN psychotropic medication

administration is a common practice of psychiatric nurses to decrease patients' anxiety and agitation.

A study conducted by Usher et al. (2009) focusing on the clinical decision-making processes associated with PRN psychotropic medication administration found that nurses identified several factors that influence their decisions to administer PRN psychotropic medication. These include concern for patient safety or the safety of others in the environment and having insufficient training on PRN psychotropic medication administration. Additional factors include decreased staffing levels, caring for several patients experiencing agitation, aggression, psychotic symptoms, or elated mood, and patients' requests for PRN psychotropic medication. In addition, the researchers found that more experienced and regular nurses used PRN psychotropic medication administration less often than casual or agency nurses who had less experience and who were less familiar with patients. The researchers attributed this difference to regular and more experienced nurses being able to anticipate and prevent patients' aggression and in doing so were also able to avoid the need for PRN psychotropic medication administration (Usher et al., 2009).

After thoroughly reviewing several research studies on PRN psychotropic medication, it is evident that health professionals' medication administration practices vary. Baker et al. (2007) conducted interviews with various healthcare professionals (e.g. medical staff, nurses, pharmacists) with differing levels of experience to obtain a broader perspective of PRN psychotropic medication practices among professional groups. Mental health professionals identified factors which influenced their decisions to administer PRN psychotropic medication instead of using alternative interventions. These included limited skills and clinical experience, limited time, and high patient to nurse ratios. In addition, RNs reported that their decisions to

administer PRN psychotropic medications were influenced by level of patients' distress, patients' history, and their belief that administering PRN psychotropic medication would prevent or manage violence (Baker et al., 2007). Many factors influence health professionals' PRN psychotropic medication administration practices which make it difficult to adequately account for variations in health professionals' PRN psychotropic medication administration practices. According to the American Nurses Association's *Psychiatric-Mental Health Nursing Scope & Standards of Practice*, RNs need to use current research and best practices to guide their pharmacological interventions and to assess patients' responses to interventions (American Nurses Association, 2007).

PRN Psychotropic Medication Administration Monitoring

To determine whether having treatment teams review data on PRN psychotropic medication administrations was effective in reducing incidences of PRN psychotropic medication administration, Friedman et al. (2012) conducted a PRN tracker project. Treatment teams comprised of psychiatry, psychology, general medicine, social work, rehabilitation, nursing, direct care, nutrition, pastoral services, and substance-abuse counseling staff used a tracker database spreadsheet to review patterns of PRN psychotropic medication use and to identify treatment gaps potentially requiring clinical modifications. Data was reviewed for 28 months, and the results of this project showed that monthly PRN psychotropic medication administration decreased from 642 to 240. However, even though data was reviewed on 166 patients, this accounted for only one-third of the hospital's population. In any case, the researchers found that timely review of data related to PRN psychotropic medication administration by treatment teams reduced incidences of PRN psychotropic medication administration. After reviewing the PRN psychotropic medication administration data, treatment

teams were more inclined to utilize other non-pharmacological clinical strategies when possible in lieu of using PRN psychotropic medication to manage patients' psychiatric symptoms (Friedman et al., 2012). Moreover, monitoring PRN psychotropic medication administration provides prescribers with information on patients' exposure to PRN psychotropic medication over time (Smith et al., 2008).

Patient Demographics

Involuntarily committed patients are more likely than patients admitted on voluntary commitments to receive PRN psychotropic medications (Curtis et al., 2007; Jarrett et al., 2008; Stein-Parbury et al., 2008). Patients with schizophrenia receive the highest incidences of PRN psychotropic medication administration on psychiatric units (Smith et al., 2008; Stein-Parbury et al., 2008). However, patients with diagnoses of depression and dementia receive the most incidences of PRN psychotropic medication administration on the geropsychiatric units (Lindsey & Buckwalter, 2012). Patients with substance use disorders had high incidences of PRN psychotropic medication administration (Smith et al., 2008). According to Stein-Parbury et al. (2008), patients with drug and alcohol abuse and personality disorders had significantly higher incidences of PRN psychotropic medication administration per day. Female patients have more incidences than male patients of receiving PRN psychotropic medication on psychiatric units (Jarrett et al., 2008; Lindsey & Buckwalter, 2012). One study found that patients in their 30s have the highest incidences of PRN psychotropic medication administration in psychiatric units (Jarrett et al., 2008). However, male patients in their 40s receive the highest incidences of PRN psychotropic medication administration in the state hospitals throughout Pennsylvania. There were no differences in PRN psychotropic medication administration among ethnic or racial groups (Smith et al., 2008).

Demographic data was obtained in several studies (Curtis et al., 2007; Jarrett et al., 2008; Lindsey & Buckwalter, 2012; Smith et al., 2008; Stein-Parbury et al., 2008) that examined PRN psychotropic medication administration. Demographic data provides quality improvement staff with information as to the highest recipients of PRN psychotropic medication administration. In summary, although demographic data varies, the most consistent themes for receiving higher incidences of PRN psychotropic medication administration include patients with a diagnosis of schizophrenia, involuntarily committed patients, females, and those with co-occurring substance use disorders and personality disorders.

Patients' Perspectives

In a study by O'Brien and Cole (2004), a participatory-action research framework was used and interviews were conducted with patients and nurses to determine patients' and nurses' experiences on a psychiatric close-observation area within a hospital. Patients on psychiatric units expressed various emotions (e.g. being upset, scared, anxious, agitated, aggressive, angry, isolated) that they experienced during their hospitalization and voiced concern over nurses not always providing interventions to address these feelings (O' Brien & Cole, 2004). Nursing interventions and actions patients identified as helpful when they were experiencing distressing symptoms such as anxiety or agitation include providing structure, teaching coping skills, and demonstrating care and respect. Further, patients voiced concern regarding lack of activities available to them on inpatient units. Patients expressed liking spending time talking to other patients and staff, playing cards, listening to music, and doing puzzles and artwork (O'Brien & Cole, 2004). A limitation of this study acknowledged by the researchers "was that it was confined to one unit at a particular point in time" (O'Brien & Cole, 2004, p. 97).

Patients stated that they experienced fear, embarrassment, anger, and helplessness when PRN psychotropic medications were administered (Jarrett et al., 2008). Nurses must consider the experiences and subjective feelings of patients on an inpatient psychiatric unit and implement interventions to assist patients in attending to and addressing their distressing emotions. Further, nurses need to offer patients activities to help them productively occupy their free time during the course of their hospitalization.

PRN Psychotropic Medication Administration Practices

Most PRN psychotropic medications are administered on the 3-11 shift (Baker et al., 2008; Curtis et al., 2007; Mullen & Drinkwater, 2011; Smith et al., 2008; Stein-Parbury et al., 2008). Oral medication is the most frequent route of administration of PRN psychotropic medication (Baker et al., 2010; Baker et al., 2008; Smith et al., 2008), and PRN psychotropic medications are typically administered early in the course of patients' hospitalization (Baker, et al., 2008). Diazepam (e.g. benzodiazepines) is the most frequently administered PRN psychotropic medication in psychiatric units (Curtis et al., 2007; Mullen & Drinkwater, 2011; Stein-Parbury et al., 2008). However, Haldol is the most frequently administered PRN psychotropic medication in geropsychiatric units (Lindsey & Buckwalter, 2012). Lorazepam is the most frequently administered PRN psychotropic medication throughout the state hospitals in Pennsylvania (Smith et al., 2008). Most PRN psychotropic medication administrations are initiated by nurses (Smith et al., 2008; Stein-Parbury et al., 2008). In summary, although health professionals' PRN psychotropic medication practices vary, the most consistent findings support most PRN psychotropic medications being administered on 3-11 shift and at the request of Registered Nurses.

Documentation Practices

There is lack of documentation surrounding PRN psychotropic medication administration (Curtis et al., 2007; Geffen et al., 2008; Jarrett et al., 2008; Lindsey & Buckwalter, 2012; O'Brien & Cole, 2004). Frequently, nurses are not documenting outcomes from PRN psychotropic medication administration (Geffen et al., 2008; Hilton & Whiteford, 2008; O'Brien & Cole, 2004; Lindsey & Buckwalter, 2012; Stein-Parbury, et al., 2008). Likewise, nurses are not documenting side effects from PRN psychotropic medication administration (Hilton & Whiteford, 2008). In addition, nurses are not consistently documenting the reason for PRN psychotropic medication administration (O'Brien & Cole, 2004; Stein-Parbury et al., 2008; Thomas et al., 2006). Further, there is no documentation surrounding therapeutic interventions used in an effort to eliminate the need for PRN psychotropic medication administration (Curtis et al., 2007) and no documentation on whether alternative interventions were used prior to patients receiving PRN psychotropic medications (Lindsey & Buckwalter, 2012).

Several studies (Curtis et al., 2007; Geffen et al., 2008; Jarrett et al., 2008; Lindsey & Buckwalter, 2012; O'Brien & Cole, 2004) found that nurses have poor documentation practices related to PRN psychotropic medication administration and use of therapeutic non-pharmacological interventions. However, it must be noted that in two of these studies (Curtis et al., 2007; O'Brien & Cole, 2004), data was collected for only a month. This would limit generalization of the study results.

Documentation is an important part of nursing practice. Therefore, nurses must comprehensively document all aspects related to administering PRN psychotropic medications and the use of therapeutic non-pharmacological interventions. This includes the reason for PRN psychotropic medication administration, outcome of PRN psychotropic medication

administration, and any adverse effects noted after administration of PRN psychotropic medication (Lindsey & Buckwalter, 2012). In summary, it is evident that there is poor documentation surrounding PRN psychotropic medication administration as well as poor documentation related to use and effectiveness of therapeutic non-pharmacological interventions.

Therapeutic Non-Pharmacological Interventions

There is limited evidence that therapeutic non-pharmacological interventions are being used prior to patients receiving PRN psychotropic medications (Baker et al., 2007; Curtis et al., 2007; Jarrett et al., 2008). Spending time talking with staff is the most frequently used therapeutic non-pharmacological intervention (Baker et al., 2007; Curtis et al., 2007; Hilton & Whiteford, 2008; O' Brien & Cole, 2004). In addition, other frequently used non-pharmacological interventions include distraction, redirection, one-to-one interaction, and reassurance (Lindsey & Buckwalter, 2012). Additional non-pharmacological interventions include anxiety management techniques and de-escalation (Baker et al., 2007). Difficulty arises in determining which non-medication-based interventions are effective in reducing PRN psychotropic medication administration (Jung & Newton, 2009). However, research studies have found that behavioral interventions and therapeutic non-pharmacological interventions are effective in decreasing incidences of PRN psychotropic medications (Baker et al., 2007; Donat, 2006; Hilton & Whiteford, 2008; Jarrett et al., 2008; Mullen & Drinkwater, 2011; Thomas et al., 2006). Alternative non-pharmacological interventions such as psychological treatments are effective, associated with less side effects than PRN psychotropic medications, and empower patients to develop and use coping skills which will better prepare them for discharge into the community. According to Hilton and Whiteford (2008), the least restrictive interventions (e.g.

non-pharmacological interventions) should be considered first before using PRN psychotropic medications.

Therapeutic activities are effective in managing patients who exhibit behavioral disturbances. Likewise, activity-based nursing interventions (e.g. movement, games, relaxation) are effective in reducing PRN psychotropic medication administration (Thomas et al., 2006). However, Mullen and Drinkwater (2010) found in their retrospective study on a psychiatric intensive care unit that, often times, there are no structured activities on the afternoon shift.

De-escalation techniques (e.g. establishing rapport, speaking calmly, offering alternative activities) are interventions used by staff to decrease violent or disruptive behavior (Price & Baker, 2012). Similarly, staff training in behavioral competencies is useful in recognizing escalation and other psychiatric behaviors requiring early interventions to prevent the need for PRN psychotropic medication (Donat, 2006). Typically, RNs employed on behavioral health units complete crisis management training annually in order to ensure competence in assisting patients exhibiting psychiatric behaviors of concern. Moreover, senior nursing and medical staff use non-pharmacological interventions more than junior staff (Geffen et al., 2002). Non-pharmacological therapeutic interventions include active listening, limit setting, offering activities, and encouraging the patient to go to a quiet area (Price & Baker, 2012). Other non-pharmacological interventions include counseling and use of distraction (Curtis, Baker, & Reid, 2007). Music therapy has also been effective in decreasing agitated and aggressive behavior (Jayasekara, 2009). Further, interpersonal approaches such as negotiation and interpersonal calming could be used to reduce agitation, anxiety, or generalized distress. With negotiation or bargaining, each participant (e.g. nurse, patient, doctor) contributes to resolve the difficulty.

Interpersonal calming involves using interpersonal skills and the use of self to calm anxious patients (Cleary, Hunt, Horsfall, & Deacon, 2012).

Many times, RNs in acute inpatient mental health settings use PRN psychotropic medication administration as a first resort without first attempting therapeutic non-pharmacological interventions (Baker et al., 2007). However, a change in practice must be made so that nurses use therapeutic non-pharmacological interventions routinely in their practice as a primary intervention to manage anxious or agitated patients before considering administering PRN psychotropic medications. This change in practice would undoubtedly ensure that therapeutic nursing care is provided on a consistent basis.

A variety of research methods (e.g. retrospective chart audits, interviews, literature reviews) were used to determine use of therapeutic non-pharmacological interventions in the studies reviewed. A limitation is that none of the studies monitored therapeutic interventions that were effective in preventing the need for PRN psychotropic medication administration. In addition, it is possible that nurses are using therapeutic non-pharmacological interventions but are not documenting this. Although there is limited evidence documenting the use of therapeutic non-pharmacological interventions prior to PRN psychotropic medication administration, the evidence supports the effectiveness of therapeutic non-pharmacological interventions in reducing incidences of PRN psychotropic medication administration.

Standards of Practice

The American Nurses Association outlines the scope and standards of practice by which a mental health nurse at all educational preparation levels must practice. According to the American Nurses Association's *Psychiatric-Mental Health Nursing Scope and Standards of Practice* (2007), one standard is to enhance the quality of nursing practice. RNs do this by

participating in interdisciplinary teams to evaluate patient care and by making recommendations to improve nursing practice. Another standard is utilizing strategies which promote health and a safe environment. RNs accomplish this by educating patients on their psychiatric diagnosis and collaboratively developing the treatment plan with patients as well as by teaching patients coping skills, relaxation techniques, and problem-solving skills to assist them with relapse prevention. Another standard involves milieu therapy and focuses on psychiatric-mental health RNs utilizing strategies to maintain a safe and therapeutic environment for all of the patients on the unit. RNs accomplish this through continuous patient assessment and by providing patients with the least restrictive treatment necessary to maintain safety. Moreover, psychiatric-mental health nurses have a responsibility to utilize preventive safety measures to create a safe milieu. To accomplish this, psychiatric-mental health nurses implement evidence-based interventions and treatments. Accordingly, nurses utilize therapeutic communication and interventions which promote the development of trusting relationships and establish a therapeutic treatment alliance (American Nurses Association, 2007).

Guidelines for PRN Psychotropic Medication Administration

The literature supports the need for clinical practice guidelines for PRN psychotropic medication administration (Curtis et al., 2007; Hilton & Whiteford, 2008; O'Brien & Cole, 2004; Smith et al., 2008). Accordingly, Hilton and Whiteford (2008) developed a standard PRN psychotropic medication administration protocol that nurses used when considering administering PRN psychotropic medication. This protocol proved useful to nurses in that it provided them with guidelines to follow prior to administering PRN psychotropic medication. However, there were no standards or PRN psychotropic medication administration protocols in the literature on which to base their protocol. The lack of established guidelines in the literature

for using therapeutic non-pharmacological interventions before administering PRN psychotropic medications, as well as mental health professionals' reliance on the use of PRN psychotropic medication, reinforces the need for practice guidelines to be established.

In an effort to decrease incidences of PRN psychotropic medication administration as well as to develop uniform guidelines for managing agitation and aggression exhibited by patients, a therapeutic non-pharmacological intervention protocol for managing patients with anxiety or agitation could be implemented which may contribute to the body of knowledge. This protocol may be a useful tool for RNs to follow after identifying patients experiencing symptoms of anxiety and agitation. Moreover, this protocol may serve as a guide for RNs to use non-pharmacological interventions first before administering PRN psychotropic medications. It may also remind RNs to document the events surrounding the use of therapeutic non-pharmacological interventions and PRN psychotropic medication administration.

Therapeutic Non-pharmacological Intervention Protocol

The steps of the Therapeutic Non-pharmacological Intervention Protocol include the following:

1. Perform a rapid clinical assessment (Hilton & Whiteford, 2008).
2. Always consider therapeutic non-pharmacological interventions first (e.g. de-escalation, counseling, time out, distraction, reality testing, relaxation, cognitive behavioural therapy) (Hilton & Whiteford, 2008).
3. If therapeutic non-pharmacological interventions are unsuccessful, call the health care provider for further orders (Hilton & Whiteford, 2008).
4. After carrying out health care provider's orders, document:

- Circumstances leading up to patients' agitated or anxious behavior

- Therapeutic non-pharmacological interventions used
- Outcome of using therapeutic non-pharmacological interventions
- Rationale for use of PRN psychotropic medication
- Outcome of using PRN psychotropic medication

Gaps in the Knowledge Base

A gap in research is the effectiveness of training RNs on therapeutic non-pharmacological interventions and how that training impacts the use of PRN psychotropic medication use. Another gap in research is the inability to identify occurrences where therapeutic non-pharmacological interventions were used and therefore prevented the need for PRN psychotropic medication administration because of the lack of documentation of these interventions. It may be possible that psychiatric nurses are using non-pharmacological interventions but are not documenting them (Curtis et al., 2007). Thus, a gap in research pertains to the lack of documentation surrounding antecedents, justification, and outcomes of PRN psychotropic medication administration.

After reviewing the literature, it is evident that there are no evidence-based standards for PRN psychotropic medication administration. Additional research is needed to establish evidence for PRN psychotropic medication administration. In addition, the literature supports a definite need for improved documentation surrounding PRN psychotropic medication administration practices of RNs (Hilton & Whiteford, 2008). RNs should routinely use therapeutic non-pharmacological interventions in their practice as a primary intervention to manage anxiety and agitation before considering administering PRN psychotropic medications. This change in practice will undoubtedly ensure that therapeutic nursing care is provided on a consistent basis which in turn will reduce the need for PRN psychotropic medication.

Stakeholders

One stakeholder who will be affected from the results of this study is patients. If patients are provided therapeutic non-pharmacological interventions as a primary intervention before coerced medication is utilized, they will spend more time interacting with RNs which may result in the development of therapeutic relationships. In addition, if RNs are encouraging patients to use therapeutic non-pharmacological interventions, patients will be provided with opportunities to manage symptoms such as anxiety and agitation using coping skills rather than relying on medication and thus, will be better prepared for discharge. The results of this study will determine if patients are provided non-pharmacological interventions and if so, which non-pharmacological interventions are most effective in preventing the need for PRN psychotropic medication. This in turn, could influence which non-pharmacological interventions patients are taught and/or encouraged to use to manage their emotions.

Other individuals potentially affected by the results will be RNs. RNs will be affected in that they are the ones who will be routinely initiating therapeutic non-pharmacological interventions. If results from this study determine that non-pharmacological interventions are effective in preventing the need for PRN psychotropic medication, RNs may better understand the importance of first using therapeutic non-pharmacological interventions. In addition, utilizing therapeutic non-pharmacological interventions may prevent the need for more aggressive interventions such as IM medications and more resistive options including seclusion and physical restraint in which patients and staff may be injured. If RNs see the benefits of using these interventions, they may be more inclined to routinely utilize therapeutic non-pharmacological interventions prior to first resorting to PRN psychotropic medication to manage patients experiencing anxiety and agitation. Further, results from this study may assist RNs in

knowing which non-pharmacological interventions are most effective in preventing the need for PRN psychotropic medications. This may assist RNs in determining which interventions they encourage patients to use before using PRN psychotropic medication.

Other primary stakeholders include the unit manager and director of the psychiatric unit as well as administration and performance improvement staff at the hospital. The results of this study will determine if RNs are attempting to manage patients with symptoms of agitation and anxiety using non-pharmacological interventions first before administering PRN psychotropic medications. Results from this study could influence changes in practice on the psychiatric unit should these stakeholders implement policy changes requiring RNs to routinely use non-pharmacological interventions first before administering PRN psychotropic medications.

Additional stakeholders include patients' outpatient psychiatric providers in the community and members of the community. Patients' outpatient psychiatric providers in the community may be affected because skills patients learn and use in inpatient psychiatric units can also be used in outpatient settings which could affect the use of PRN psychotropic medication administration in outpatient settings. In addition, members of the community may be affected since, through time, results from this study could potentially influence practice changes at psychiatric facilities throughout the world if non-pharmacological interventions are effective in preventing the need for PRN psychotropic medication. Therefore, this study could impact whether psychiatric health care providers in the community and beyond use therapeutic non-pharmacological interventions routinely in their practice to manage patients with symptoms of anxiety and agitation.

Rationale for Study

Reliance on PRN psychotropic medication administration is a common first-line measure used by nurses in acute inpatient mental health settings to manage anxiety or agitation resulting in high incidences of PRN psychotropic medication administration (Mugoya and Kampfe, 2010). Yet, non-pharmacological interventions have been effective in reducing the need for PRN psychotropic medication administration (Hilton & Whiteford, 2008). However, there is lack of documentation on whether therapeutic non-pharmacological interventions are being used prior to PRN psychotropic medication administration (Curtis et al., 2007). In addition, many factors influence health professionals' PRN psychotropic medication administration practices which make it difficult to adequately account for variations in health professionals' PRN psychotropic medication administration practices. Accordingly, one rationale for this study is to determine what non-pharmacological interventions are used by mental health RNs prior to or in lieu of administering PRN psychotropic medication to manage anxiety and agitation in adult psychiatric hospitalized patients. In addition, since there are many extraneous factors impacting nurses' decisions to administer PRN psychotropic medication, another rationale is to determine what factors influence mental health RNs' decisions to administer PRN psychotropic medications. Knowing what non-pharmacological interventions are used by mental health RNs prior to or in lieu of administering PRN psychotropic medications may assist RNs in utilizing the most effective non-pharmacological interventions to manage patients' signs and symptoms of anxiety and agitation. Identifying the extraneous factors influencing RNs' decisions to administer PRN psychotropic medications may contribute to the knowledge base of why PRN psychotropic medications are frequently administered as a first resort to manage anxiety and agitation exhibited by patients. This study may provide healthcare professionals with a better

understanding of mental health RNs' PRN psychotropic medication administration practices and use of therapeutic non-pharmacological interventions and assist them in determining whether RNs are using therapeutic non-pharmacological interventions prior to or in lieu of administering PRN psychotropic medications.

Chapter Three: Methods

Design

This scholarly project was a descriptive study utilizing a quantitative design. Quantitative research is defined as "the systematic, controlled, empirical and critical investigation of hypothetical propositions about presumed relations among natural phenomena. The aim is to generate principles and propositions that describe and predict phenomena of interest and to be able to generalize to other situations" (Tappen, 2011, p. 36-37). Data was obtained using two survey-type self-reporting tools.

Population

Data were obtained from a convenience sample of 26 registered nurses (RNs) employed in an inpatient psychiatric unit on one hospital unit in a mid-Atlantic state. The nurses were caring for adult patients with symptoms of anxiety and agitation who have a variety of psychiatric diagnoses.

Procedures

Prior to the implementation of this project, approval was obtained from the hospital's (See Appendix A) and Carlow University's Institutional Review Boards (See Appendix B). Participation in this study was voluntary. Fliers inviting RNs to participate in this study were placed in the RNs' mailboxes at the hospital by the Nurse Manager or Unit Director (See Appendix C). Information on the fliers included the purpose of the study and the expectations of any RNs who chose to participate in the study including (1) attending one of several prearranged educational in-services on the use of the Nursing Intervention Tracking Form, (2) completing Nursing Intervention Tracking Forms for one specified week each month for three consecutive months for every date/shift they work during the study period, and (3) completing a Nursing

Survey. In addition, the fliers included information on the dates, times, and location at the hospital where the educational sessions were held. A contact number for the primary investigator was included on the fliers should participants have any questions. An explanation about the incentive to participate ($5 Starbucks gift card for participating and completing the Nursing Survey) was included on the flier. RNs agreeing to participate attended one of the educational in-services. All participants were provided with an informed consent letter which provided information about the study (See Appendix D). The researcher scheduled several in-services in consideration of the RNs' varied working schedules.

After receiving approval from the Institutional Review Board at the hospital where the study was conducted and from the Institutional Review Board at Carlow University, educational in-services were held by the researcher at the hospital to educate participants on the use of the Nursing Intervention Tracking Form. The educational in-services lasted approximately 15 minutes. During the educational in-services, each participant drew a number from a basket containing the numbers 1-30. After drawing a number from the basket, participants were instructed to remember the number they selected because this was the number they recorded as the nurse identifier on the Nursing Survey and on each Nursing Intervention Tracking Form they used. It was important that participants remember the number they selected because neither the researcher nor anyone else knew the numbers participants selected. Therefore, participants' anonymity was maintained. At the end of the session, participants completed a Nursing Survey which took another 5 minutes. It was anticipated that participants would complete one tracking form per shift during the study. The tracking form took approximately one minute per patient to complete. Participants were instructed not to report on patients who were prescribed protocols for detoxification symptoms because these patients routinely receive PRN psychotropic

medication as part of a substance withdrawal protocol to manage detoxification symptoms. The researcher did not have any access to patients or to patients' records. Therefore, patients' anonymity was maintained.

Data Collection Plan

The Nursing Intervention Tracking Form and Nursing Surveys developed by the researcher were used to collect the data. With the tracking form, data was collected for one specified week for three consecutive months during the study period. The dates and time period for implementation were specified during the educational in-services in order for the participants to know when the tracking form went into effect. RNs agreeing to participate in this study attended an educational in-service explaining the use of the tracking form and were instructed to complete tracking forms for every date/shift they worked during the specified weeks of the study period when caring for patients exhibiting signs and symptoms of agitation or anxiety. Participants were instructed to place their completed tracking forms in a locked box labeled "Completed Nursing Intervention Tracking Forms and Nursing Surveys" which was located on the psychiatric unit. Due to the limited number of tracking forms completed at the end of the three month study period, participants were asked to complete tracking forms for an additional week. Accordingly, participants completed tracking forms for a total of four weeks.

During the educational in-services, participants completed a Nursing Survey which included questions requesting demographic information. Upon completion of the Nursing Surveys, participants placed the Nursing Surveys in the locked box labeled "Completed Nursing Intervention Tracking Forms and Nursing Surveys" which was located on the psychiatric unit.

Instruments

Nursing intervention tracking form.

Monitoring the use of therapeutic non-pharmacological interventions and PRN psychotropic medication administration was accomplished by using a Nursing Intervention Tracking Form developed by the primary investigator (See Appendix E). The tracking form was a useful tool for RNs to document information related to non-pharmacological interventions. This information included the rationale for utilizing non-pharmacological interventions, what non-pharmacological techniques or methods were used, and the effectiveness of such non-pharmacological measures. In addition, if administering PRN psychotropic medication was necessary, this tracking form provided information regarding what non-pharmacological interventions were attempted prior to patients receiving PRN psychotropic medication. Further, this tool provided information on factors influencing RNs' decisions to administer PRN psychotropic medication. Moreover, this tool provided information as to who was requesting or initiating PRN psychotropic medication administration (e.g. Nurse, Patient, Physician).

Currently, there are no tracking forms that exist which measure the effectiveness of therapeutic non-pharmacological interventions nor are there tracking forms which monitor therapeutic non-pharmacological interventions used prior to or in lieu of administering PRN psychotropic medication. Moreover, there are no tracking forms that exist which monitor factors influencing RNs' decisions to administer PRN psychotropic medication. Accordingly, the researcher developed a Nursing Intervention Tracking Form. This form was reviewed by several RNs to establish validity. The aim of this tracking form was to provide a means to monitor the use of non-pharmacological interventions and PRN psychotropic medications.

After participants were educated on the use of the tracking form, they completed tracking forms for one specified week each month for three consecutive months and completed tracking forms for an additional week specified by the researcher. At the end of each shift, if the participant cared for an anxious or agitated patient, participants recorded the specified information on a tracking form. Participants were asked to identify the signs and symptoms patients were exhibiting when they intervened. They selected their responses from numbered options of signs and symptoms of anxiety or agitation and recorded the number or numbers of their responses in the appropriate column under anxiety or agitation. Additional information requested on the tracking form included the non-pharmacological interventions used prior to or in lieu of administering PRN psychotropic medication. For convenience and time management for participants, numbered options were provided at the bottom of the tracking form for them to choose which best represented their reason. Participants were instructed to use the numbered scale at the bottom of the form when logging their responses. If participants chose another intervention than the ones listed, they were asked to specify the intervention they used. There were questions on the tracking form where participants wrote the letter of their response (a. Yes or b. No) to the questions. These questions included “Were PRN psychotropic medications given?” and "Did the Anxiety or Agitation Resolve?" Participants were asked whether the anxiety or agitation resolved after non-pharmacological interventions were used and again if PRN psychotropic medications were administered. If a PRN psychotropic medication was administered, participants recorded the number/numbers of their selected responses in the space after “If a PRN psychotropic medication was given, what factors influenced your decision?” To simplify this, they were able to select from the options listed at the bottom of the tracking form. Additionally, participants recorded the letter indicating who requested/initiated the PRN

psychotropic medication administration (a. nurse, b. patient, c. physician). Lastly, participants recorded their preselected number in the nurse identifier area and recorded their shift. The researcher did not know the names of participants since their names were not on this form, and the researcher was not able to identify the participants from the nurse identifier number. The tracking forms were available on the psychiatric unit, and participants used a new tracking form each date/shift they worked. After completing the tracking forms, participants placed them in the locked box labeled "Completed Nursing Intervention Tracking Forms and Nursing Surveys" located on the psychiatric unit.

Nursing survey.

The Nursing Survey (See Appendix F) developed by the researcher collected data about participants including highest level of nursing education, number of years of psychiatric nursing experience, and whether RNs were American Nurse Credentialing Center (ANCC) certified. In addition, this survey collected data on how often participants were currently working. This survey was used to collect data on how well participants believe their orientation/on the job training and educational programs prepared them to utilize methods other than medications to manage patients' agitation or anxiety. Moreover, this survey collected data on participants' confidence in their ability to use methods other than medications to manage agitation or anxiety. The researcher provided each participant with a Nursing Survey during the educational in-service for them to complete. They placed their completed surveys in the box labeled "Completed Nursing Intervention Tracking Forms and Nursing Surveys" located on the psychiatric unit.

Data analysis plan

Information from the Nursing Intervention Tracking Forms was analyzed using STATA to determine frequency distributions. For example, after reviewing the tracking forms, it was

determined what non-pharmacological interventions were being used and which non-pharmacological interventions were used most frequently. It was also determined which non-pharmacological interventions had the highest percentage of PRN psychotropic medications not given and the most frequent problem necessitating the need for using non-pharmacological interventions and/or PRN psychotropic medications. In addition, the tracking forms provided the researcher with information regarding the symptoms patients were experiencing when RNs intervened and whether or not the patients' anxiety or agitation resolved after non-pharmacological interventions were used and/or PRN psychotropic medications were administered. Moreover, the tracking forms provided the researcher with information as to the most common factors influencing RNs' decisions to administer PRN psychotropic medications and who most frequently requested PRN psychotropic medications. The tracking forms provided information as to which shift RNs were most often using non-pharmacological interventions and/or administering the most PRN psychotropic medications. The tracking forms provided information as to how early in the anxiety or agitation process interventions were used.

Information from the Nursing Surveys was compiled to describe the population. In addition, the Nursing Surveys were used to examine the relationship between how well RNs' believed their orientation/on-the-job training and their educational programs prepared them to use methods other than medications to manage patients' agitation and anxiety and their level of confidence using methods other than medications to manage patients' agitation or anxiety. Mode and frequency distributions were reported for nominal data. Fisher's Exact test was used to compare differences between the two groups: RNs who only completed Nursing Surveys and RNs who completed both Nursing Surveys and Tracking Forms. In order to assess the correlation between RNs' confidence in using non-pharmacological interventions to manage

patients' anxiety or agitation and preparedness from on-the-job training and formal education programs, Spearman's correlation coefficient was used. Statistical significance was assessed at $p < .05$.

Chapter 4: Results

Analysis of Data

Participant demographics.

Twenty-six RNs working on the psychiatric unit were invited to participate in this study. Of these, 20 RNs (76.9%) signed an informed consent agreeing to participate in the study and completed Nursing Surveys. However, only 13 RNs (65.0%) agreeing to participate in the study completed tracking forms.

The majority of participants had an Associate's degree (n=8; 40.0%) and had over 3 years (n=19; 95.0%) of psychiatric nursing experience (See Table 1). In addition, the majority of participants were not ANCC certified (n=17; 85.0%). Most of the participants worked full time (n=10; 50.0%). Fifty percent of participants (n=10) strongly agreed that their orientation/on-the-job training prepared them for using methods other than medication to manage patient agitation or anxiety. Thirty percent (n=6) agreed and twenty five percent (n=5) strongly agreed that their educational program prepared them to use methods other than medication to manage patient agitation or anxiety. Fifty percent of participants (n=10) strongly agreed that they were confident in their ability to use methods other than medications to manage patient agitation or anxiety.

Participant Demographics (Table 1)

	RNs Who Completed Tracking Forms	RNs Who Did Not Complete Tracking Forms	All RNs Who Participated in the Study
	n=13	n=7	n=20
Education			
Associate's Degree	30.8% (n=4)	57.1% (n=4)	40.0% (n=8)
Diploma	23.1% (n=3)	14.3% (n=1)	20.0% (n=4)
Bachelor's Degree	46.1% (n=6)	14.3% (n=1)	35.0% (n=7)
Master's Degree	0.0% (n=0)	14.3% (n=1)	5.0% (n=1)
Years of Psychiatric Nursing Experience			
< 3 Years Psychiatric Nursing Experience	7.7% (n=1)	0.0% (n=0)	5.0% (n=1)
≥ 3 Years Psychiatric Nursing Experience	92.3% (n=12)	100% (n=7)	95.0% (n=19)
ANCC Certification			
ANCC Certified	7.7% (n=1)	14.3% (n=1)	10.0% (n=2)
Not ANCC Certified	84.6% (n=11)	85.7% (n=6)	85.0% (n=17)
Used to Be ANCC Certified	7.7% (n=1)	0.0% (n=0)	5.0% (n=1)
Currently Working			
Full Time	61.5% (n=8)	28.6% (n=2)	50.0% (n=10)
Part Time	30.8% (n=4)	42.9% (n=3)	35.5% (n=7)
Casual	7.7% (n=1)	28.6 (n=2)	15.0% (n=3)
Preparation and Confidence Using Methods Other Than Medications			
Orientation/On-the-Job Training Prepared RNs to use Methods Other Than Medications	Strongly Disagreed-0.0% (n=0) Disagreed-7.7% (n=1) Neutral- 0.0% (n=0) Agreed-38.5% (n=5) Strongly Agreed-53.9% (n=7)	Strongly Disagreed-0.0% (n=0) Disagreed-14.4% (n=1) Neutral-14.4% (n=1) Agreed-28.6% (n=2) Strongly Agreed-28.6% (n=2)	Strongly Disagreed-0.0% (n=0) Disagreed-10.0% (n=2) Neutral-5.0% (n=1) Agreed-35.0% (n=7) Strongly Agreed-50.0% (n=10)
Educational Program Prepared RNs to use Methods Other Than Medications	Strongly Disagreed-0.0% (n=0) Disagreed-15.4% (n=2) Neutral-23.1% (n=3) Agreed-38.5% (n=5) Strongly Agreed-23.1% (n=3)	Strongly Disagreed-28.6% (n=2) Disagreed-0.0% (n=0) Neutral-28.6% (n=2) Agreed-14.3% (n=1) Strongly Agreed-28.6% (n=2)	Strongly Disagreed-10.0% (n=2) Disagreed-10.0% (n=2) Neutral-25.0% (n=5) Agreed-30.0% (n=6) Strongly Agreed-25.0% (n=5)
RNs' Confidence Using Methods Other Than Medications	Strongly Disagreed-0.0% (n=0) Disagreed-0.0% (n=0) Neutral-7.7% (n=1) Agreed-53.9% (n=7) Strongly Agreed-38.5% (n=5)	Strongly Disagreed-0.0% (n=0) Disagreed-0.0% (n=0) Neutral- 28.6% (n=2) Agreed-0.0% (n=0) Strongly Agreed-71.4% (n=5)	Strongly Disagreed-0.0% (n=0) Disagreed-0.0% (n=0) Neutral-15.0% (n=3) Agreed-35.0% (n=7) Strongly Agreed-50.0% (n=10)

Thirteen RNs completed Nursing Intervention Tracking Forms. There were 49 encounters in which RNs used non-pharmacological interventions (See Table 2). The most frequently used non-pharmacological intervention was active listening (n=28; 57.1%) followed by walking/exercise (n=12; 24.5%) and limit setting (n=9; 18.4%). The least frequently used non-pharmacological interventions recorded by RNs were music (n=1; 2.0%) and counseling (n=1; 2.0%). Patient-driven interventions were the only non-pharmacological intervention that was not recorded being used by RNs. It is important to note that participants may have used and recorded more than one non-pharmacological intervention during each encounter.

Table 2. Profile of non-pharmacological interventions used

Intervention type	**Count***	**%****
Active listening	28	57.1
Walking/exercise	12	24.5
Limit Setting	9	18.4
Meditation/mindfulness activity	8	16.3
Other intervention	7	14.3
Time out /quiet area	6	12.2
Offering activities	6	12.2
Distraction	5	10.2
Negotiation	3	6.1
No intervention used	2	4.1
Music	1	2.0
Counseling	1	2.0
Patient-driven intervention	0	0.0

* More than one intervention may have been recorded for a single observation, so the total counts do not add to 49.
** Number of observations with a particular intervention divided by 49.

In encounters where PRN psychotropic medication was not administered, distraction was the intervention most often used (n=3; 60.0%) followed by "no intervention used" (n=1; 50.0%) and walking/exercise (n=4; 40.0%) (See Table 3). The non-pharmacological interventions that had the lowest percentage of PRN psychotropic medications not given were music, negotiation,

and counseling. Patient-driven interventions were the only non-pharmacological interventions not recorded being used by RNs.

The most frequent non-pharmacological intervention that RNs recorded using prior to administering PRN psychotropic medications was active listening (n=18; 31.6%) followed by walking/exercise (n=6; 10.5%), limit setting (n=6; 10.5%), and "other intervention" (n=6; 10.5%) (See Table 3). The least frequently used non-pharmacological interventions recorded by RNs prior to administering PRN psychotropic medication were music (n=1; 1.8%) and counseling (n=1; 1.8%). "No intervention used" (n=1; 1.8%) was recorded in one encounter before PRN psychotropic medications were administered. Patient-driven interventions were not recorded being used by RNs prior to patients receiving PRN psychotropic medications.

Table 3. Frequency of problem resolution after using various non-pharmacological interventions.

	PRN Meds Not Given		**PRN Meds Given**			
Intervention type	Count	Column %	Count	Column %	**Total Counts***	**Row % of PRN Meds Not Given**
Distraction	3	12.5	2	3.5	5	60.0
No Intervention Used	1	4.2	1	1.8	2	50.0
Walking/Exercise	4	16.7	6	10.5	10	40.0
Limit Setting	3	12.5	6	10.5	9	33.3
Time Out/Quiet Area	2	8.3	4	7.0	6	33.3
Active Listening	8	33.3	18	31.6	26	30.8
Meditation/Mindfulness Activity	2	8.3	5	8.8	7	28.6
Offering Activities	1	4.2	4	7.0	5	20.0
Music	0	0.0	1	1.8	1	0.0
Negotiation	0	0.0	3	5.3	3	0.0
Counseling	0	0.0	1	1.8	1	0.0
Other Intervention	0	0.0	6	10.5	6	0.0
Patient-driven Intervention	0	0.0	0	0.0	0	-
Total	24	100.0	31	100.0	86	-

*More than one intervention may have been recorded for a single observation, so the total counts do not sum to 49.

There were 24 encounters in which RNs recorded patients were exhibiting anxiety (See Table 4). The most frequently recorded non-pharmacological interventions RNs used to manage patients' anxiety were active listening (n=12; 29.3%), walking/exercise (n=5; 12.2%), meditation/mindfulness activities (n=5; 12.2%), and "other intervention" (n=5; 12.2%). The least frequently recorded non-pharmacological interventions RNs used to manage patients' anxiety were music (n=1; 2.4%) and counseling (n=1; 2.4%). The non-pharmacological interventions that RNs did not record using to manage patients' anxiety were negotiation and patient-driven intervention.

There were 10 encounters in which RNs recorded patients were exhibiting agitation (See Table 4). The most frequently recorded non-pharmacological interventions RNs used to manage patients' agitation was active listening (n=7; 38.9%) and walking/exercise (n=4; 22.2%). The least frequently recorded non-pharmacological interventions RNs used to manage patients' agitation were limit setting (n=2; 11.1%), offering activities (n=2; 11.1%), time out/quiet area (n=1; 5.6%), negotiation (n=1; 5.6%), and "other intervention" (n=1; 5.6%). The non-pharmacological interventions that were not recorded as being used by RNs to manage patients' agitation were music, patient-driven intervention, distraction, and meditation/mindfulness.

There were 15 encounters in which RNs recorded patients were exhibiting both anxiety and agitation (See Table 4). The most frequently recorded non-pharmacological interventions RNs used to manage patients exhibiting signs and symptoms of anxiety and agitation were active listening (n=9; 31.0%) and limit setting (n=5; 17.2%). The least frequently recorded non-pharmacological interventions were offering activities (n=2; 6.9%), negotiation (n=2; 6.9%), distraction (n=1; 3.4%), and "other intervention" (n=1; 3.4%). The non-pharmacological interventions that were not recorded being used were music, counseling, and patient-driven

interventions. In 49 encounters, the most frequently recorded problem was anxiety (n=22; 44.9%). The next most frequently recorded problem was both anxiety and agitation (n=15; 30.6%). The least frequently recorded problem was agitation (n=9; 18.4%).

Table 4. Profile of non-pharmaceutical interventions by problem class.

Non-pharm code	**Anxiety Only (n=24)**			**Agitation Only (n=10)**			***Both (n=15)**			**Total**
	Count	Column %	Row %	Count	Column %	Row %	Count	Column %	Row %	
Active listening	12	29.3	42.9	7	38.9	25.0	9	31.0	32.1	28
Limit setting	2	4.9	22.2	2	11.1	22.2	5	17.2	55.6	9
Time out/quiet area	2	4.9	33.3	1	5.6	16.7	3	10.3	50.0	6
Offering activities	2	4.9	33.3	2	11.1	33.3	2	6.9	33.3	6
Music	1	2.4	100.0	0	0.0	0.0	0	0.0	0.0	1
Negotiation	0	0.0	0.0	1	5.6	33.3	2	6.9	66.7	3
Counseling	1	2.4	100.0	0	0.0	0.0	0	0.0	0.0	1
Walking/exercise	5	12.2	41.7	4	22.2	33.3	3	10.3	25.0	12
Patient-driven intervention	0	0.0	-	0	0.0	-	0	0.0	-	0
Distraction	4	9.8	80.0	0	0.0	0.0	1	3.4	20.0	5
Meditation/mindfulness activity	5	12.2	62.5	0	0.0	0.0	3	10.3	37.5	8
Other intervention	5	12.2	71.4	1	5.6	14.3	1	3.4	14.3	7
No intervention used	2	4.9	0	0	0.0	0.0	0	0.0	0.0	2
Total	41	100.0	46.6	18	100.0	20.5	29	100.0	33.0	88

Column % represents the proportion of times a non-pharmaceutical intervention was recorded among all observations within the problem group. Row % represents the proportion of times a problem was listed among observations with a particular non-pharmaceutical intervention.
* Observations were classified as both if at least one anxiety and one agitation problem was listed.

In 46 encounters, PRN psychotropic medications were least often administered for anxiety (n=22; 50.0%). PRN psychotropic medications were most often administered when patients exhibited both anxiety and agitation (n=15; 13.3%) (See Table 5).

Table 5. Frequency of medication administration by problem class.

Problem class	Medication not given		Medication Given		Total Count	Row % of Meds Not Given
	Count	Column %	Count	Column %		
Anxiety Only	11	73.3	11	35.5	22	50.0
Agitation only	2	13.3	7	22.6	9	22.2
Both	2	13.3	13	41.9	15	13.3
Total	15	100.0	31	100.0	46	32.6

*Total number of observations considered was limited by the number of responses to the question "Were PRN psychotropic medications given?" (n=46).

The most frequently recorded anxiety symptoms patients (n=39) were exhibiting when RNs intervened was report of nervousness/anxiety (n=29; 46%), frequently seeking assurance from staff (n=8; 12.7%), difficulty concentrating/distractibility (n=5; 7.9%), and restlessness (n=5; 7.9%). The least frequently recorded anxiety symptoms patients were exhibiting when RNs intervened were wringing hands/tremors (n=2; 3.2%) and compulsive/ritualistic behavior (n=1; 1.6%) (See Table 6).

The most frequently recorded anxiety symptoms exhibited by patients who had at least one symptom of anxiety and had at least one symptom of agitation (n=15) when RNs intervened was nervousness/anxiety (n=9; 42.9%) and frequently seeking assurance from staff (n=4; 19.0%). The least frequently recorded anxiety symptoms were rapid speech (n=2; 9.5%), obsessive thoughts (n=1; 4.8%), restlessness (n=1; 4.8%), and wringing hands/tremors (n=1; 4.8%). The anxiety symptoms that were not recorded by RNs were somatic complaints/symptoms, difficulty concentrating/distractibility, compulsive/ritualistic behavior (See Table 6).

Table 6. Frequency of anxiety symptoms among individuals with at least one symptom of anxiety

Anxiety symptom	Any Anxiety* (n=39)		Anxiety and Agitation** (n=15)	
	Count	Column %	Count	Column %
Report of Nervousness/Anxiety	29	46.0	9	42.9
Frequently Seeking Assurance from Staff	8	12.7	4	19.0
Difficulty Concentrating/Distractibility	5	7.9	0	0
Obsessive Thoughts	4	6.3	1	4.8
Compulsive/Ritualistic Behavior	1	1.6	0	0
Restlessness	5	7.9	1	4.8
Somatic Complaints/Symptoms	3	4.8	0	0
Rapid Speech	3	4.8	2	9.5
Wringing Hands/Tremors	2	3.2	1	4.8
Other	3	4.8	3	14.3
Total	63	100	21	100

*Individuals with at least one symptom of anxiety.
**Individuals with at least one symptom of anxiety and at least one symptom of agitation

The most frequently recorded signs or symptoms of agitation (n=25) patients were experiencing when RNs intervened were irritability/agitation (n=9; 25.7%), heightened responsiveness to stimuli (n=9; 25.7%), and raising voice/yelling (n=7; 20.0%) (See Table 7). The least frequently recorded symptoms of agitation were uncooperativeness (n=1; 2.9%) and angry/abusive remarks (n=1; 2.9%). Body language and threatening staff or peers were signs and symptoms that were not recorded by RNs during the encounters.

The most frequently recorded signs and symptoms of agitation in patients who had at least one symptom of agitation and at least one symptom of anxiety (n=15) were heightened responsiveness to stimuli (n=6; 33.3%) and irritability/agitation (n=4; 22.2%) (See Table 7). The least frequently recorded signs and symptoms were excessive/non-purposeful motor activity (n=2; 11.1%) and uncooperativeness (n=1; 5.6%). Body language, physical aggression, threatening staff or peers, and angry/abusive remarks were not recorded as signs and symptoms exhibited by patients during the encounters.

Table 7. Frequency of agitation symptoms among individuals with at least one symptom of agitation.

Agitation symptom	Any Agitation* (n=25)		Anxiety and Agitation** (n=15)	
	Count	Column %	Count	Column %
Report of Irritability/Agitation	9	25.7	4	22.2
Heightened Responsiveness to Stimuli	9	25.7	6	33.3
Excessive/Non-purposeful Motor Activity	3	8.6	2	11.1
Raising Voice/Yelling	7	20.0	3	16.7
Body Language	0	0	0	0
Uncooperativeness	1	2.9	1	5.6
Physical Aggression	3	8.6	0	0
Threatening Staff/Peers	0	0	0	0
Angry/Abusive Remarks	1	2.9	0	0
Other	2	5.7	2	11.1
Total	35	100	18	100

*Individuals with at least one symptom of agitation.
**Individuals with at least one symptom of agitation and at least one symptom of anxiety.

The rate of problem resolution after non-pharmacological interventions were used was 36.1% (See Table 8). The non-pharmacological intervention used by RNs that had the highest percentage of resolution of anxiety or agitation was walking/exercise. In encounters where walking/exercise was recorded being used (n=11), patients' anxiety or agitation resolved in 54.5% of the encounters. Other non-pharmacological interventions recorded that had some resolution of anxiety or agitation were active listening (n=28) in which patients' anxiety or agitation resolved in 50% of the encounters, time out/quiet area (n=6) in which patients' anxiety or agitation resolved in 50% of the encounters, and "no intervention used" (n=2) in which patients' anxiety or agitation resolved in 50% of the encounters. The non-pharmacological interventions recorded being used that had the lowest percentage of resolution of patients' anxiety or agitation were offering activities (n=6; 0.0%), music (n=1; 0.0%), negotiation (n=3; 0.0%), and counseling (n=1; 0.0%). Patient-driven interventions were the only non-pharmacological interventions not used in any of the encounters.

Table 8. Frequency of problem resolution after using various non-pharmacological interventions.

Intervention type	Problem not resolved after non-pharm		Problem resolved after non-pharm		Total Counts *	Row % Problem Not Resolved
	Count	Column %	Count	Column %		
Walking/exercise	5	9.1	6	19.4	11	54.5
No intervention used	1	1.8	1	3.2	2	50.0
Active listening	14	25.5	14	45.2	28	50.0
Time out/quiet area	3	5.5	3	9.7	6	50.0
Meditation/mindfulness activity	5	9.1	3	9.7	8	37.5
Limit setting	7	12.7	2	6.5	9	22.2
Distraction	4	7.3	1	3.2	5	20.0
Other intervention	5	9.1	1	3.2	6	16.7
Offering activities	6	10.9	0	0.0	6	0.0
Music	1	1.8	0	0.0	1	0.0
Negotiation	3	5.5	0	0.0	3	0.0
Counseling	1	1.8	0	0.0	1	0.0
Patient-driven intervention	0	0.0	0	0.0	0	0.0
Total	55	100.0	31	100.0	86	36.1

*More than one intervention may have been recorded for a single observation, so the total counts do not sum to 49.

In the majority of encounters, patients' anxiety or agitation resolved after PRN psychotropic medications were administered (See Table 9). In the 30 encounters where PRN psychotropic medication was given, the patients' anxiety or agitation resolved in 80% of the encounters. The patients' anxiety or agitation did not resolve in 20% of the encounters (n=6).

Table 9. Frequency of problem resolution after administration of PRN psychotropic medications.

PRNMeds Given?	Problem not resolved after meds		Problem resolved after meds		Total Counts*	% Resolved
	Count	Column %	Count	Column %		
Yes	6	85.7	24	75.0	30	80.0
No	1	14.3	8	25.0	9	88.9
Total	7	100	32	100	39	-

*Number of observations that included information on whether PRN medications were given (n=46) and problem resolution (n=40), so the total number of counts does not equal 49.

Patients exhibiting a high level of anxiety persistent after non-pharmacological interventions were used (n=15; 48.4%) was the most frequent factor influencing RNs' decisions to administer PRN psychotropic medications. Patients' refusal to try non-pharmacological interventions (n=8; 25.8%) was the second most frequent factor influencing RNs' decisions to administer PRN psychotropic medications (See Table 10). The factors recorded by RNs that were least likely to influence their decisions to administer PRN psychotropic medications were a high level of agitation persistent after non-pharmacological interventions were used (n=3; 9.7%), high level of acuity (n=2; 6.5%), time restrictions (n=1; 3.2 %), and decreased staffing levels (n=1; 3.2%). Surprisingly, none of the RNs recorded that having a high number of assigned patients for the shift influenced their decision. It is important to note that RNs may have recorded more than one factor influencing their decision to administer PRN psychotropic medications in each encounter. It also must be noted that factors influencing RNs' decisions to administer PRN psychotropic medications were not recorded for 18 encounters.

Table 10. Frequency of what factors influencing RN's decision to use PRN medication among those observations for which influencing factor was recorded (n=31).

Influencing Factors	**Count***	**Column %****
High Level of Anxiety ***	15	48.4
Patients Refused to Try Non-pharm Intervention	8	25.8
Other	6	19.4
Known History with Particular Patient	5	16.1
High level of Agitation****	3	9.7
High Level of Acuity	2	6.5
Time Restrictions	1	3.2
Decreased Staffing Levels	1	3.2
High Number of Assigned Patients for the Shift	0	0.0
Total	41	100

*More than one influencing factors may have been recorded for a single observation. Thus the total count may not add up to 31.

** Number of observation with particular influencing factor divided by 31.

*** High Level of Anxiety Persistent After Non-pharm Intervention

**** High level of Agitation Persistent After Non-pharm Intervention

***** Influencing factors were not recorded for 18 observations

There were 32 encounters in which PRN psychotropic medication was given (See Table 11). In the majority of encounters (62.5%), patients (n=20) requested PRN psychotropic medication be given. Nurses (n=11) requested PRN psychotropic medication be given in 34.4% of the encounters. No Physicians requested PRN psychotropic medication be given in any of the encounters.

Table 11. Frequency of responses to the question "If a PRN psychotropic medication was given, who requested it?" among those observations for which this information was recorded (n=32).

Party requesting medication	**Count**	**Column %***
Patients Only	20	62.5
Nurse Only	11	34.4
Both Nurse and Patient	1	3.1
Physician	0	0.0
Total	32	100

*Number of observation with particular requesting medication information divided by 32.

Non-pharmacological interventions were most frequently used during the daylight shift (n=31; 66.0%) followed by the afternoon shift (n=11; 23.4%). Non-pharmacological interventions were least frequently used during the night shift (n=5; 10.6%). There were two encounters in which RNs did not use non-pharmacological interventions prior to administering PRN psychotropic medication. The shifts in which non-pharmacological interventions were not used were daylight (n=1; 50.0%) and night shift (n=1; 50.0%) (See Table 12).

Table 12. Frequency of shift among observations incorporating non-pharmacological interventions, those not incorporating non-pharmacological interventions, and the total sample.

Shift type	**Using Non-Pharm Intervention**			**Not Using Non-Pharm Intervention**			**Total**	
	Count	Column %	Row%	Count	Column %	Row%	Count	Column %
Daylight	31	66.0	96.9	1	50.0	3.1	32	65.3
Afternoon	11	23.4	100	0	0.0	0	11	22.4
Night	5	10.6	83.3	1	50.0	6.7	6	12.2
Total	47	100	95.9	2	100	4.1	49	100

The most frequent non-pharmacological interventions recorded being used by the RNs on the daylight shift was active listening (n=18; 30.5%), walking/exercise (n=10; 16.9%), and meditation/mindfulness activities (n=7; 11.9%) (See Table 13). The least frequent non-pharmacological interventions recorded being used by RNs on the daylight shift was "other interventions" (n=3; 5.1%), distraction (n=2; 3.4%), and music (n=1; 1.7%). The non-pharmacological interventions that were not recorded being used by RNs on the daylight shift were negotiation, counseling, and patient-driven interventions.

The most frequent non-pharmacological intervention recorded being used by RNs on the afternoon shift was active listening (n=6; 30.0%), distraction (n=3; 15.0%), and "other interventions" (n=3; 15.0%) (See Table 14). The least frequent non-pharmacological interventions recorded being used by RNs on the afternoon shift was limit setting (n=2; 6.7%), negotiation (n=2; 10.0%), walking/exercise (n=2; 10.0%), counseling (n=1; 5.0%), and meditation/mindfulness activity (n=1; 5.0%). The non-pharmacological interventions that were not recorded being used by RNs on the afternoon shift were time out/quiet area, offering activities, music, and patient-driven exercises.

The most frequent non-pharmacological intervention recorded being used by RNs on the night shift was active listening (n=4; 44.4%) (See Table 14). The least frequent non-pharmacological interventions recorded being used by RNs on the night shift were limit setting (n=1; 11.1%), time out/quiet area (n=1; 11.1%), negotiation (n=1; 11.1%), and "other intervention" (n=1; 11.1%). The non-pharmacological interventions that were not recorded being used by RNs on the night shift were offering activities, music, counseling, walking/exercise, patient-driven interventions, meditation/mindfulness activities, and distraction.

Table 13. Frequency of non-pharmacological interventions by shift.

	Daylight			Afternoon			Night			Total	
Interventions type	Count	Column %	Row %	Count	Column %	Row %	Count	Column %	Row %	Count	Column %
No Intervention Used	1	1.7	50.0	0	0	0.0	1	11.1	50.0	2	2.3
Active Listening	18	30.5	64.3	6	30.0	21.4	4	44.4	14.3	28	31.8
Limit Setting	6	10.2	66.7	2	6.7	22.2	1	11.1	11.1	9	10.2
Time Out/ Quiet Area	5	8.5	83.3	0	0	0	1	11.1	16.7	6	6.8
Offering Activities	6	10.2	100	0	0	0	0	0	0	6	6.8
Music	1	1.7	100	0	0	0	0	0	0	1	1.1
Negotiation	0	0.0	0.0	2	10.0	66.7	1	11.1	33.3	3	3.4
Counseling	0	0.0	0.0	1	5.0	100	0	0	0	1	1.1
Walking/Exercising	10	16.9	83.3	2	10.0	16.7	0	0	0	12	13.6
Patient-driven Intervention	0	0.0	0.0	0	0	0	0	0	0	0	0
Distraction	2	3.4	40.0	3	15.0	60.0	0	0	0	5	5.7
Meditation/ Mindfulness Activity	7	11.9	87.5	1	5.0	12.5	0	0	0	8	9.1
Other Intervention	3	5.1	42.9	3	15.0	42.9	1	11.1	14.3	7	8.0
Total	59	100	67.0	20	100	22.7	8	100	9.1	98	100

There were 31 encounters in which PRN psychotropic medications were administered (See Table 14). PRN psychotropic medication was administered most frequently by the afternoon shift (n=10; 90.9%) followed by the night shift (n=5; 83.3%). PRN psychotropic medication was least frequently administered on the daylight shift (n=16; 55.2%).

Table 14. Frequency of PRN psychotropic medications given by shift.

PRN psychotropic medications given?	**Daylight**		**Afternoon**		**Night**		**Total**
	Count	Column %	Count	Column %	Count	Column %	
Yes	16	55.2	10	90.9	5	83.3	31
No	13	44.8	1	9.1	1	16.7	15
Total	29	100	11	100	6	100	46

The results indicate that RNs who had a higher level of education (e.g. Bachelor's degree) administered more PRN psychotropic medications than those having an Associate's degree or Diploma (See Table 15). In addition, this study found that the less frequently RNs were working (n=1), the more often patients received PRN psychotropic medications. It should be

noted that more RNs working full time participated in this study than did those working part time and casual.

Table 15. Number of observations involving medication administration (or no administration), tabulated by nurses based on their education level, experience time and working frequency (n=46).

		Administered Medication? (Missing = 3)					
		Yes		No		Totals	
	Category	Count	Row %	Count	Row %	Nurses	# Med Admin.
Education level	a. Associate	10	52.6	9	47.4	5	19
	b. Diploma	4	80	1	20	2	5
	c. Bachelor	17	77.3	5	22.7	6	22
	d. Master	0	0	0	0	0	0
	e. Doctorate	0	0	0	0	0	0
Years of Experience	a. < 3	1	100	0	0	1	1
	b. ≥ 3	30	66.7	15	33.3	12	45
Working frequency	a. Full	15	57.7	11	42.3	8	26
	b. Part	11	78.6	3	21.4	4	14
	c. Casual	5	83.3	1	16.7	1	6

The results indicate that there was no significant relation ($r = -.08$, $p = .79$) between RNs' confidence using methods other than medications to manage patients' agitation or anxiety and level of preparation from orientation/on-the-job training (See Table 16). In addition, there was no significant relation between RNs' confidence using methods other than medications to manage patients' agitation or anxiety and level of preparation from their education program ($r = .08$, $p = .80$).

Table 16. Relationship between confidence using non-pharmacological methods and level of preparedness due to either on-the-job training or formal education program.

Correlation	**Spearman's rho**	**p-value**
Confidence vs. Preparedness after on-the-job training	-0.0833	0.7867
Confidence vs. Preparedness after formal education program	-0.0773	0.8019

Summary of Findings

This research study was conducted to determine what non-pharmacological interventions were used by mental health RNs prior to or in lieu of administering PRN psychotropic medications to manage anxiety and agitation in adult psychiatric hospitalized patients and to determine what factors influenced RNs' decisions to administer PRN psychotropic medications to manage anxiety and agitation in adult psychiatric hospitalized patients. The results of this study indicated that in the majority of cases, RNs used non-pharmacological interventions to manage patient's anxiety or agitation. The non-pharmacological intervention recorded being used most frequently by RNs was active listening. Other non-pharmacological interventions that were frequently used were walking/exercise, limit setting, and meditation/mindfulness activities. In encounters where PRN psychotropic medication was not administered, distraction was the intervention most often used

Anxiety was the problem most frequently recorded on the tracking forms and the problem most often necessitating the use of non-pharmacological interventions. Interestingly, RNs administered less PRN psychotropic medications to patients exhibiting signs or symptoms of anxiety than they did to patients exhibiting signs and symptoms of agitation. However, PRN psychotropic medications were most often administered by RNs to patients exhibiting signs and symptoms of both anxiety and agitation.

The non-pharmacological intervention most frequently used to manage patients exhibiting signs or symptoms of anxiety was active listening. Other non-pharmacological interventions frequently used to manage patients exhibiting signs or symptoms of anxiety were walking/exercise and meditation/mindfulness. The non-pharmacological intervention most frequently used to manage patients exhibiting signs or symptoms of agitation was active listening. Other non-pharmacological interventions used were walking/exercise and limit setting.

Interestingly, distraction and meditation/mindfulness activities were recorded by RNs as being used to manage patients' anxiety, yet they were not recorded as used to manage patients with signs or symptoms of agitation. The non-pharmacological interventions used most frequently to manage patients with signs or symptoms of both anxiety and agitation were active listening and limit setting.

The rate of problem resolution after non-pharmacological interventions were used was 36.1%. Walking/exercise was the non-pharmacological intervention that resolved the most responses of anxiety or agitation. In encounters where PRN psychotropic medications were administered, patients' anxiety or agitation resolved 80% of the time.

The most common factor influencing RNs' decisions to administer PRN psychotropic medications was a high level of anxiety persistent after non-pharmacological interventions were used. Patients most often requested PRN psychotropic medications. Non-pharmacological interventions were recorded being used most often on daylight shift. The most frequent non-pharmacological intervention used by RNs on all three shifts (e.g. daylight, afternoon, and night shift) was active listening. PRN psychotropic medications were most frequently administered on afternoon shift.

The results of this study indicate that there was no significant relation between RNs' confidence using methods other than medications to manage patients' agitation or anxiety and their level of preparation from orientation/on-the-job training. The results also indicate that there was no significant relation between RNs' confidence using methods other than medications to manage patients' agitation or anxiety and their level of preparation from their education program. RNs who had a higher level of education (e.g. Bachelor's degree) administered more PRN psychotropic medications than those having an Associate's degree or Diploma. This study found

that the less frequently RNs were working (e.g. casual), the more often patients were administered PRN psychotropic medications.

Chapter Five: Discussion and Conclusions

Discussion of Findings

This study found that in the majority of encounters, RNs used non-pharmacological interventions to manage patients' anxiety and agitation. There were only two encounters that RNs recorded that they did not use non-pharmacological interventions prior to administering PRN psychotropic medication. In one of the encounters, the RN recorded that the patient refused non-pharmacological interventions. The findings from this study create questions as to whether RNs documented every encounter they used non-pharmacological interventions. With the limited number of tracking forms completed, it is very likely that RNs did not document every encounter in which they used non-pharmacological interventions. Curtis, Baker, and Reid (2007) found similar results. Specifically, they found that RNs may be using non-pharmacological interventions but are not recording all occurrences.

One research question in this study was "What non-pharmacological interventions are used by mental health RNs prior to or in lieu of administering PRN psychotropic medication to manage anxiety and agitation in adult psychiatric hospitalized patients?" The non-pharmacological intervention used most frequently by RNs was active listening. Listening to patients is useful for assessing patients' emotional state and providing patients support (Price & Baker, 2012). Spending time talking with staff was the most frequently used non-pharmacological intervention cited in other studies (Baker et al., 2007; Curtis et al., 2007; Hilton & Whiteford, 2008; O'Brien & Cole, 2004). Other non-pharmacological interventions that were frequently used were walking/exercise, limit setting, and meditation/mindfulness activities. These non-pharmacological interventions were identified as interventions used in other research studies as well (Bos et al., 2013; Price & Baker, 2012; Thomas et al., 2006).

Difficulty arises in determining which non-pharmacological interventions are effective in decreasing the incidence of PRN psychotropic medication administration (Jung & Newton, 2009). The rate of problem resolution after non-pharmacological interventions were used was 36.1%. This study found that non-pharmacological interventions are effective in decreasing incidences of PRN psychotropic medication administration similar to the findings from other studies (Baker et al., 2007; Donat, 2006; Hilton & Whiteford, 2008; Jarrett et al., 2008; Mullen & Drinkwater, 2011; Thomas et al., 2006). Distraction was the non-pharmacological intervention that had the lowest percentage of PRN psychotropic medication administration. Nanda, Eisen, Zadeh, & Owen (2011) found that distraction helped reduce patients' anxiety and agitation in mental health settings and was associated with fewer incidences of PRN psychotropic medication administration.

The findings from this study support RNs using non-pharmacological interventions prior to administering PRN psychotropic medication. Likewise, other research studies have found that behavioral interventions and therapeutic non-pharmacological interventions are effective in decreasing the incidence of PRN psychotropic medications (Baker et al., 2007; Donat, 2006; Hilton & Whiteford, 2008; Jarrett et al., 2008; Mullen & Drinkwater, 2011; Thomas et al., 2006).

The most frequently recorded non-pharmacological intervention used to manage patients with signs or symptoms of anxiety and agitation was active listening. However, the most frequently recorded non-pharmacological intervention that had the highest percentage of resolution of anxiety or agitation was walking/exercise. When RNs used the intervention walking/exercise, patients' anxiety or agitation resolved in 54.5% of the time. Other non-pharmacological interventions recorded that had some resolution of anxiety or agitation were active listening and time out/quiet area. These non-pharmacological interventions were

consistent with non-pharmacological interventions used by RNs in other research studies (Price & Baker, 2012, Thomas, 2006).

The most frequent sign or symptom of anxiety that patients were exhibiting when RNs intervened was report of nervousness/anxiety. In encounters where patients were exhibiting both signs and symptoms of anxiety and agitation, the most frequent anxiety symptom recorded when RNs intervened was report of nervousness/anxiety. The most frequent signs or symptoms of agitation that patients were exhibiting when RNs intervened that were recorded on the tracking forms were report of irritability/agitation and heightened responsiveness to stimuli. In encounters where patients were exhibiting both signs and symptoms of agitation and anxiety, the most frequent sign or symptom recorded was heightened responsiveness to stimuli. In the majority of encounters, it appears that RNs intervened early in the process by using non-pharmacological interventions when patients reported signs or symptoms of anxiety or agitation. Early intervention is essential to successfully manage patients' behavior (Price & Baker, 2012).

The results from this study indicate that anxiety was the problem most frequently recorded on the tracking forms and the problem most often associated with the use of non-pharmacological interventions. Interestingly, RNs administered fewer PRN psychotropic medications to patients exhibiting signs or symptoms of anxiety than they did to patients exhibiting signs and symptoms of agitation. However, PRN psychotropic medications were most often administered by RNs to patients exhibiting signs and symptoms of both anxiety and agitation. Other studies found that the most common reason for PRN psychotropic medication administration was agitation (Baker et al., 2010; Baker, Lovell, & Harris, 2007; O' Brien & Cole, 2004; Smith et al., 2008; Stein-Parbury et al., 2008). In encounters where PRN psychotropic medications were administered, patients' anxiety or agitation resolved 80% of the time.

The results of this study indicate that non-pharmacological interventions were recorded as used most often on daylight shift. The most frequent non-pharmacological intervention used by RNs on all three shifts (e.g. daylight, afternoon, and night shift) was active listening. PRN psychotropic medications were most frequently administered on afternoon shift. This finding is consistent with several other research studies that found that most PRN psychotropic medications are administered on the 3-11 shift (Baker et al., 2008; Curtis et al., 2007; Mullen & Drinkwater, 2011; Smith et al., 2008; Stein-Parbury et al., 2008). This finding may be due to decreased staffing levels on the afternoon shift (Baker et al., 2010).

Full time RNs administered PRN psychotropic medication less often than casual RNs. This finding is similar to a study conducted by Usher et al., (2009) which found that regular RNs used less PRN psychotropic medication than casual RNs who may be less familiar with patients. Surprisingly, the results of this study indicated that patients most frequently requested PRN psychotropic medications. Whereas, the results of other studies (Smith et al., 2008; Stein-Parbury, 2008) found that most PRN psychotropic medication administrations were initiated by RNs.

The second research question of this study was "What factors influence mental health RNs decisions to administer PRN psychotropic medications to manage anxiety and agitation in adult psychiatric hospitalized patients?" The most common factors influencing RNs' decisions to administer PRN psychotropic medications were patients exhibiting a high level of anxiety persistent after non-pharmacological interventions and patients' refusal to try non-pharmacological interventions. These findings are consistent with findings in other research studies (Curtis et al., 2007; Usher et al., 2009) which found that factors influencing RNs'

decisions to administer PRN psychotropic medication were level of patients' distress and patients' requests for PRN psychotropic medication.

Limitations

There are several limitations which need to be addressed. One limitation was the small sample size. Only 20 of the 26 RNs (76.9%) employed on the psychiatric unit agreed to participate in this study. Another limitation was that not all of the RNs participating in this study completed tracking forms. Only 13 of the 20 RNs (65.0%) agreeing to participate in this study completed tracking forms. This creates questions as to whether or not RNs used therapeutic non-pharmacological interventions and administered PRN psychotropic medications but did not document these occurrences on the tracking forms. The researcher intended to use the Fisher Exact test but, since almost all of the participants administered PRN psychotropic medications, this was not done. An additional limitation is the culture of preferring medication use as a first line response.

Another limitation was that RNs did not always fully complete the specified information on the tracking form. For example, factors influencing RNs' decisions to administer PRN psychotropic medications were not recorded in 18 observations. A key limitation to this study was the limited number of tracking forms completed by RNs. In addition, since RNs were not observed, it could not be determined whether participants completed tracking forms each and every time they used non-pharmacological interventions and/or administered PRN psychotropic medications. Therefore, it is very possible that RNs used non-pharmacological interventions and/or administered PRN psychotropic medications but did not document all occurrences on the tracking form. This study solely relied on RNs' self-report. Many RNs recorded that patients were exhibiting signs and symptoms of both anxiety and agitation. While it is possible that

patients were exhibiting signs and symptoms of both anxiety and agitation, it is also possible that RNs were unsure how to complete the tracking forms. Despite the fact that RNs received education on completing the tracking forms, RNs may have thought they were to complete both columns on the tracking form pertaining to the problems anxiety and agitation. It is also possible that RNs may not have distinguished between symptoms of agitation or anxiety. Moreover, the chronology within encounters when multiple non-pharmacological interventions were recorded could not be determined. Another limitation is that the researcher developed both instruments for the study and there was no previous validity or reliability data. However, these instruments were reviewed by several experts and nurses.

Implications

The results of this study could be used to support nurse educators in educating students on first using non-pharmacological interventions to manage patients' anxiety or agitation, documenting in patients' medical records the non-pharmacological interventions used, and indicating the results of using non-pharmacological interventions. Non-pharmacological interventions successfully resolved problems over 1/3 of the time and may prevent the use of PRN psychotropic medications in the future. The findings from this study create questions as to whether or not RNs recorded all encounters in which they used non-pharmacological interventions and/or administered PRN psychotropic medications. Nurses could conceivably have used non-pharmacological interventions and/or administered PRN psychotropic medication but may not have documented all encounters. Nurses may benefit from education on documenting the use of non-pharmacological interventions.

This study may be useful for mental health RNs in nursing practice. Currently, information surrounding RNs' use of non-pharmacological interventions and factors influencing

their decisions to administer PRN psychotropic medications is limited. The findings of this study may contribute to the knowledge base associated with identifying factors that influence mental health RNs' decisions to administer PRN psychotropic medications in hopes that this knowledge may lead to changes in practice. Findings from this study may also provide mental health RNs and other healthcare professionals with a better understanding of what non-pharmacological interventions were most effective in reducing or alleviating symptoms and the possibility of PRN psychotropic medication. This study reinforces the importance of RNs using non-pharmacological interventions to manage patients exhibiting signs or symptoms of anxiety or agitation.

Since most PRN psychotropic medications are administered on the 3-11 shift in this study, patients may benefit from being provided more groups and/or activities to minimize free time during that time period. The fact that patients most frequently requested PRN psychotropic medication supports the need for RNs to teach patients coping skills to manage their anxiety or agitation in an attempt to decrease reliance on PRN psychotropic medications. Identifying signs and symptoms patients were experiencing when RNs intervened may assist RNs with early recognition of the development of anxiety or agitation in patients. Identifying the most frequent problems necessitating the need for use of non-pharmacological interventions and/or PRN psychotropic medication may assist RNs in utilizing the most appropriate interventions to manage patients' anxiety or agitation.

Recommendations for Further Study

Due to the limited research surrounding PRN psychotropic medication administration, there is a definite need for additional research focusing on the multitude of factors that influence this important aspect of psychiatric nursing. Future research needs to focus on PRN

psychotropic medication administration and patients' experiences (Baker et al., 2007). In addition, research needs to focus on administrative factors (e.g. eliminating written orders for PRN psychotropic medications), prescriber factors (e.g. symptoms for which PRN psychotropic medications are prescribed), patient factors (e.g. co-occurring substance abuse disorders and drug-seeking behavior), and nursing factors (e.g. RNs' skill level) that play a role in the use of PRN psychotropic medication. Additional research needs to include randomized control studies and replications of similar studies conducted in psychiatric facilities in the United States. Also, future research needs to identify evidence-based guidelines for PRN psychotropic medication administration and further explore the use of non-pharmacological interventions prior to PRN psychotropic medication administration (Baker et al., 2007; Curtis et al., 2007) that will guide psychiatric nurses in providing optimal quality care. Additionally, future research could focus on RNs' decision-making process for administering PRN psychotropic medication (McKenzie, Kudinoff, Benson, & Archillingham, 1999). Moreover, future research needs to focus on whether continuing education and training programs for RNs focusing on therapeutic non-pharmacological methods positively or negatively affect incidences of PRN psychotropic medication.

The purpose of this study was to determine what non-pharmacological interventions are used by mental health RNs prior to or in lieu of administering PRN psychotropic medication and to determine what factors influence mental health RNs' decisions to administer PRN psychotropic medications to manage anxiety and agitation in adult psychiatric hospitalized patients. The results of this study indicate that non-pharmacological interventions have successfully resolved patients' anxiety and agitation which reinforces the importance of RNs using non-pharmacological interventions to manage patients' anxiety or agitation. The findings

of this study may contribute to the knowledge base associated with identifying factors that influence mental health RNs' decisions to administer PRN psychotropic medications in hopes that this knowledge may lead to changes in practice.

References

American Nurses Association (2007). *Psychiatric-mental health nursing scope & standards of practice.* Silver Springs, MD: Nursebooks.

Baker, J. A., Keady, J., Hardman, P., Kay, J., Jones, L., & Jolley, D. (2010). Psychotropic PRN use among older people's inpatient mental health services. *Journal of Psychiatric and Mental Health Nursing, 17,* 463-468. doi: 10.111/j.1365-2850.2009.01546.x

Baker, J. A., Lovell, K., & Harris, N. (2007). Mental health professionals' pro re nata (p.r.n.) medication practices in acute inpatient mental health care: A qualitative study. *General Hospital Psychiatry*, *29,* 163-168. doi: 10.1076/j.genhosppysh.2006.12.005

Baker, J. A., Lovell, K., & Harris, N. (2008). A best-evidence synthesis review of the administration of psychotropic pro re nata (PRN) medication in in-patient mental health settings. *Journal of Clinical Nursing, 17*, 1122-1131. doi: 10.1111/j.1365-2702.2007.02236.x

Bos, E. H., Merea, R., Brink, E. V., Sanderman, R., & Bartels-Velthuis, A. A. (2013). Mindfulness training in a heterogeneious psychiatric sample: Outcome evaluation and comparison of different diagnostic groups. *Journal of Clinical Psychology, 70*(1), 60-71. doi: 10.1002/jclp.22008

Cleary, M., Hunt, G. E., Horsfall, J., & Deacon, M. D. (2012). Nurse-patient interaction in acute adult inpatient mental health units: A review and synthesis of qualitative studies. *Issues in Mental Health Nursing, 33*, 66-79. doi: 10.3109/01612840.2011.622428

Curtis, J., Baker, J. A., & Reid, A. R. (2007). Exploration of therapeutic interventions that accompany the administration of p.r.n. ('as required') psychotropic medication within acute mental health settings: A retrospective study. *International Journal of Mental Health Nursing*, *16*, 318-326. doi: 10.1111/j.1447-0349.2007.00487.x

Dearing K. S., & Steadman, S. (2011). The psychometric properties of the self-assessment of the interpersonal relationship scale. *Perspectives in Psychiatric Care, 47*, 176-182. doi: 10.1111/j.1744-6163.2010.00287.x

Donat, D. C. (2006). Impact of a clinical-administrative review procedure on reducing reliance on psychotropic PRN medication. *Psychiatric Rehabilitation Journal, 29*(3), 215-218.

du Plessis, L., & Brennan, W. (2012). Calming techniques. *Occupational Health, 64*(5), 27-30.

Forchuk, C. (1991). Peplau's theory: Concepts and their relations. *Nursing Science Quarterly, 4*(2), 54-60.

Friedman, R., Nurenberg, J. R., Birnbaum, S., & Schleifer, S. J. (2012). Using structured clinical feedback to encourage alternatives to use of "P.R.N." medication in a state psychiatric hospital. *Journal of Psychiatric practice, 18*(5), 381-387. doi: 10.1097/01.pra.0000419823.69914.c7

Gastmans, C. (1998). Interpersonal relations in nursing: A philosophical-ethical analysis of the work of Hildegard E. Peplau. *Journal of Advanced Nursing, 28*(6), 1312-1319.

Geffen, J., Cameron, A., Sorensen, L., Stokes, J., Roberts, M. S., & Geffen, L. (2002). Pro re nata medication for psychoses: The knowledge and beliefs of doctors and nurses. *Australian and New Zealand Journal of Psychiatry, 36*, 642-648.

Hilton, M. F., & Whiteford, H. A. (2008). Pro re nata medication for psychiatric inpatients: A time to act. *Australian and New Zealand Journal of Psychiatry*, *42,* 555-564.

Jarrett, M., Bowers, L., & Simpson, A. (2008). Coerced medication in psychiatric inpatient care: Literature review. *Journal of Advanced Nursing, 64*(6), 538-548. doi: 10.1111/j.1365-2648.2008.04832.x

Jayasekara, R. (2009). The effectiveness of interventions in the prevention and management of aggressive behaviours in patients admitted to an acute hospital setting. *Journal of Advanced Nursing, 65*(12), 2512-2513. doi: 10.1111/j.1365-2648.2009.5151d.x.

Jung, X. T., & Newton, R. (2012). Cochrane reviews of non-medication-based psychotherapeutic and other interventions for schizophrenia, psychosis, and bipolar disorder: A systematic literature review. *International Journal of Mental Health Nursing, 18*, 239-249. doi: 10.1111/j.1447-0349.2009.00613.x

Kneisl, C. R., & Trigoboff, E. (2013). *Contemporary psychiatric-mental health nursing.* Upper Saddle River, NJ: Pearson Education Inc.

Kopecky, H. J., Kopecky, C. R., & Yudofsky, S. C. (1998). Reliability and validity of the overt agitation severity scale in adult psychiatric inpatients. *Psychiatric Quarterly, 69*(4), 301-323.

Lindsey, P. L., & Buckwalter, K. C. (2012). Administration of PRN medications and use of nonpharmacologic interventions in acute geropsychiatric settings: Implications for practice. *Journal of the American Psychiatric Nurses Association, 18*(2), 82-90. doi: 10.1177/1078390312438768

McKenzie, A., Kudinoff, T., Benson, A., & Archillingham, A. (1999). Administration of PRN medication: A descriptive study of nursing practice. *Australian and New Zealand Journal of Mental Health Nursing, 8,* 187-191.

Mugoya, G. C., Kampfe, C. M. (2010). Reducing the use of PRN medication in in-patient psychiatric hospitals. *Journal of Life Care Planning, 9*(2), 37-46.

Mullen, A., & Drinkwater, V. (2011). Pro re nata use in a psychiatric intensive care unit. *International Journal of Mental Health Nursing, 20*, 409-417. doi: 10.1111/j.1447-0349.2011.00746.x

Nanda, U., Eisen, S., Zadeh, R. S., & Owen, D. (2011). Effect of visual art on patient anxiety and agitation in a mental health facility and implications for the business case. *Journal of Psychiatric and Mental Health Nursing, 18,* 386-393. doi: 10.1111/j.1365-2850.2010.01682.x

Nelson, S. (2011). Theories focused on interpersonal relationships. In J. B. Butts, & K. L. Rich, (Eds.), *Philosophies and theories for advanced nursing practice* (pp 271-311). Sudbury, MA: Jones & Bartlett.

O'Brien, L., & Cole, R. (2004). Mental health nursing practice in acute psychiatric close-observation areas. *International Journal of Mental Health Nursing, 13,* 89-99.

Peplau, H. E. (1992). Interpersonal relations: A theoretical framework for application in nursing practice. *Nursing Science Quarterly, 5*(1), 13-18. doi: 10.1177/089431849200500106

Price, O., & Baker, J. (2012). Key components of de-escalation techniques: A thematic synthesis. *International Journal of Mental Health Nursing, 21*, 310-319. doi: 10.1111/j.1447-0349.2011.00793.x

Silk, L., Watt, J., Pilon, N., & Draper, C. (2013). Development of a psychotropic PRN medication evaluative tool. *Journal of Mental Health Research in Intellectual Disabilities, 6*(1), 29-41. doi: 10.1080/19315864.2011.640096.

Smith, G. M., Davis, R. H., Altenor, A., Tran, D. P., Wolfe, K. L., Deegan, J. A., & Bradley, J. (2008). Psychiatric use of unscheduled medications in the Pennsylvania state hospital system: Effects of discontinuing the use of P.R.N. orders. *Community Mental Health Journal, 44*(4), 261-270. doi10.1007/s10597-008-9126-y

Stein-Parbury, J., Reid, K., Smith, N., Mouhanna, F. L. (2008). Use of pro re nata medications in acute inpatient care. *Australian and New Zealand Journal of Psychiatry, 42*, 283-292.

Stewart, D., Robson, D., Chaplin, R., Quirk, A., & Bowers, L. (2012). Behavioural antecedents to pro re nata psychotropic medication administration on acute psychiatric wards. *International Journal of Mental Health Nursing, 21*, 540-549. doi: 10.1111/j.1447-0349.2012.00834.x

Tappen, R. M. (2011). *Advanced nursing research: From theory to practice*. Sudbury, MA: Jones & Bartlett Learning.

Thapa, P. B., Palmer, S. L., Owen, R. R., Huntley, A. L., Clardy, J. A. , & Miller, L. H. (2003). P.R.N. (As-Needed) orders and exposure of psychiatric inpatients to unnecessary psychotropic medications. *Psychiatric Services, 54*(9), 1282-1286.

Thomas, B., Jones, M., Johns, P., & Trauer, T. (2006). P.r.n. medication use in a psychiatric high-dependency unit following the introduction of a nurse-led activity programme. *International Journal of Mental Health Nursing, 15*, 266-271. doi: 10.1111/j.1447-0349.2006.00433.x

Usher, K., Baker, J. A., Holmes, C., & Stocks, B. (2009). Clinical decision-making for 'as needed' medications in mental health care. *Journal of Advanced Nursing, 65*(5), 981-991. doi: 10.1111/j.1365-2648.2008.04957.x

Zeller, S. L., & Rhoades, R. W. (2010). Systematic reviews of assessment measures and pharmacologic treatments for agitation. *Clinical Therapeutics, 32*, 403-425. doi: 10.1016/j.clinthera.2010.03.006

Yudofsky, S. C., Kopecky, H. J., Kunik, M., Silver, J. M., & Endicott, J. (1997). The overt agitation severity scale for the objective rating of agitation, *Journal of Neuropsychiatry,* 9, 541-548.

Appendix A

St. Clair Hospital IRB Approval Letter

23 May 2014

Ms. Donna Leckey
Carlow University
Pittsburgh, PA

RE: Carlow University IRB #14-054-G-189 Therapeutic Non-pharmacological Interventions and PRN Psychotropic Medication Administration Practices of Mental Health RNs (DNP Capstone Project)

Dear Ms. Leckey,

The St. Clair Hospital Institutional Review Board met this morning and evaluated your request for approval of the above named study, reviewing the protocol, instruments and informed consent.

I am pleased to report that your study meets all of the acceptable requirements of the St. Clair Institutional Review Board and is approved.

We look forward to participating in this protocol and to your report on the outcome of the study.

Sincerely,

James M. Collins
President and
Chief Executive Officer

copy: G. Alan Yeasted
File

Appendix B

Carlow University IRB Approval Letter

CARLOW UNIVERSITY

INSTITUTIONAL REVIEW BOARD

To: Donna Leckey

Cc: Mary Lou Bost

From: Peggy Slota

Co-Chair, Carlow IRB

Date: May 6, 2014

Re: IRB # 14-054-G-189 - Therapeutic Non-pharmacological Interventions and PRN Psychotropic Medication Administration Practices of Mental Health RNs

The above project was reviewed and approved by Carlow's Institutional Review Board.

The project is approved for a period of up to one year.

Approval Date: May 6, 2014

Expiration Date: May 5, 2015

If any untoward incidents or unanticipated adverse reactions should develop in the course of your research with human subjects, you must notify the Institutional Review Board Office at 578-6349 immediately.

Appendix C

Invitation to Participate in Research Study

Invitation to Participate in a Research Study

Who: All RNs employed on the psychiatric unit at St. Clair Hospital

What: Research Study on Therapeutic Non-pharmacological Interventions and PRN Psychotropic Medication Administration Practices of Mental Health RNs.

Purpose: (1) To determine what non-pharmacological interventions are used by mental health RNs prior to or in lieu of administering PRN psychotropic medication to manage anxiety and agitation in adult psychiatric hospitalized patients and (2) To determine what factors influence mental health RNs' decisions to administer PRN psychotropic medications to manage anxiety and agitation in adult psychiatric hospitalized patients

If you decide to take part in this research study, I will ask you to:

- Attend a brief educational in-service explaining my project and complete a Nursing Survey which is anticipated to take 5 minutes to complete
- Complete Nursing Intervention Tracking Forms for one specified week each month for three consecutive months during the study period

When: STOP BY May 25, June 3, or June 11 at 6:30 am, 2:00 pm, or 3:00 pm. Other dates and times may be arranged to accommodate your schedule.

Where: Conference Room on the psychiatric unit at St. Clair Hospital

Participants will receive a $5 Starbucks gift card.

Principal Investigator to contact should you have any questions:

Donna Leckey RN, M.S.
Carlow University
(724) 388-0774

Appendix D

Informed Consent Letter

CONSENT TO ACT AS A PARTICIPANT IN A RESEARCH STUDY

Title: Therapeutic Non-pharmacological Interventions and PRN Psychotropic Medication Administration Practices of Mental Health RNs

Principal Investigator: Donna Leckey RN, M.S.
Carlow University
(724) 388-0774

Dear Participants,

My name is Donna Leckey. I am a Registered Nurse at Torrance State Hospital. I have been a Registered Nurse for 19 years, 15 of which have been in psychiatric nursing. I am also a student at Carlow University. As part of my degree requirements, I am conducting a research study.

The purpose of this study is to determine what non-pharmacological interventions are used by mental health RNs prior to or in lieu of administering PRN psychotropic medication to manage anxiety and agitation in adult psychiatric hospitalized patients. In addition, since there are many extraneous factors impacting RNs' decisions to administer PRN psychotropic medication, another aim of this project is to determine what factors influence mental health RNs' decisions to administer PRN psychotropic medications to manage anxiety and agitation in adult psychiatric hospitalized patients. Your participation in this study will greatly assist me in learning what non-pharmacological interventions are effective in preventing the need for PRN psychotropic medication administration and identifying what factors are most influential in your decision to administer PRN psychotropic medications. All RNs working on the psychiatric unit at St. Clair Hospital will be invited to participate in this study.

As part of this study, I will be collecting data regarding non-pharmacological interventions and PRN psychotropic medication administration using Nursing Intervention Tracking Forms. If you decide to take part in this research study, I will ask you to:

- Attend a 15 minute educational in-service and complete a Nursing Survey which will provide basic demographic information (e.g. level of education, years of experience) (It is anticipated that it will take 5 minutes to complete.)
- Draw a number from a basket during the educational in-service to use as your nurse identifier number to place on the Nursing Intervention Tracking Forms and Nursing Survey so that you can complete the forms anonymously
- Complete Nursing Intervention Tracking Forms for one specified week each month for three consecutive months for every date/shift you work during the study period (It is anticipated that the tracking form will take 1 minute per patient to complete.)
- Place the completed Nursing Survey and Nursing Intervention Tracking Forms in a locked box labeled "Completed Nursing Intervention Tracking Forms and Nursing Surveys" on the psychiatric unit
- Sign your name at the bottom of this letter to indicate your voluntary consent to participate in this study

Your responses on the Nursing Survey and Nursing Intervention Tracking Forms will be strictly confidential and will not identify you. The results will only be released in aggregate form. The signed consent letters will be kept separate and apart from study data. You will place your signed consent letter in an envelope that will be sealed and stored in a locked file cabinet.

Your voluntary response to this request constitutes your informed consent to your participation in this activity. You are not required to participate. A possible risk from taking part in this study is that it may take nurses a short amount of additional time for charting. A possible benefit is that you may contribute to research focusing on improving the care psychiatric patients receive. If you decide not to participate, your decision will not affect your current or future relations with St. Clair Hospital and Carlow University. This activity has been approved by the Carlow University Institutional Review Board. This committee administers both the General Assurance of Compliance with the United States Department of Health and Human Services Policy for the protection of Human Subjects and the University policy covering the protection of human subjects. The Committee may be contacted through the Chairperson by calling 412-578-6349.

I chose to research non-pharmacological interventions and PRN psychotropic medication administration because there is limited research in these areas and because I sincerely believe that learning more about this important area can make a significant difference in mental health practice. However, I realize that to successfully complete this research, your participation is a vital part of this study.

Thank you for your valuable contribution to this research.

Sincerely,

Donna Leckey M.S. RN

VOLUNTARY CONSENT

The above information has been explained to me and all of my current questions have been answered. I understand that I am encouraged to ask questions about any aspect of this research study during the course of this study, and that such future questions will be answered by a qualified individual or by the investigator(s) at the telephone number(s) given.
By signing this form, I agree to participate in this research study. A copy of this consent form will be given to me.

_____	_____	_____
Participant's Signature	Printed Name of Participant	Date

CERTIFICATION of INFORMED CONSENT

I certify that I have explained the nature and purpose of this research study to the above-named individual(s), and I have discussed the potential benefits and possible risks of study participation. Any questions the individual(s) have about this study have been answered, and we will always be available to address future questions as they arise.

_____	_____
Printed Name of Person Obtaining Consent	Role in Research Study
_____	_____
Signature of Person Obtaining Consent	Date

Appendix E

Nursing Intervention Tracking Form

Nursing Intervention Tracking Form

Directions: Complete this form for each patient who is anxious or agitated during your shift but is **NOT** on protocols for detoxification symptoms.

Choose One:		Non-pharmacological interventions used prior to or in lieu of administering PRN psychotropic medication *** (See Key Below)	Did the anxiety or agitation resolve? a. Yes b. No	Were PRN psychotropic medications given? a. Yes b. No (If No, Move to Next Patient)	Did the anxiety or agitation resolve? a. Yes b. No	If a PRN psychotropic medication was given, what factors influenced your decision? **** (See Key Below)	If a PRN psychotropic medication was given, who requested It? a. Nurse b. Patient c. Physician
Problem Anxiety Identify when you intervened * (See Key Below)	Problem Agitation Identify when you intervened ** (See Key Below)						

*1. Report of Nervousness/Anxiety 2. Frequently Seeking Assurance from Staff 3. Difficulty Concentrating/Distractibility 4. Obsessive Thoughts 5. Compulsive/Ritualistic Behavior 6. Restlessness 7. Somatic Complaints/Symptoms (e.g. Insomnia, Stomach Aches, Increased HR/BP, Shortness of Breath) 8. Rapid Speech 9. Wringing Hands/Tremors 10. Other (Please Specify)

** 1. Report of Irritability/Agitation 2. Heightened Responsiveness to Stimuli 3. Excessive/Non-purposeful Motor Activity 4. Raising Voice/Yelling 5. Body Language (e.g. Red Face, Waving Arms in the Air) 6. Uncooperativeness 7. Physical Aggression (e.g. Slamming Doors) 8. Threatening Staff/Peers 9. Angry/Abusive Remarks 10. Other (Please Specify)

***1. No Intervention Used 2. Active Listening 3. Limit Setting 4. Time Out/Quiet Area 5. Offering Activities 6. Music 7. Negotiation 8. Counseling 9. Walking/Exercise 10. Patient-driven Intervention 11. Distraction 12. Meditation/Mindfulness Activity 13. Other Intervention (Please Specify)

****1. Patient Refused to Try Non-pharmacological Interventions 2. Time Restrictions 3. Decreased Staffing Levels 4. High Level of Anxiety Persistent After Non-pharmacological Interventions Used 5. High Patient Acuity 6. High Level of Agitation Persistent After Non-pharmacological Interventions Used 7. High Number of Assigned Patients for the Shift 8. Known History with Particular Patient (e.g. Acting Out, Violence, etc.) 9. Other (Please Specify)

Nurse Identifier_____ **Shift** Daylight_____ Afternoon_____ Night_____

Thank you for completing this tracking form. Please place completed tracking forms in the locked box labeled "Completed Nursing Intervention Tracking Forms and Nursing Surveys."

Appendix F

Nursing Survey

Nursing Survey

Nurse Identifier _____

1. What is your highest level of NURSING education?

    a. Associate's Degree b. Diploma c. Bachelor's Degree

    d. Master's Degree e. Doctorate

2. How many years of PSYCHIATRIC nursing experience do you have?

    a. Less than 3 Years b. 3 Years or More

3. Are you ANCC Certified?

    a. Yes b. No

4. How often do you work CURRENTLY?

    a. Full Time b. Part Time c. Casual

5. My ORIENTATION/ON-THE-JOB TRAINING prepared me to use methods other than medications to manage patient agitation or anxiety.

    1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree

6. My EDUCATIONAL PROGRAM prepared me to use methods other than medications to manage patient agitation or anxiety.

    1= Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree

7. I am CONFIDENT in my ability to use methods other than medications to manage patient agitation or anxiety.

    1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree

Thank you for completing this survey. Please place your completed survey in the locked box labeled "Completed Nursing Intervention Tracking Forms and Nursing Surveys."