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Staff Knowledge and Attitudes Toward Recovery Principles Among Mental Health Professionals Who Work with Adult Psychiatric Inpatients

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STAFF KNOWLEDGE AND ATTITUDES TOWARD RECOVERY PRINCIPLES AMONG MENTAL HEALTH PROFESSIONALS WHO WORK WITH ADULT PSYCHIATRIC INPATIENTS

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Abstract

Recovery from serious mental illness (SMI) promotes a lifestyle that enables individuals to overcome obstacles related to mental illness and to become hopeful, responsible, and empowered to contribute to society (Anthony, 1993; Jacobson & Greenley, 2001). This study addressed the mental health worker's knowledge and attitudes toward recovery principles, utilizing an online survey method to examine the relationship between staff knowledge of and attitudes toward recovery principles among mental health professionals who work in inpatient psychiatric settings that serve adult patients. Participants in this study included staff members at inpatient psychiatric hospital facilities in the United States. Results from this study were restricted due to the low number of respondents to the questionnaire during the designated 3-month time frame for data gathering. The implications of these findings were discussed, as well as the need for more research on this area of study.

Table of Contents

List of Tables

Chapter 1: Introduction

Statement of the Problem

Over the past few decades, recovery principles have been increasingly recognized as essential components of treatment for individuals with serious mental illness (SMI; Compton et al., 2014; McLellan, 2012). Recovery from SMI promotes a lifestyle that enables individuals to overcome obstacles related to mental illness and to become hopeful, responsible, and empowered to contribute to society (Anthony, 1993; Jacobson & Greenley, 2001). With this in mind, researchers have tried to determine how mental health systems can promote recovery for individuals with SMI most effectively.

In 2004, the U.S. Department of Health and Human Services and other health providers announced 10 principles of recovery, including basic rights to self-direction by individuals with SMI in order to promote empowerment; treatment that is individualized, person-centered, strengths-based, and holistic; understanding that recovery is nonlinear; the encouragement of peer support; and instilment of respect, responsibility, and hope (American Psychological Association, 2012). Making these principles central to behavioral health treatment enables individuals with SMI to become positive contributors to society through work and meaningful engagement in their communities (Hogan, 2003).

SMI is associated with vital problems of disability, mortality, and poverty that are costly to individual health and the economy. SMIs such as schizophrenia, depressive disorders, and substance use disorders are major contributors to severe disability that influence quality of life (World Health Organization [WHO], 2016). Individuals with SMI can become isolated, violent, fearful and suspicious of others, and/or dependent on alcohol and drugs (American Psychiatric Association, 2013). SMI is also associated with increased

mortality. In fact, untreated SMI can result in suicide attempts that significantly increase mortality rates for this population (Ostamo & Lönnqvist, 2001). In addition to disabling individuals and causing deaths, SMI is associated with financial burdens (Knapp, Mangalore, & Simon, 2004). For instance, more than $300 billion was the estimated cost of treatment for individuals with SMI in 2002 (Insel, 2008). Given the deleterious effect of SMI on societies and their economies, it is clear that an understanding of how individuals with SMI can recover and become more engaged in society is very important.

An important factor contributing to challenges treating SMI is that providers are not in agreement on SMI-related issues, and this can impact care. Specifically, even though recovery principles are increasingly recognized as crucial to quality of psychological and psychiatric services, many health care providers are still skeptical about the viability of recovery from SMI and may have negative attitudes toward individuals with SMI due to stigma and prejudice (Angermeyer & Dietrich, 2006; King, 2014). Some health providers still believe that SMIs are deteriorative disorders (Bilder et al., 1988; Bilder et al., 1992) that can permanently prohibit them from having productive lives. Most importantly, these negative attitudes continue to challenge health providers and researchers. Indeed, they have a negative impact on patient care and can have a negative impact on patient gratification (Li, Comulada, Wu, Ding, & Zhu, 2013), an essential factor in determining quality of health care services.

Given the importance of recovery principles in providing quality of care, many health providers are dedicating their time and energy toward the establishment of a culture of recovery by endorsing recovery principles among health providers through the development of training programs and encouraging staff to attend them (Liberman, Kopelowicz, Ventura,

& Gutkind, 2002). This is crucial because research indicates that staff characteristics (Sahin & Tatar, 2006) and engagement of staff are central to any efforts toward the improvement of health conditions of patients (Di Blasi, Harkness, Ernst, Georgiou, & Kleijnen, 2001). In fact, most health care agencies are currently attempting to integrate recovery principles into their treatment programs (Compton et al., 2014; McLellan, 2012). A growing number of scholars in the mental health field are stressing the importance of increasing knowledge of and attitudes toward recovery principles among health care providers (Bedregal, O'Connell, & Davidson, 2006; Cleary & Dowling, 2009). Nevertheless, there is scant research that has carefully examined the relationship between knowledge of and attitudes toward recovery principles among mental health professionals who work with adult psychiatric inpatients.

Purpose of the Study

Researchers indicate that implementation of recovery principles (Amering & Schmolke, 2009; Sowers, 2005) and staff characteristics and attitudes (Rooney, 2010) are the most relevant factors influencing the efficacy of treatment of individuals with behavioral health problems. Given the importance of these factors to quality of care, many behavioral health providers have devoted much energy and many resources to incorporating recovery principles through the development of staff training programs (Liberman et al., 2002). Nevertheless, minimal knowledge and negative attitudes toward recovery have made systemic change in behavioral health challenging. The present state of affairs in mental health points directly toward a need for research measuring the connection between staff knowledge of and attitudes toward recovery principles; however, there is little research on how to assess this relationship among mental health professionals who work with adult psychiatric inpatients.

This study addressed the near absence of such evaluative research on staff knowledge of and attitudes toward recovery principles, utilizing an online survey method to examine it. Participants in this study included staff members at inpatient psychiatric hospital facilities in the United States. It was hoped that results from this study would encourage psychiatric hospitals to devote more resources and professional training to ensure that their staff understand recovery principles and are aware of and value their attitude toward recovery principles when working with individuals with SMI.

Chapter 2: Literature Review

Serious Mental Illness

Challenges of serious mental illness. There are critical problems associated with SMI. These problems include disability, mortality, and poverty. According to WHO (2016), SMIs, such as schizophrenia, depressive disorders, and substance use disorders, influence quality of life by developing into severe disabilities. Some symptoms associated with SMI include isolation, violence, fear and suspicion of others, and/or dependency on alcohol or drugs (American Psychiatric Association, 2013). A longitudinal study of 331 participants with comorbidity of SMI and substance abuse found that the use of alcohol or other substances combined with nonadherence to medications may signal an extreme risk of violent behaviors among individuals with SMI (Swartz et al., 1998).

SMI is also associated with increased mortality. In a cohort study conducted in London, UK that included 31,719 participants, researchers found that between 2007 and 2009, mortality was significantly elevated among individuals with SMI, substance abuse, and depressive disorders. The highest mortality rate was reported to be among those individuals experiencing substance abuse (Chang et al., 2010). Krug, Mercy, Dahlberg, and Zwi (2002) reported that untreated SMI can result in suicide attempts that increase the number of deaths for a county, even more than number of deaths related to war. In fact, these authors noted that approximately 1.6 million individuals died in 2000 due to violent behaviors. One fifth of these deaths were war-related, and almost half of the entire death toll was associated with suicidal behaviors.

In addition to disabling individuals and causing deaths, SMI is also associated with significant financial problems. In 1990, health care costs associated with anxiety problems

were close to $50 billion (DuPont et al., 1996). In contrast, approximately $300 billion per year was the estimated cost of services provided to individuals with SMI (National Institute of Mental Health, 2009). It is evident that more research needs to be conducted to understand how individuals can recover from SMI and what can be done to increase meaningful engagement in society.

Inpatient psychiatric settings. Even though some people still fear mental illness and view it as punishment from God, it is, fortunately, no longer the view in inpatient psychiatric settings. Due to regulatory quality practices and guidelines, widespread systemic and institutional ignorance or abuse for individuals with SMI in inpatient psychiatric facilities is no longer sanctioned as acceptable "treatment." For example, the founders of Friends Hospital, an inpatient psychiatric facility in Philadelphia founded in 1813, viewed mental illness as a temporary impairment that forces individuals to experience a sense of darkness. They proposed that it is possible to empower the person and lead him or her out of the darkness. Thus, they decided to develop the nation's first private facility focused on treating individuals with SMI.

This facility was called "the Asylum for the Relief of Persons Deprived of the Use of their Reason." The therapeutic approach at this facility was grounded on the belief that the mentally ill should not be viewed as being less than human. Instead, providers at this facility believed individuals with SMI should be considered fully human and capable of being moral beings if society approaches them with kindness, dignity and respect (Perloff, 1994).

Recovery

Recovery oriented care movement. Consumers who provided thoughts and ideas of how to cope with SMI initially inspired the recovery transformation. To increase public

awareness in the 1980s, individuals with mental illnesses began to produce publications about how to cope with serious health conditions (Anthony, 1993; Mancini, Hardiman, & Lawson, 2005). The main focus of their publications was to support the idea that relying on medications is not enough to cope with mental health problems. Instilling hope and enhancing motivation are important factors in improving quality of care (Deegan, 1988). Other efforts indicated that encouraging individuals to take responsibility for their recovery is significant to improve mental health treatment (Leete, 1989). In addition, consumers emphasized the importance of eliminating social and personal stigma of mental health illnesses (Leete, 1989).

Although consumers encouraged the implementation of what has become known as recovery principles, many researchers and clinical professionals did not integrate these principles into their treatment programs and continued using the traditional model of treatment, which is the medical model (Davidson, O'Connell, Tondora, Lawless, & Evans, 2005). According to the medical model, recovery is defined as a reduction in symptoms and a return to pre-illness condition or baseline functioning (Davidson et al., 2005). Many clinical professionals believe that recovery is a removal or absence of symptoms associated with the diagnosed health problems (Bellack, 2006; Rudnick, 2012).

The medical model focuses mainly on using medications to cope with problematic symptoms. This notion is in direct opposition to that of the consumers' perspective that recovery is an ongoing process that includes medication and/or non-medication interventions such as peer or social support (Bellack, 2006). Even though the medical model has been used for decades, it does not help some individuals with complicated mental health disorders to return to pre-illness conditions. Individuals with broken bones may recover and return to

their pre-illness conditions but those with chronic illnesses, such as asthma, diabetes, cancer, or serious psychiatric disorders, may not be able to return to premorbid functioning (Davidson et al., 2005). Even if individuals can return to pre-illness condition, they may continue to struggle with other problems associated with SMI, such as isolation or poverty (Bellack, 2006; Davidson et al., 2005; Jacobson & Greenley, 2001; Liberman & Kopelowicz 2005).

Recovery transformation is also fueled by research and clinical practice. Research has been conducted across the United States and Europe to investigate progress of individuals with SMI, particularly, schizophrenia. For example, a 32-year longitudinal study of 118 individuals diagnosed with schizophrenia was conducted to follow treatment progress. Findings from this study showed that one half to two thirds of the sample were identified with significant improvement (Strauss & Breier, 1987). Similarly, findings of a meta-analysis of 53 longitudinal studies of cognitive performance of 2,476 individuals diagnosed with schizophrenia indicated that participants exhibited significant improvement in most cognitive tasks with follow-up treatment (Szoke et al., 2008). Research indicate that individuals with schizophrenia can improve long-term functioning outcomes as well with the appropriate treatment. Such outcomes have had a positive impact on the recovery movement and challenged the pessimistic view held by professionals who believe that functioning of individuals with SMI inevitably deteriorates over time (Bilder et al., 1988; Bilder et al., 1992; Hamdani et al., 2015; Kelley, Gilbertson, Mouton, & Van Kammen, 1992).

In the last decades, politics and health care providers continued to support the recovery movement by providing a new vision of recovery from mental health problems (Farkas, 2007). Specifically, it has shown that transformation of the mental health system

occurs when health care policies begin to encourage clinicians and other professionals to implement recovery principles in treatment programs. In 2002, the President of the United States, George W. Bush, considered improving quality of care for individuals with substance use and mental health problems as one of his main goals. To achieve this goal, President Bush announced the establishment of the New Freedom Commission on Mental Health. The main purpose of the Commission was to investigate and examine the strategies or approaches that were used to deliver mental health services. Another function of the Commission was to encourage and recommend means of improving the mental health care system. The conclusions drawn from the Commission's investigations suggested that recovery from mental illness is possible if awareness of recovery is increased and recovery principles are implemented in health care systems (Hogan, 2003). The idea that recovery is possible continues to be a driving force in current research (Clay, 2012).

The concept of recovery. There is no one concise definition that covers all dimensions of recovery (Brennaman & Lobo, 2011; Davison et al., 2005; Davidson, Rowe, Tandora, O'Connell, & Staeheli-Lawless, 2009; Davidson & White, 2007; Onken, Craig, Ridgway, Ralph, & Cook, 2007). A possible explanation for not having a precise definition of recovery relates to the fact that recovery has multiple uses in different disciplines (e.g., health, social, and legal) and in everyday language. (Brennaman & Lobo, 2011). Whereas the linguistic and medical perspectives view recovery as a return to a previous level of strength, well-being, or a pre-illness condition (Davidson et al., 2005; Oxford Dictionary of English Online, 2016), the consumer-survivor perspective describes recovery as a *process* that does not require alleviation of symptoms or a return to a previous level of functioning (Davidson et al., 2005).

The meaning of recovery appears to become more multidimensional when it is associated with mental health (Anthony, 1993; Davidson et al., 2009; Hogan, 2003; Jacobson & Greenley, 2001; Onken et al., 2007; Substance Abuse and Mental Health Services Administration [SAMHSA], 2012). Definitions of recovery that are derived from the mental health profession focus mainly on increasing self-awareness, instilling hope, and increasing acceptance of living with obstacles and challenges resulting from mental health problems (Brennaman & Lobo, 2011; Davidson et al., 2005; Scheyett, DeLuca, & Morgan, 2013). This perspective also suggests that a person's ability cannot be determined solely by a mental health diagnosis or dysfunctional symptoms. It requires an understanding of the interaction between the person and his or her environment (Anthony, Cohen, Farkas, & Bachrach, 1990).

Recovery has been characterized as a reciprocal relationship between different variables involving individuals with SMI, including their environments and health care providers (Noiseux et al., 2009). In other words, a change in any of these elements may induce a change in the other elements. Recovery is also characterized as a nonlinear process (Brennaman & Lobo, 2011). According to SAMHSA (2012), recovery includes occasional setbacks, which can be viewed as learning experiences that help to strengthen the process of recovery and endorse continued personal growth.

Of course, not every attempt or effort in recovery leads to positive outcomes. Nevertheless, individuals should recognize that unsuccessful attempts are learning experiences that can help in the development of healthy coping skills and strengthened recovery (Deegan, 1988). Coping skills may include self-organization and adaptation to manage isolation, hopelessness, and other emotional distresses (Brennaman & Lobo, 2011). In addition, it is helpful to view the treatment of SMI as a journey that aids in continual

personal growth throughout the achievement of personal rights and goals, while obtaining support from society (Davidson & White, 2007).

To have a comprehensive definition of recovery, it must include all factors associated with recovery (Bellack, 2006), including aspirational internal and external conditions (Jacobson & Greenely, 2001). The internal conditions include processes that help to establish initial stages of change. For instance, individuals in recovery are expected—ideally—to be hopeful and have positive attitudes toward treatment outcomes. They are also expected to develop a sense of self that is separate from the mental illness. Additionally, they should acquire positive coping skills to overcome obstacles associated with health problems. Moreover, these individuals should have opportunities to make their own choices and participate in decisions regarding their lives, and to assist them in this, they should learn and practice healthy communication skills to interact positively with others (Belack, 2006). Nevertheless, processing the internal conditions may not be enough to constitute the required changes and foster recovery in individuals. Internal conditions must be combined with external conditions.

External conditions are associated primarily with social aspects instead of personal individual aspects (Belack, 2006). These external conditions include experiences, policies, and practices that enhance recovery. For example, health care providers should develop health policies to prevent discrimination against individuals with SMI. Likewise, health organizations and agencies should establish strategies to eliminate personal and social stigma associated with mental disorders. These organizations should create supportive cultures and environments that encourage growth and respect, and instill hope for individuals with mental health problems. Finally, health services and treatment models should be designed to

empower individuals with mental illnesses that will strengthen them in their journeys through the recovery process (Belack, 2006).

Understanding the interaction between internal and external conditions can aid in gaining an appreciation of the reciprocal relationship between the multiple dimensions of recovery. Diminishing social stigma of mental illness helps to reduce the personal stigma that prohibits some individuals from separating themselves from their diagnoses. In addition, providing appropriate educational services in the community can provide layman with the opportunity to gain useful knowledge and awareness of mental illness. This can help reduce the impact of symptoms of those with mental illness and increase their abilities to cope with stress. Collaboration between individual and social constructs helps to empower consumers and health providers which, in turn, allows them to share responsibility and foster recovery (Jacobson & Greenley, 2001).

In summary, recent literature lends greater support to the consumer-survivor perspective as opposed to the traditional medical perspective in defining recovery, embracing the concept that recovery must include both internal and external conditions which lead to better outcomes for individuals with SMI. Thus, recovery from SMI can be defined as a nonlinear journey that helps individuals to overcome obstacles associated with mental illness and gain their rights, achieve personal goals, become hopeful, responsible, and empowered, and contribute to society (Anthony, 1993; Davidson & White, 2007, Jacobson & Greenley, 2001; McReynolds, 2002).

Principles of recovery. Over the past few decades, the recovery approach has been increasingly recognized as an essential organizing philosophy of treatment for individuals with mental illnesses (Clossey, Mehnert, & Silva, 2011; Compton et al., 2014; Davidson et

al., 2009; Leamy, Bird, Le Boutillier, Williams, & Slade, 2011; Le Boutillier et al., 2011; McLellan, 2012). There are 10 principles of recovery which were developed by the U.S. Department of Health and Human Services and other health providers in 2004 (American Psychological Association, 2012). The first of these principles is to make recovery self-directed, which can be implemented by giving individuals opportunities to choose their own pathways to improve their health conditions. The second principle is to make recovery individualized and person-centered. This principle suggests that each individual must have a treatment plan that meets his or her needs and takes the individual's personal experiences, cultural backgrounds, and strengths into consideration.

The third recovery principle is empowerment. This allows individuals to participate in making decisions about their treatment or health issues. The fourth principle involves encouraging individuals to take responsibility for their health conditions. The fifth principle, the holistic approach principle, is unique and essential to the recovery process. This principle provides that recovery from SMI not only involves addressing the person's symptoms, but also focuses on mind, body, and environment. The sixth principle states that recovery is nonlinear. Individuals are expected to make forward progress toward symptom reduction or remission, but it must be accepted that there will be instances of symptom reemergence or lapses. In this context, management of symptoms may require a process, parallel to that used to manage chronic health problems such as diabetes. There are times that diabetes symptoms flare-up, and other times when symptoms are less acute and interfere less with functioning. The same is true of the process of recovery. During the process of recovery, individuals learn from setbacks or symptom regression, ways to grow and to become independent and stable.

The seventh principle of recovery promotes active engagement in supportive relationships with peers. The eighth principle involves the individual being respected and accepted by self and others. The ninth principle expects that the individual recovery process utilizes existing strengths within the person. The tenth principle highlights the individual becoming more hopeful for the future and believing that he or she can overcome obstacles associated with SMI (American Psychological Association, 2012). Many individuals with SMI have experienced lives that are controlled by their mental health conditions. This results in individuals experiencing a loss of control over significant components of their lives, which leads to hopelessness (Torrey & Wyzik, 2000).

Thus, in order to improve quality of care and to empower individuals with SMI to contribute to society, it is strongly encouraged that recovery principles be implemented in mental health treatment (Hogan, 2003).

Recovery principles and quality of care. Research shows that implementation of recovery principles can improve the quality of care of those suffering from mental illness (Chiu, Ho, Lo, & Yiu, 2010; Salyers & Macy, 2005; Sowers, 2005; Torrey, Rapp, Tosh, McNabb, & Ralph, 2005; Wilrycx, Croon, Van den Broek, & van Nieuwenhuizen, 2015). Torrey and colleagues (2005) investigated elements required to improve services for adults with SMI. The outcome of their investigation indicated that there is a need for a combination of implementation of recovery principles with existing evidence-based practices (Torrey et al., 2005).

Similarly, a review of over 170 studies indicates that there is general agreement among researchers that the implementation of recovery principles can improve quality of care for individuals with SMI (Bonney & Stickley, 2008). Additionally, a longitudinal study

consisting of 624 individuals diagnosed with SMI and 490 staff who worked with these individuals was designed to evaluate effectiveness of recovery transformation. Findings suggested that interventions based on the recovery approach helped to decrease rates of overnight admission, improved individuals' function during their time at the facility, and improved staff skills, such as strategies to build rapport with patients (Malinovsky et al., 2013).

Staff Knowledge of and Attitudes toward Recovery

Understanding the knowledge and attitudes of mental health providers toward recovery principles has increasingly become the focus of research. For instance, in 2006, a tool called the Recovery Knowledge Inventory (RKI) was developed and administered to assess mental health staff knowledge and attitudes about recovery (Bedregal et al., 2006). Participants in this study were randomly selected from nine facilities that provide treatment for individuals with mental health and substance use disorders in the state of Connecticut. The RKI gathers information about roles and responsibilities in recovery, understanding of the nonlinearity process, roles of self-definition and peers in recovery, and expectations of recovery.

The analysis of 144 participants' responses indicated that participants were aware that it is important for individuals in recovery to recreate a new meaning of life and identity that separate them from their mental illnesses. Also, participants of the RKI study appeared to understand that individuals in recovery should have choices and take responsibility for their decisions and treatment. Participants seemed to be mindful of the impact of their roles and attitudes on individuals' recovery; however, they seemed to be less familiar with the expectations of recovery, and they did not appear to be able to describe or recognize the

nonlinear process of recovery. The authors claimed that providing appropriate training and increasing awareness of recovery principles can influence participants' beliefs and attitudes positively (Bedregal et al., 2006).

Similarly, a sample of 153 health care providers in Ireland, including nurses, doctors, social workers, occupational therapists, and psychologists, was used to examine the knowledge of and attitudes toward the concept of recovery in mental health settings. The participants in this study completed an adapted version of the RKI. Findings suggested that these health care providers had positive knowledge of and attitudes toward the implementation of recovery principles in treatment; however, participants appeared to be less familiar with the nonlinear principle and less comfortable supporting healthy risk-taking. The authors claimed that health care facilities that promote recovery principles should focus on instilling hope and encourage therapeutic risk taking (Cleary & Dowling, 2009). Even though knowledge of and attitudes toward recovery principles are increasingly recognized as crucial to quality of psychiatric services, there is little research that has closely examined the relationship between staff knowledge and attitudes of recovery principles among mental health providers to adult psychiatric inpatients.

The concept of knowledge. Knowledge is a complex concept. Some scholars define knowledge as a belief that is true and can be justified (Hunt, 2003). Conversely, other scholars indicate that knowledge is more than beliefs. In a project to analyze knowledge, Ichikawa and Steup (2017) stated that, sometimes, when an individual is very sure about something, it may turn out to be incorrect. The concept of knowledge becomes even more complicated when dividing it to its various forms. Some scholars refer to knowledge as a personal storage area that contains a wide variety of knowledge types. These include

procedural knowledge, factual knowledge, potential factual knowledge, and opinions or beliefs (Boshoff, 2014). Moreover, some scholars view knowledge as a domain that consist of different levels and dimensions.

In 1956, the Bloom's Taxonomy of Learning Domains, including the cognitive domain that includes knowledge, was created by Benjamin Bloom, who is one of the most highly regarded scholars in the study of knowledge. The Taxonomy is a pyramid with ascending levels of knowledge and thinking. In a review of Bloom's Taxonomy, Krathwohl (2002) indicates that the revised Taxonomy includes a knowledge domain that consists of two separate dimensions: the knowledge dimension and the cognitive process dimension.

The first dimension of the knowledge domain of the revised Taxonomy, the knowledge dimension, involves four types of knowledge. Factual knowledge, which is the knowledge of basic elements, includes knowledge of terminology and knowledge of specific details and elements. Conceptual knowledge, which refers to interrelationships between the basic elements, consists of knowledge of classification and categories, knowledge of principles and energizations, and knowledge of theories, models, and structures. Procedural knowledge, which involves how to do something or use skills, includes knowledge of subject-specific skills and algorithms, knowledge of subject-specific techniques and methods, and knowledge of criteria for determining when to use appropriate procedures. Metacognitive knowledge, which is knowledge of cognition in general that includes the understanding of one's own cognition, is composed of strategic knowledge, knowledge about cognitive tasks including appropriate contextual and conditional knowledge, and self-knowledge (Krathwohl, 2002).

Similarly, the other dimension of the knowledge domain of the revised Taxonomy, the cognitive process dimension, consists of five levels. Therefore, the cognitive process dimension of the revised Taxonomy begins on the bottom level with "Remember," followed by "Understand", "Apply," "Analyze," "Evaluate," and "Create" (Krathwohl, 2002).

The role of knowledge. Research indicates that knowledge can be used as a power to regulate and control life. In an effort to understand human knowledge and its function Schoen (1945, p. x) suggests that it is important for individuals to understand what they know and how well they understand it. The author indicates that if an individual is faced with a situation about which the individual has no knowledge, the individual is powerless; however, if an individual has a little knowledge, some power can be managed (Schoen, 1945). Therefore, under this model, awareness of health conditions and well-being can increase the likelihood of making healthy behaviors.

Okobia, Bunker, Okonofua, and Osime (2006) conducted a cross-sectional study of 189 women with family history of breast cancer to examine the relationship between knowledge and practices of breast cancer prevention. Findings suggested that awareness of early signs of cancer can increase screening behaviors. Therefore, knowledge is beneficial in maintaining healthy behaviors.

It is possible, then, that psychiatric professionals in inpatient settings who serve adults with SMI also have knowledge in their field, of varying levels and dimensions. Therefore, when attempting to increase the efficacy of treatment for individuals with SMI and substance use disorders, it may be necessary to assess staff knowledge of recovery principles. There are many benefits to assessing staff knowledge of recovery principles. Assessing knowledge helps to determine the levels of need for additional training or additional staff. Also, it helps

to determine whether knowledge contributes to other outcomes, such as staff awareness of competence when providing care (Sullivan & Mullan, 2017). Research on the relationship between knowledge of recovery principles and outcomes appears to indicate that staff knowledge of recovery principles may be associated with better outcomes, including improved staff attitudes toward recovery principles.

Assessing knowledge with the RKI. The objective of this dissertation was to determine whether there is a relationship between knowledge of and attitudes toward recovery principles. Even though the RKI does not specifically define what type of knowledge is measured, it is clear that the RKI reflects some types of knowledge listed in the revised version of the Bloom's Taxonomy. It addresses the knowledge dimension (e.g., procedural knowledge, conceptual knowledge, metacognitive knowledge) more so than the process dimension. For instance, one of the RKI's statements, "Recovery in serious mental illness/substance abuse is achieved by following a prescribed set of procedures," reflects the general idea of procedural knowledge, which is the process of knowing how to perform something that includes methods of analysis and evaluation, and criteria for utilizing appropriate skills, strategies, and procedures.

Conceptual knowledge, another type of knowledge within the Taxonomy, is reflected in the RKI's statement, "All professionals should encourage clients to take risks in the pursuit of recovery." Conceptual knowledge refers to the interrelationships between the basic elements of knowledge. The basic elements of knowledge are the major components of another dimension of knowledge, factual knowledge, which consists of information that helps individuals to be familiar with a given situation or to solve problems related to it. Therefore, the relationships between the basic elements give the elements the power to

function cooperatively to make sense of the obtained information. In this case, encouraging clients to take risks in the pursuit of recovery is more related to the third component of conceptual knowledge, which is the knowledge of principles and generalizations.

Similarly, the statement, "It is often harmful to have too high of expectations for clients" is associated with the metacognitive knowledge, which is the awareness and understanding of both general and personal cognitions. In this case, examining professionals' expectations for clients is a type of self-assessment that relates to the third component of metacognitive knowledge, self-knowledge.

The concept of attitude. Attitude is among the most important concepts in the human sciences. Efforts to understand attitudes, particularly in social psychology, has increased since 1928, when scholars declared that it is possible to measure them (Gawronski, 2007). In fact, attitude is currently at the center of productive theory and research in the social and behavioral sciences (Ajzen, 2001; Tesser, 1990; Tesser & Shaffer, 1990). Scholars continue to describe attitude as having a multidimensional nature (Ajzen, 2001), and the concept of attitude refers generally to an evaluative process of a psychological object (Ajzen, 2001; Gawronski, 2007).

The evaluative process used in measuring attitudes involves the assessment of different reactions to the same object. In an attempt to understand the nature and operation of attitudes, Ajzen (2001) stated that the evaluation process can evoke responses to a single object that are good or bad, harmful or beneficial, pleasant or unpleasant, and likable or dislikable. Individuals differ in their tendencies to engage in the evaluative process. For some people, evaluation reactions can occur without awareness or intent to engage in them.

This vision of the formulation of attitudes was supported by the expectancy-value model. The model provides the most popular conceptualization of attitude. According to Ajzen (2001), once an individual develops beliefs and affect about an object, this individual formulates attitudes about this object automatically. Thus, there is no need for engagement in any cognitive process to develop attitudes (Ajzen, 2001).

There are differences in attitudes among various individuals toward an object, and research has shown that a single individual can have different attitudes toward the same object at the same time and not realize it (Yiqun, Wei, & Yao, 2014). These two different attitudes within a single individual are referred to as explicit and implicit attitudes. The explicit attitude refers to the conscious and intentional aspects of an attitude, and the implicit attitude refers to the automatic, unconscious, and unidentified aspects of an attitude (De Houwer, 2006). It has been shown that implicit attitudes originate first and then explicit attitudes develop. These two types of attitudes may interact cooperatively but do not replace one another (Yiqun et al., 2014).

The role of attitude. It is recognized that attitudes are usually associated with conceptualizing and predicting behavior (Ajzen, 2001; Glasman & Albarracin, 2006; Kroesen, Handy & Chorus, 2017). In an effort to investigate the role of implicit and explicit attitudes when coping and adjusting to university life, Yiqun, Wei, and Yao (2014) surveyed a sample of 141 college students who completed differing questionnaires that measured coping, adjusting, and adapting to university life, as well as attitudes. Results of this study suggested that implicit attitudes can be a predictor of adaptation to university life. Additionally, this study indicated that both implicit and explicit attitudes may operate as mediators during the coping process (Yiqun et al., 2014).

Similarly, Glasman and Albarracin (2006) conducted a meta-analysis that consisted of 4,598 participants to explore the relationship between attitudes and behavior. The findings revealed that there is significant relationship between them. Also revealed was that attitudes are associated with future behaviors more strongly when the attitudes were retrieved or revoked easily. Additionally, the association between attitudes and behavior was determined to be strong when individuals had direct experience with the evaluated object and recoded their evaluations frequently. Moreover, the findings specified that the relationship between attitudes and behavior become strongest when attitudes or evaluations of a psychological object were confident and were developed on information that is relevant to the behavior and induced by a thinking process related to one-sided information, rather than two-sided, concerning the evaluated object.

Attitudes play a significant role in decision making. In an effort to explore the role of attitudes in memory-based decision making, Sanbonmatsu and Fazio (1990) found that individuals usually have a large knowledge of attributes of decision options. This knowledge is available in memory to allow individuals to make attentive and careful choices. Nevertheless, the authors claim that individuals generally do not depend on such attributed knowledge but, instead, use other strategies, depending on attitudes. Specifically, the authors proposed that when an individual's motivation to make a correct decision or opportunity to utilize the available attributed knowledge goes down, the chance of that individual using attitudes to make a decision goes up. The authors concluded that individuals rely on the attitudes to make their decisions because this strategy is relatively fast and effortless.

In addition, research indicates that staff attitudes may influence quality of care (Conning & Rowland, 1992; Friedman et al., 2006; Garety & Morris, 1984; Rooney, 2010),

as well as adaption of recovery principles and practices (Hungerford, Dowling, & Doyle, 2015). Thus, understanding the relationship between knowledge and attitudes is vitally important for the mental health professional working directly with patients. The professional must develop an awareness of the possibility that when making decisions about the patient's treatment, he or she may be unknowingly relying upon either an explicit or implicit attitude toward the patient or the patient's condition, while believing the decision was made based on a cognitive knowledge of the principles of recovery. Because of this possibility, the determination of a professional's knowledge and attitudes toward recovery principles is essential, so the professional can become cognizant of this and can avoid the possibility of confusing attitude with knowledge when treating patients.

Assessing attitude with the RKI and RAQ. Measuring attitudes is a complicated process. Explicit attitudes are usually measured by self-reporting, but implicit attitudes are often measured by external evaluations. Although self-reporting may be inefficient to determine an individual's attitudes, properly designed questionnaires may be capable of measuring both external and internal attitudes toward an object. In fact, the questionnaires, the Recovery Knowledge Inventory (RKI) and the Recovery Attitudes Questionnaire (RAQ) were developed to accomplish that. When completing these questionnaires, the individual may employ self-reporting or may reveal his or her implicit attitudes without awareness.

Given the dual attitude concept, measuring attitudes becomes much more challenging. It has been noted that attitude has a multidimensional nature and responses of an individual could be contradictory toward the same object. Therefore, this possible contradiction must be factored into any analysis of attitude. Although this is beyond the scope of this current

research, this presents a challenge for future research into developing appropriate protocols for measuring dual attitudes.

Theoretical framework of the relationship between the RKI and RAQ. Despite an overlap between the concepts of knowledge and attitudes, the RKI and RAQ been used in this dissertation because of their capability of measuring both knowledge of and attitudes toward recovery principles.

The concepts of knowledge and attitudes are based upon certain realities. First, in order to have an opinion on something, a person must have some knowledge of the subject. For example, imagine a person from China recently arrived in the United States and was asked if the New York Jets would be in the Super Bowl this year, and was asked to answer this question a scale similar to those used by these questionnaires. Hypothetically, this person has no knowledge concerning American football or the Super Bowl, and would be unable to either agree or disagree with the statement. He or she would likely respond "neither agree nor disagree" to this question. This outcome would also apply when responding to items on these scales with no knowledge of recovery principles.

Second, a person answering the questionnaire who answers a question specifically about recovery principles indicates some knowledge of recovery principles sufficient to render an opinion and will make a choice in the range of agreement or the range of disagreement. With this answer, it will indicate both a knowledge of the principles of recovery and attitudes of the subject to the principles. Third, there are questions posed in this questionnaire that are unrelated to the recovery principles but assess attitudes toward the certain practices in the mental health field.

Fourth, based upon the factors discussed above, the participant can be placed into the following categories according to their responses: (a) the participant has knowledge of recovery principles and has a negative attitude toward them, (b) the participant has knowledge of recovery principles and has a positive attitude toward them, (c) the participant has no knowledge of the recovery principles but is in favor of elements that are a part of recovery principles, and (d) the participant has no knowledge of recovery principles but has a negative attitude toward elements that are a part of recovery principles.

Regarding scoring of the responses to the questionnaire, a person with no knowledge will choose a response in the middle of the scale, meaning that he or she neither agrees nor disagrees with the statement. A person who has knowledge related to the statement of recovery principles will choose a response in the range of either agreement or disagreement. Thus, using the scores, a person can be placed in one of the above four categories, which is the methodology of assessing.

It is assumed that if results from the RKI indicate that most of the sample have high scores, it can be surmised that most of participants have high knowledge and positive attitudes toward recovery principles. Similarly, if results from the RAQ indicate that most of the sample have high scores, then it will be possible to assume that most of the participants have high levels of positive attitudes toward recovery principles. If scores on both scales, RKI and RAQ, are high, it can be concluded that knowledge did not hinder the level of attitudes. This means that knowledge and attitudes are positively correlated. This study did not consider the nature of the knowledge; rather, for the purposes of this study, knowledge referred to either participants having or not having awareness of recovery principles.

Additionally, this study was not concerned about the accuracy of the knowledge but more focused whether participants had perceived knowledge.

Chapter 3: Research Questions and Hypotheses

Given what has been reported in this literature review, there is limited research that has carefully examined the relationship between knowledge of and attitudes toward recovery principles among mental health professionals who work with adult psychiatric inpatients. Therefore, the following two research questions and three hypotheses were formulated and guided this investigation.

Research Questions

Research question 1. Is there a relationship between psychiatric hospital employees' knowledge of the principles about recovery from SMI, as measured by RKI, and their attitudes about recovery, as measured by RAQ-7?

Research question 2. Will the Cronbach's alpha coefficient of the RAQ-7 be higher than its original coefficient when administered to more homogenous groups (using only responses of mental health professionals who work with adult psychiatric inpatients)?

Hypotheses

Hypothesis 1. There will be a significant positive correlation between scores on the RKI and the RAQ-7.

Hypothesis 2. Factor analysis of the RAQ-7 will confirm the original factor structure of the scale.

Hypothesis 3. The RAQ-7 will show acceptable internal consistency, as measured by Cronbach's alpha of at least .70.

Rationale for the Hypotheses

The literature has shown that implementation of recovery principles may improve quality of care (Chiu et al., 2010; Hogan, 2003; Sowers, 2005; Torrey et al., 2005; Wilrycx et

al., 2015). Also, teaching recovery principles to staff has been shown to be associated with increased knowledge of recovery (Feeney, Jordan, & McCarron, 2013). Yet, although teaching staff about recovery principles of serious mental illness has been shown to increase knowledge of recovery, it is unclear how knowledge of recovery principles relates to attitudes toward recovery among mental health professionals who work with adult psychiatric inpatients. Therefore, based on current research, it is hypothesized that psychiatric employees' knowledge of the principles about recovery from SMI will positively predict attitudes about recovery.

Chapter 4: Method

Study Overview

This correlational study used an online survey to investigate whether there is a relationship between psychiatric hospital employees' *knowledge* of the principles about recovery from SMI and *attitudes* about recovery, both of which may influence patient outcomes. The study used assessments of staff knowledge of and attitudes toward recovery principles. Data were collected anonymously by means of an online internet platform. Staff knowledge of and attitudes toward recovery principles were evaluated using the RKI and RAQ-7, respectively.

Participants

The study sample included mental health staff members at inpatient psychiatric hospitals that serve adults over the age of 18 years. Staff included psychiatrics, nurses, social workers, therapists, and mental health technicians who have a master's degree, doctoral degree in psychology, or another advanced degree in a mental health-related field. A total of 300 staff members were expected to be recruited. The justification for the sample size was based on a power analysis, with the goal of obtaining at least 100 completed surveys, which was based on an estimated return rate of one out of every three surveys started being completed.

Inclusion criteria. Individuals with the following characteristics were included in the study: staff members who were currently working in the adult units at inpatient psychiatric hospital settings, whose roles included psychiatrists, nurses, social workers, therapists, or mental health technicians during a span of 3 months from June 27, 2017 through September 27, 2017.

Exclusion criteria. Individuals with the following characteristics were excluded from the study: staff members who did not complete the RAQ-7 and the RKI, or who did not identify working as psychiatrists, nurses, social workers, therapists, or mental health technicians in an inpatient psychiatric facility with adults over the age of 18 years.

Measures

Demographic questionnaire. A brief demographic questionnaire was collected to gather the following information: age, gender, race, ethnicity, years of education, job title, number of years working at the facility, number of years of experience in an inpatient psychiatric setting, and number of trainings attended focusing on recovery principles (See Appendix C).

Recovery Knowledge Inventory. As shown in Appendix A, the RKI is a self-report measure that consists of 20 items used to assess mental health staff knowledge and attitudes about recovery (Bedregal et al., 2006). An example of an item on the RKI is "Recovery in serious mental illness/substance abuse is achieved by following a prescribed set of procedures." Responses on this questionnaire are rated on a 5-point Likert scale (1 = "strongly disagree," 2 = "disagree," 3 = "neutral," 4 = "agree," 5 = "strongly agree"). Higher scores indicate better understanding of recovery (Meehan & Glover, 2009). A principal component analysis on the 20 items of the RKI produced four dimensions with a variance of 50%. The four dimensions are labeled *roles and responsibilities in recovery*, which explains 17% of the variance; *non-linearity of the recovery process*, which explains 13% of the variance; *roles of self-definition and peers in recovery*, which explains 12% of the variance; and *expectations regarding recovery*, which explains 8% of the variance. The estimates for

the reliability analysis (Cronbach's alphas) for the four dimensions were .81, .70, .63, and .47, respectively (Bedregal et al., 2006).

Recovery Attitudes Questionnaire-7. The RAQ is a self-report measure used to assess attitudes toward recovery from psychiatric disorders (Borkin et al., 2000). The original version of this scale consists of 21 items; however, the number was reduced to 7 items for the version used in the present study (See Appendix B). The 7 items loaded on 2 factors, consisting of "Recovery is Possible and Needs Faith" and "Recovery is Difficult and Differs Among People." An example of an item on the RAQ-7 is "Recovering from mental illness is possible no matter what you think may cause it." Responses on this questionnaire are rated on a 5-point Likert scale (1 = "strongly disagree," 2 = "disagree", 3 = "neutral," 4 = "agree," and 5 = "strongly agree"), with higher scores indicating a higher positive attitude about the notion of recovery.

The original RAQ, which consists of 21 items, has acceptable internal consistency as indicated by an alpha coefficient of .84; however, after reducing the questionnaire to 7 items, the scale produced a lower, though still acceptable, alpha coefficient of .70. The authors of this scale proposed that the reason for this lowered coefficient is the reduction of the number of the scale's items. Nevertheless, the authors suggest that the internal consistency between the RAQ-7 items may increase when it is administered to new samples with more homogenous groups (Borkin et al., 2000).

Procedure

Before conducting the study, the researcher obtained approval from the Philadelphia College of Osteopathic Medicine's (PCOM) institutional review board (IRB). The researcher also contacted the authors of the surveys in order to obtain permission to use their

instruments for this study. Next, the researcher converted the RKI, the RAQ-7, and the demographic questionnaire into an electronic platform, SurveyMonkey. The researcher then collected potential mental health practitioners' e-mails from a targeted search of national inpatient psychiatric hospital facilities, derived from the Association of Postdoctoral and Psychology Internship Centers (APPIC) website, as well as other national behavioral health companies that manage and operate inpatient psychiatric hospital facilities.

An e-mail was sent to programs' chief psychologists or internship directors, inviting them to forward it to all mental health staff members who worked on adult inpatient units in their facilities. The e-mail invited these staff members to participate in the survey. Included in the e-mail was an introduction and statement regarding the purpose of the study, and a link to the SurveyMonkey questionnaire.

Potential participants were asked to agree or decline to participate in the survey after reading the introduction and statement of purpose. If potential participants agreed to participate in the survey, they were asked to click on a link that directed them to a new page that initiated the SurveyMonkey questionnaire, which consisted of the RKI, the RAQ-7, and demographic questionnaire.

A second e-mail was sent to potential participant referral sources 4 weeks later as a reminder about the invitation to participate in the survey. The invitation to participate remained open for a period of 3 months. The data from each individual survey were compiled into a database through the Survey Monkey program and downloaded into the Statistical Package for the Social Sciences (SPSS) program. Finally, the researcher performed statistical analyses of all collected data.

Chapter 5: Results

Demographic Analyses

Frequency distributions are presented for review on selected variables. The demographic variables included age, gender, race/ethnicity, years of education, job title, years of employment at current facility, years employed in an inpatient psychiatric facility, and number of trainings attended on the topic of recovery.

Age. The variable of age was divided into 10 categories ranging from 21 to 25 through older than 65. As shown in Table 1, the age ranges clustered into three categories: 26 to 30 (20.8%), 31 to 35 (19.4%), and 36-40 (19.4%).

Table 1

Age Ranges

Age	*N*	%
21-25	1	1.4
26-30	15	20.8
31-35	14	19.4
36-40	14	19.4
41-45	5	6.9
46-50	5	6.9
51-55	6	8.3
56-60	3	4.2
61-65	2	2.8
>65	5	6.9

Gender. Approximately three fourths of the sample consisted of females. Refer to Table 2 for gender demographics.

Table 2

Gender

Gender	*N*	%
Male	18	25.7
Female	52	74.3

Race/Ethnicity. As shown in Table 3, 86.1% of participants were Caucasian. The next most common group was Asian, but this accounted for less than 5% of the sample. The remainder were either of mixed descent, African American, Hispanic, or other.

Table 3

Race/Ethnicity

Race/Ethnicity	*N*	%
Caucasian/White	62	86.1
Asian	3	4.2
Mixed	2	2.8
African-American	1	1.4
Hispanic/Lantino/a	1	1.4
Other	1	1.4

Educational level. Slightly over one half of the sample had earned a doctorate. Master's trained individual accounted for nearly one third of the sample. The remainder had earned bachelor's degrees (See Table 4).

Table 4

Educational Level

Educational level	*N*	%
Master's degree (M.A., M.S., M.Ed.)	21	29.2
Doctorate (Ph.D., Psy.D., Ed.D., other)	34	47.2
Other	11	15.3

Years of employment in current job. In Table 5, the number of years participants worked at their current facilities is described. Approximately 70% of the sample reported having worked in their current jobs for 5 years or less, whereas approximately 9% reported having worked in their current settings for 10 or more years.

Table 5

Years of Employment in Current Job

Years of Employment	*N*	%
Less than 1 year	15	21.4
1-2 years	13	18.6
2-3 years	6	8.6
3-4 years	9	12.9
4-5 years	5	7.1
5-6 years	3	4.3
6-7 years	3	4.3
7-8 years	3	4.3
8-9 years	7	10.0
10-15 years	4	5.7
15-20 years	1	1.4
> 20 years	1	1.4

Years of employment in an inpatient psychiatric facility. As depicted in Table 6, more than half of the sample reported having worked in the inpatient setting for 5 years or less. About 22% of the group identified having been in the field for 10 or more years.

Table 6

Years of Employment in an Inpatient Psychiatric Facility

Years of Employment	*N*	%
Less than 1 year	5	7.1
1-2 years	16	22.9
2-3 years	6	8.6
3-4 years	9	12.9
4-5 years	6	8.6
5-6 years	2	2.9
6-7 years	4	5.7
7-8 years	3	4.3
8-9 years	1	1.4
9-10 years	3	4.3
10-15 years	10	14.3
15-20 years	2	2.9
> 20 years	3	4.3

Number of recovery oriented trainings attended in past 5 years. About one fourth of the sample participants never attended a training on recovery (see Table 7). The modal category (44.3%) attended between one and three programs, with approximately one fifth of the sample having attended between four to six trainings.

Table 7

Number of Recovery Oriented Trainings Attended in Past 5 Years

Number of Trainings	*N*	%
0	17	24.3
1-3	31	44.3
4-6	15	21.4
7-9	3	4.3
>10	4	5.7

Statistical Analyses

Hypothesis 1. Hypothesis 1 stated that there would be a positive correlation between scores on the RKI and the RAQ-7. A Pearson product moment coefficient correlation was calculated between scores on the RKI and RAQ-7. This analysis revealed that there was no relationship between these two measures ($r(72) = .112$, $p = .175$). Therefore, this hypothesis was not confirmed. This finding is illustrated in Table 8.

Table 8

Correlation between Recovery Knowledge Inventory and Recovery Attitudes Questionnaire-7

RAQ-7 total scores	*r*	N	*p*
RKI total scores	.112	72	.175

Hypothesis 2. The factor structure of the RAQ-7 was tested through a principal components varimax rotated analysis with eigen values set to 1 according to Kaiser's criterion, and the two extracted factors accounted for 47.48% of the variance. The obtained KMO value, which ranges between 0 and 1, equaled .67, which is considered mediocre, suggesting that the data are somewhat suited for factor analysis. A value of .60 is a minimum. Bartlett's test of sphericity provides an approximate chi square value of 61.82 ($df = 21$, $p = .000$). This value should be significant and rejected the null hypothesis.

Based on a minimum factor loading of .55, two factors emerged (See Table 9). Three items loaded on Factor 1 and two items loaded on Factor 2. One item loaded on both factors and was eliminated, leaving two items on Factor 1. Factor 3 consisted of one item and was not interpreted, though it related to stigma. Factor 1 appears to be a measure of the *nonlinear process of recovery*. Those who score high on this factor agree that the process of recovery is nonlinear in nature, meaning that it can include setbacks as well as periods of time when non-symptomatic. Factor 2 is a measure of *hope*, such that those scoring high on this dimension agree that there is hope for the possibility of recovery. Factor 3 was not interpretable, as it only contained a single item; however, this item loaded extremely highly and appeared to be an indication of *stigma*. The factors and their respective items differed

from the original factor analysis of the RAQ-7, which described Factor 1 as *recovery is possible and needs faith*, instead consisting of the following: (2.) *To recover requires faith*, (4.) *Recovery can occur even if symptoms of mental illness are present*, (5.) *Recovering from mental illness is possible no matter what you think may cause it*, and (6.) *All people with serious mental illness can strive for recovery*. Factor 2 in the original RAQ-7 was described *as recovery is difficult and differs among people*, and consisted of three items: (1.) *People in recovery sometimes have setbacks*, (3.) *Stigma associated with mental illness can slow down the recovery process*, and (7.) *People differ in the way they recover from a mental illness*. Factor loadings on the RAQ-7 can be found in Table 9.

Table 9

Factor Loadings for Recovery Attitudes Questionnaire-7 (RAQ-7)

Factor/Items		Loading
Factor 1: *Nonlinear Process of Recovery*		
Item	7. People differ in the way they recover from a mental illness.	.823
	4. Recovery can occur even if symptoms of mental illness are present.	.718
Factor 2: *Hope*		
Item	6. All people with serious mental illnesses can strive for recovery.	.686
	5. Recovering from mental illness is possible no matter what you think may cause it.	.627

Hypothesis 3. This hypothesis predicted that the internal consistency reliability of the RAQ-7 would be at least .70. The obtained value was .43 and, therefore, this hypothesis was not supported. Essentially, Cronbach's alpha is an overall measure of the intercorrelation of the items and measures the homogeneity of the content domain. The obtained value was well below the minimum acceptable value and did not support the homogeneity of this content domain. Only Factor 1 (*nonlinear process of recovery*) showed acceptable internal reliability (See Table 10).

Table 10

Cronbach's Alpha on Recovery Attidue Questionnaire-7

Scale/Factor	Cronbach's Alpha
Total Scale (4 factors)	.43
Factor 1: *Nonlinear Process of Recovery* (2 items)	.70
Factor 2: *Hope (2 items)*	.46

Number of trainings. An analysis of the number of recovery trainings attended by the participants in the past 5 years and the effects on recovery knowledge and recovery attitudes yielded no significant differences, as shown in Table 11.

Table 11

Analysis by Approximate Number of Trainings Attended for Past 5 Years

		Sum of Squares	df	Mean Square	F	Sig.
RKI TotalScore	Between Groups	265.88	4	66.47	.883	.479
	Within Groups	4893.20	65	75.28		
RAQ-7 TotalScore	Between Groups	15.09	4	3.77	.562	.691
	Within Groups	436.00	65			

Analysis by role. A comparison of psychologists, other mental health professionals (non-psychologists), and trainees (practicum or extern/intern/resident/fellow) was made using two one-way ANOVAs on RKI and RAQ-7. The means of the groups are shown in Table 12. On Levene's Test, homogeneity of variance was non-significant (See Table 13). The ANOVA source table using role of provider as the independent variable and RKI and RAQ-7 scores as dependent variable is found on Table 14.

Table 12

Means by Role

	N	Mean	Standard Deviation	Standard Error
RKI Total Score				
Psychologists	35	74.31	9.31	1.57
Other MH Professionals	25	73.92	7.98	1.60
Trainees	9	73.56	3.21	3.21
RAQ-7 Total Score				
Psychologists	35	29.80	.44	.44
Other MH Professionals	25	30.68	.48	.48
Trainees	9	30.11	.96	.96

Table 13

Levene's Test for Homogeneity of Variances

	Levene's Statistic	df1	df2	Sig.
RKI TotalScore	.531	2	66	.591
RAQ-7 TotalScore	.274	2	66	761

Table 14

ANOVA Source Table for Comparing Role of Provider as Independent Variable with Recovery Knowledge Inventory and Recovery Attitudes Questionnaire-7 Scores as Dependent Variables

	Sum of Squares	df	Mean Square	F	Sig.
RKI Total Score					
Between Groups	5.033	2	2.516	.032	.969
Within Groups	5217.605	66	79.055	1.60	
Total	5222.638	68			
RAQ-7 Total Score					
Between Groups	11.317	2	5.659	.869	.424
Within Groups	429.929	66	6.514		
Total	441.246	68			

A subsequent analysis using an independent groups t-test compared psychologists and psychology trainees (students, interns, fellows) versus others on each dependent variable. Once again, Levene's statistics were not significant. The results of the independent groups t-test are included in Table 15. There was no significant difference between the groups on either measure, meaning that the mean scores on the RKI and RAQ-7 did not differ significantly between these two groups.

Table 15

Independent Groups t-test Comparing Psychologists and Psychology Trainees versus Others

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
RKITotalScore	1.019	.316	.108	67	.914	.23909	2.21105
			.113	56.404	.911	.23909	2.12103
RAQTotalScore	.518	.474	-1.286	67	.203	-.81636	63495
			-1.317	53.730	.193	-.81636	.61970

Chapter 6: Discussion

Summary and Implications of Findings

This study was designed to explore the relationship between staff knowledge of and attitudes toward recovery principles for mental health professionals who work with patients in inpatient psychiatric settings who suffer from SMI. This study was important because it was hypothesized that if data showed that staff knowledge of and attitudes of recovery are related, health care providers and professionals may feel more obligated to develop more recovery-oriented treatment programs. More specifically, since research indicates that either long or short periods of time of training can increase staff understanding of recovery (Maheen & Glover, 2009), psychiatric hospital staff managers might feel encouraged to ensure that their employees understand and value recovery principles when working with individuals with SMI.

Hypothesis 1 stated that there would be a positive correlation between scores on the RKI and RAQ-7; however, analysis revealed that there was no relationship between these two measures. This was somewhat surprising, since it would appear to be logical that with increased knowledge and awareness of the principles of recovery, mental health staff would have greater attitudes toward recovery, especially in terms of the possibility of recovering from mental illness, reduction in stigma, and differing in the ways that each individual recovers from a mental illness. One of the difficulties in overcoming negative attitudes and stereotypes—especially stigma—toward persons with SMI is that there are still many biases that people hold, based on lack of knowledge, labeling, and general lack of information. Therefore, it was curious that there was no significant relationship between results on these two scales. Notably, the fact that there was a restricted sample may have influenced these

results, and so it may be difficult to draw generalizations from the lack of significance. In future studies comparing these two scales, it is suggested that a similar correlation be recalculated with greater numbers of participants in order to better test this hypothesis. It is also possible that recovery knowledge and recovery attitudes are somewhat independent, and that strong attitudes of acceptance of those who suffer with SMI and belief in human potential may be independent of actual knowledge about how people recover from SMI and/or substance abuse problems. In either case, those in leadership positions in inpatient psychiatric settings may consider engaging in regular staff trainings in recovery knowledge and attitudes, and reinforce recovery knowledge and attitudes continuously in informal discussions, clinical supervision, and regular case conferences in which patients' progress is discussed.

Hypothesis 2 examined the factor structure of the RAQ-7. Three items on the questionnaire loaded on Factor 1, *nonlinear process of recovery*. This refers to the attitude that people do not all follow the same pathway toward recovery and, in fact, may often experience setbacks throughout their recovery journeys. This attitude also encompasses the belief that recovery can occur even while people may be symptomatic—much like people who suffer from other chronic medical diseases, such as diabetes—experiencing symptoms while still being able to lead a meaningful life and striving for improved health. The second factor appeared to be a measure of *hope*. Items that loaded on this factor included the belief that recovery can occur, and that all people with SMI can strive for recovery, regardless of the etiology of their illnesses.

Hypothesis 3 predicted that the internal consistency reliability of the RAQ-7 would be at least .70. This hypothesis was not supported. The Cronbach's alpha, a measure of

intercorrelation of the items and homogeneity of the content domain, was well below the minimum value and, therefore, did not support homogeneity of the content domain.

One of the results that was especially interesting was that a comparison across groups of psychologists, interns/trainees/fellows, and other mental health providers revealed no significant differences between groups on either the RKI or the RAQ-7 as a result of participation in recovery trainings. Since it is difficult to know to what degree mental health providers and trainees have been exposed to recovery learning, and whether that training was focused on mental health recovery, recovery from substance misuse/abuse, or both, it is challenging to draw conclusions from this result. Nevertheless, it might be interesting to expose these groups to structured didactic trainings that is specifically focused on recovery from mental health, and perform a pretest and posttest assessment of their recovery knowledge and recovery attitudes following training.

The American Psychological Association's Recovery Advisory Committee, under the auspices of SAMHSA, published a recovery training program with a series of modules designed to train psychologists and mental health providers in August 2014 entitled *Recovery to Practice Initiative Curriculum: Reframing Psychology for the Emerging Health Care Environment* (American Psychological Association & Jansen, 2014). The curriculum consists of 15 modules: Introduction to Recovery-Based Psychological Practice, The Role of Psychologists and Health Care Reform, Assessment, Partnership and Engagement, Person-Centered Planning, Health Disparities, Interventions-I: Guiding Principles and Integrated Framework, Interventions-II: Evidence-Based Practices, Interventions-III: Promising or Emerging Practices and Supporting Services, Issues in Forensic Settings, Interventions in Forensic Settings, Community Inclusion, Peer-Delivered Services, Systems Transformation,

and Scientific Foundations. The goals of this curriculum were to train psychologists to end discrimination and pessimism in diagnosis, appropriately provide services that have been demonstrated to be effective in helping people to recover their full potentials, support self-determination in treatment choices, ensure community and social inclusion, adhere to the fundamentals of consumer and family-driven interventions, and use recovery-oriented outcome measures (American Psychological Association & Jansen, 2014). If knowledge shapes and drives the delivery of service and the attitudes of those who deliver them, it would be interesting to see whether exposure to and participation in a standardized training program like this would help to advance providers' knowledge and attitudes to be even more recovery-friendly and recovery-informed.

Study Limitations

Since the sample was restricted to those who work with people with SMI in inpatient hospital settings, the sample population did not account for all mental health professionals who interact with patients in other types of treatment settings, such as standard individual outpatient treatment, intensive outpatient programs, and rehabilitation centers, among other settings. Another limitation of the study speaks to the reliability of the RAQ-7. The RAQ-7 is a brief form of the original 21-item RAQ, and after reducing the questionnaire to 7 items, the scale reported a lower, though still acceptable, alpha coefficient of .70, compared to the full length 21-item version of the scale, which reported a coefficient alpha of .84. More research with the short form of the RAQ is recommended to further assess the psychometric properties of this measure.

Generalization of findings of this study would have been more reliable by using larger sample. If the sample size was larger, it would have been easier to determine whether

there was a significant relationship between the high recovery knowledge and high recovery attitudes group, and low recovery knowledge group and low attitudes group. This study was underpowered, since the study only yielded 72 valid participants with the data collection time frame of 3 months. Therefore, the current results must be interpreted with extreme caution. It was estimated that the researcher would need to obtain approximately 300 participants in the study to get about 100 valid responses, which is what was needed for 80% power at the .05 level for a medium effect size using correlational analysis. Also, the lack of prior studies on the relationship between staff knowledge of and attitudes toward recovery principles among mental health professionals who work with adult psychiatric inpatients made it difficult to lay a foundation for understanding the research problem. Thus, more research in this area is required.

Future Directions

It hoped that future research in this area will delve into level of knowledge by using a separate questionnaire to determine the level of knowledge that providers have about specific components of recovery, including freedom of choice and person-centered care, stages of readiness to engage in change, and the role of relapse in recovery (non-linearity).

There are several directions that this research can be applied in the future to improve and enhance the use of recovery principles. First, more research with the RAQ-7 is needed to help to determine whether it is a useful measure of recovery attitudes with mental health professionals who work in both inpatient and outpatient mental health settings. Second, the RAQ-7 can be used in a wider variety of professional mental health settings beyond those used in this research. Third, it might be useful to develop a measure to assess what current philosophy, if any, is being employed in various treatment settings and evaluate attitudes of

professional mental health workers with the RAQ-7 in in those settings in order to determine whether there is any relationship between personal and milieu treatment philosophy and staff attitudes. It might also be useful to develop measures that can determine the effectiveness of training programs in use for enhancing treatment of mental health patients. This can be used to help determine what is necessary to implement recovery principles effectively.

It would be interesting to determine whether staff knowledge of recovery and attitudes about recovery are related to patient satisfaction outcomes. Research has indicated that there is a positive relationship between quality of care and patient satisfaction (Alazri & Neal, 2003; Cleary & McNeil, 1988; Hogan, Hershey, & Ritchey, 2006). In fact, patient satisfaction can be used as a tool to measure the quality of care (Barker, 1999; Olusina, Ohaeri, & Olatawura, 2002; Shipley, Hilborn, Hansell, Tyrer, & Tyrer, 2000). Recovery principles have also been shown to have a positive relationship with patient satisfaction (Hogan et al., 2006; Wilson, 2013). Teaching recovery principles to staff has been shown to be associated with increased knowledge of recovery and positive staff attitudes (Feeney et al., 2013). Yet, although staff characteristics have been shown to influence patient satisfaction (Cleary & McNeil, 1988; Sahin & Tatar, 2006), it is unclear how staff attitudes toward recovery principles relate to patient satisfaction. Based on current research, it could be hypothesized that staff knowledge of and attitudes toward recovery principles would predict patient discharge satisfaction in an inpatient psychiatric setting. Consequently, it might be interesting to determine whether staff who have high recovery knowledge and recovery attitudes facilitate more positive patient satisfaction outcomes than those staff who identify low recovery knowledge and recovery attitudes.

Finally, given that many people hold competing attitudes simultaneously because the construct of attitude has a multidimensional nature, responses of any individual could conceivably be contradictory toward the same object. This possible contradiction must be factored into any analysis of attitude. Therefore, it could be helpful to develop a more sensitive measurement of recovery attitudes with items designed to increase internal reliability, including items that attempt to tap explicit and implicit attitudes.

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Appendix A

Recovery Knowledge Inventory

Please read each of the following statements and, using the scale below, circle the rating that most closely matches your opinion:

	Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The concept of recovery is equally relevant to all phases of treatment.	1	2	3	4	5
2	People receiving psychiatric/substance abuse treatment are unlikely to be able to decide their own treatment and rehabilitation goals.	1	2	3	4	5
3	All professionals should encourage clients to take risks in the pursuit of recovery.	1	2	3	4	5
4	Symptom management is the first step towards recovery from mental illness/substance abuse.	1	2	3	4	5
5	Not everyone is capable of actively participating in the recovery process.	1	2	3	4	5
6	People with mental illness/substance abuse should not be burdened with the responsibilities of everyday life.	1	2	3	4	5
7	Recovery in serious mental illness/substance abuse is achieved by following a prescribed set of procedures.	1	2	3	4	5
8	The pursuit of hobbies and leisure activities is important for recovery.	1	2	3	4	5

9	It is the responsibility of professionals to protect their clients against possible failures and disappointments.	1	2	3	4	5
10	Only people who are clinically stable should be involved in making decisions about their care.	1	2	3	4	5
11	Recovery is not as relevant for those who are actively psychotic or abusing substances.	1	2	3	4	5
12	Defining who one is, apart from his/her illness/condition, is an essential component of recovery.	1	2	3	4	5
13	It is often harmful to have expectations that are too high for clients.	1	2	3	4	5
14	There is little that professionals can do to help a person recover if he/she is not ready to accept his/her illness/condition or need for treatment.	1	2	3	4	5
15	Recovery is characterized by a person making gradual steps forward without major steps back.	1	2	3	4	5
16	Symptom reduction is an essential component of recovery.	1	2	3	4	5
17	Expectations and hope for recovery should be adjusted according to the severity of a person's illness/condition.	1	2	3	4	5
18	The idea of recovery is most relevant for those people who have completed, or are close to completing, active treatment.	1	2	3	4	5

19	The more a person complies with treatment, the more likely he/she is to recover.	1	2	3	4	5
20	Other people who have a serious mental illness or are recovering from substance abuse can be as instrumental to a person's recovery as mental health professionals.	1	2	3	4	5

Appendix B

Recovery Attitudes Questionnaire-7

The Recovery Attitudes Questionnaire-7 (RAQ-7) was developed by a team of consumers, service providers, and researchers at the Hamilton County Recovery Initiative (Borkin et al, 2000). The RAQ-7 consists of 7 questions designed to help you identity and think about your own beliefs and attitudes about recovery from concurrent disorders. There is no right or wrong answer.

Recovery is a process and experience that we all share. People face the challenge of recovery when they experience the crises of life, such as the death of a loved one, divorce, physical disabilities, and serious mental illnesses. Successful recovery does not change the fact that the experience has occurred, that the effects are still present, and that one's life has changed forever. Rather, successful recovery means that the person has changed, and that the meaning of these events to the person has also changed. They are no longer the primary focus of the person's life (Anthony, 1993).

Please read each of the following statements and, using the scale below, circle the rating that most closely matches your opinion:

	Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	People in recovery sometimes have setbacks.	1	2	3	4	5
2	To recover requires faith.	1	2	3	4	5
3	Stigma associated with mental illness can slow the recovery process.	1	2	3	4	5
4	Recovery can occur even if symptoms of mental illness are present.	1	2	3	4	5
5	Recovering from mental illness is possible no matter what you think may cause it.	1	2	3	4	5

6	All people with serious mental illnesses can strive for recovery.	1	2	3	4	5
7	People differ in the way they recover from a mental illness.	1	2	3	4	5

Appendix C

Demographics Questionnaire

Instructions: Please indicate the following characteristics as they apply to you.

Age: _____

Gender:

- Male
- Female
- Transgender/Other

Race/ethnicity

- African-American
- Asian
- Native American
- Hispanic / Latino/a
- Caucasian / White
- Native Hawaiian / Pacific Islander
- Arab American / Middle eastern
- Mixed
- Other group(s) please be specific_____

Years of Education:

- Less than high school graduate (less than 12 years)
- High school graduate (12 years)
- 2 years of college or junior college, including Associates degree
- 4 years of college (Bachelor's degree) Major_____

- Master's degree (M.A, M.S., M.Ed)_____ Specialization_____
- Professional degree (such as Registered Nurse)
- Medical School (D.O., M.D.) Specialization_____
- Doctorate (Ph.D., Psy.D., Ed.D., other) Specialization_____
- Other_____

Current Job Title:

- Psychologist
- Psychiatrist
- Nurse
- Social Worker
- Mental Health Technician
- Psychology student/trainee/intern/fellow/resident
- Other _____

Year(s) you have been employed at your current facility is/are: _____

Year(s) you have been employed at *any* inpatient psychiatric facility is/are: _____

Approximate number of staff or professional trainings you have attended in the past *5 years* that focused on recovery principles of care or the recovery model is/are: _____