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Organizational Culture, Absorptive Capacity, and the Change Process: Influences on the Fidelity of Implementation of Integrated Dual Disorder Treatment in Community-Based Mental Health Organizations

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Organizational Culture, Absorptive Capacity, and the Change Process: Influences on the Fidelity of Implementation of Integrated Dual Disorder Treatment in Community-Based Mental Health Organizations

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Community-based mental health organizations epitomize the diverse settings in which efforts are underway to understand the implementation of evidence-based practices. The organizational complexities associated with the implementation process make it challenging for agencies to adhere to fidelity protocols and requirements. Yet, the context in which implementation occurs requires exploration. Important dimensions of the context are organizational culture, absorptive capacity and the change process. In light of the urgency to move empirically-based psychosocial mental health interventions into usual-care settings, it is necessary to understand the context in which such organizational dimensions influence fidelity to implementation.

This exploratory study utilizes a mixed-methods research design to conduct a secondary analysis of a national study on the implementation of evidence-based practices. The study focused on 11 community-based mental health organizations that were involved in implementing the Integrated Dual Disorder Treatment (IDDT) protocol. The primary purpose of the research was to explore factors such as organizational culture,

absorptive capacity and the change process that influence the fidelity of implementation of the Integrated Dual Disorder Treatment model.

Findings show that a recovery vision is central to organizational culture in consumer-based mental health treatment. Important dimensions of the change process focus on leadership, organizational adaptability, and processes that foster knowledge transfer and supervision. There was no relationship between organizational culture typology and fidelity to implementation. Absorptive capacity indicated a moderate to strong relationship with fidelity. Leadership collaboration and a values-innovation fit with the Integrated Dual Disorder Treatment model were found to have a strong relationship to fidelity. The findings suggest understanding the contextual aspects of organizational culture and the change process are important to fidelity. This knowledge enhances a more effective implementation process for community-based mental health agencies to promote client outcomes based in recovery and rehabilitation.

This dissertation by Ravita Maharaj fulfills the dissertation requirement for the doctoral degree in Social Work, approved by Joseph J. Shields, Ph.D., as Director, and by Wendy Whiting Blome, Ph.D., and Gregory, J. McHugo, Ph.D. as Readers.

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DEDICATION

"I know of no more encouraging fact than the unquestionable ability of man to elevate his life by conscious endeavor."

Thoreau

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I have described the past five years as part of my journey in life, with many discoveries along the way. Now that this leg of the journey has ended, I would be remiss if I did not acknowledge the many individuals who were integral in this accomplishment. I am not sure words can express the depth of my love and gratitude to my husband, Doby. Through the highs and lows of the past five years, you have been my shining light that never once lost its glow. Your strength, unwavering commitment and belief in me, and your unconditional love have supported me through this entire process. With you at my side, I knew I would not falter in attaining this goal.

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Chapter I: Introduction

Problem Statement

The U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) indicates mental and substance abuse conditions are among the most common health disorders in the United States, with nearly 50 percent of the populace affected with one disorder at some time during their lifetime (SAMHSA, 2006). These statistics indicate the tremendous scope of need for effective care for individuals with a dual diagnosis of mental illness and substance abuse/dependence. Without treatment, these conditions result in adverse individual and societal consequences, but effective treatment is generally lacking nationwide (IOM, 2006).

To help address this national public mental health concern, research in the implementation of evidence-based practice (EBP) has emerged as a priority for National Institute of Mental Health (NIMH). The emphasis is to enhance the fit between effective interventions and the context of delivery in diverse care settings, and to provide a base that advances knowledge of EBP implementation at the individual practice level, in addition to the community and state levels (NIMH, 2006).

The successful dissemination and implementation of evidence-based practice is of key interest to the social work profession. The field has codified its commitment to helping mental health provider organizations optimally respond to the needs of individuals and communities in its central tenet that social work be based on recognized and empirically based knowledge (NASW, Code of Ethics, 1999). Social work must play an important role in understanding and investigating EBP implementation, if such

practices are to have any significant and meaningful impact on clinical outcomes (Proctor & Rosen, 2008).

The literature highlights implementation as a complex undertaking with multi-faceted components to the process (Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005; Ganju, 2006). Organizational complexities involved with the implementation process attempt to explain the level of success or failure with EBP implementation, as measured by fidelity outcomes. Fidelity refers to the adherence to established program protocols and requirements (Bond, Evans, Salyers, Williams, & Kim, 2000), and failure to implement with fidelity can compromise the intended effectiveness of the original intervention (McHugo et al., 2007).

Fundamental to implementation efforts is a *change process* (Ganju, 2006; Rosenheck, 2001). Critical to EBP implementation is the behavior change of the practitioners and other key providers of evidence-based practices in organizations (Fixsen et al., 2005). Poole and Van de Ven (2004) describe effective organizational change largely dependent on changing individual knowledge, attitudes, and behavior. March (1991) contends that adaptation to change requires organizations to explore new approaches to replace traditional and out-dated practices, capabilities, and knowledge bases.

Little attention is given to how existing core beliefs, values, engrained routines, and attitudes held by organizational group members may affect the change process (Glisson, 2007; Hemmelgarn, Glisson, & James, 2006; Jaskyte & Dressler, 2005). Organizational culture determines how things are done within the organization, and its

role and influence on fidelity of EBP implementation can be significant. The implementation of an EBP also involves the knowledge transfer of new and technical information (Corrigan, Steiner, McCracken, Blaser, & Barr, 2001). Adherence to fidelity protocols will require community-base mental health (CBMH) organizations to adapt and redesign their capacities to absorb complex knowledge and processes, characteristic to a structured service model such as Integrated Dual Disorder Treatment (IDDT).

Recent studies indicate there are organizations that implement with fidelity while others do not achieve success in spite of the significant investment in resources. This is of concern to stakeholders invested in advancing empirically based mental health interventions in community-based settings. As a secondary data analysis, this multi-state study seeks to understand the organizational context in which IDDT implementation occurs. It explores how organizational culture and the change process influence some agencies to implement IDDT with high fidelity while others do not. It also seeks to understand the relationship of dimensions of organizational culture and absorptive capacity to fidelity of implementing the IDDT model.

Background of the Problem

For the approximately 33 million adults who use mental health services to address problems that result from mental illness/substance use (MI/SU), quality, effective mental health treatment based in evidence is essential (IOM, 2006). A goal of a 21st century transformative mental health agenda is to reduce symptoms among persons with mental illness, promote recovery, and improve their quality of life (NIMH, 2006). The past two decades have seen the development and advancement of empirically based psychosocial

mental health interventions geared toward psychiatric rehabilitation for people with serious mental illness (SMI) and other complex needs.

For persons with mental illness and substance abuse, SAMHSA (2003) has endorsed the Integrated Dual Disorder Treatment (IDDT) model as an effective EBP that promotes positive rehabilitation and recovery outcomes. However, knowledge about effective mental health interventions does not translate to routine practice in mental health settings (Lehman, Goldman, Dixon, & Churchill, 2004). To understand this existing gap, NIMH has prioritized research to enhance the fit between effective interventions and the context of delivery in diverse care settings. The result has been a major investment by stakeholders to understand implementation of empirically based mental health interventions at the community and state levels (NIMH, 2006).

Mental illness and substance use. According to the 1999 U.S. Surgeon General's Report on mental health, 51% of individuals with one or more lifetime mental disorders also have a lifetime history of at least one substance abuse disorder (U.S. DHHS, 1999). Recent statistics indicate, of the estimated 24.3 million adults aged 18 and older (10.9% of the adult population) diagnosed with Serious Psychological Distress (SPD) in the United States, approximately 5.4 million of these (22.1%) abuse or are dependent on illicit drugs and alcohol. In addition, 10.4% of these dually diagnosed individuals received both mental health care and specialty substance abuse treatment, while 53.5% (2.8 million) received no care (SAMHSA/NSDUH, 2007).

These statistics underline the need for the Institute of Medicine's (IOM) recommendations for fundamental change in the delivery of mental health care for

individuals with MI/SU problems. The report *Improving the Quality of Health Care for Mental and Substance-Use Condition* (IOM, 2006) comprehensively describes the need for effective mental health treatment based in evidence. According to this report, "together, mental and substance-use illnesses are the leading cause of combined death and disability for women of all ages and for men aged 15–44" (IOM, 2006, p. 29).

Failure to provide quality, effective care has serious individual and societal repercussions (IOM, 2006). For the adult population, societal consequences include sizable health care costs to the nation, increased risk for homelessness (Fischer & Breakey, 1991), and increased incarceration rates (Ditton, 1999). At the individual level, the lack of effective treatment and care can result in disability and death (IOM, 2006).

Reform efforts through the implementation of evidence-based practices (EBP). Several key reports have helped set the stage for transformative reform efforts to enhance the fit between effective interventions and practice settings. These include *Mental Health: A Report of the U.S. Surgeon General* (U.S. DHHS, 1999); *Crossing the Quality Chasm: A New Health System for the 21st Century* (IOM, 2001); and the *President's New Freedom Commission Report* (2003). All reports, in addition to the IOM's (2006) *Improving the Quality of Health Care for Mental and Substance-Use Conditions* support NIMH's goal to increase clinical relevance of mental health research in routine practice settings through EBP implementation (DHHS, 2006).

Today, SAMHSA (2003) recommends and supports as evidence-based practices (EBPs) those psychosocial mental health interventions that meet a threshold of evidence for efficacy and effectiveness (Proctor et al., 2008). These interventions promote

recovery and rehabilitation outcomes for people with SMI and other co-occurring disorders. They include supported employment (SE) (Becker & Drake, 2003); illness management recovery (IMR) (Gingerich & Mueser, 2002); family psycho education (FE) (Anderson, Reiss, & Hogarty, 1986); integrated dual disorder treatment (IDDT) (Mercer-McFadden et al., 1998), and assertive community treatment (ACT) (Stein & Test, 1980) (DHHS, 2003).

CBMH organizations and EBP for persons with MI/SU problems. The provision of mental health treatment services for persons with serious disabling MI/SU problems requires a major investment of resources for states and local government entities (IOM, 2006). States assume the financial responsibility for mental health care through reimbursements from the federal Medicaid program (Gold, Glynn, & Mueser, 2006), with CBMH organizations as the conduits between state and local entities. These agencies are responsible for delivering a continuum of mental health services to people with complex mental health needs, a majority of whom are indigent and dependent on Supplemental Security Income (SSI) and Social Security Disability Insurance (SSDI) benefits.

Under a fee-for-service payment structure, local entities share the responsibility of care through sub-contract arrangements with CBMH organizations. Funding requirements now dictate higher levels of accountability through contracts to purchase treatments and services confirmed to improve outcomes. The utilization of empirically based mental health interventions is one approach that attempts to increase the value gained from the expenditure of health care dollars.

Yet, despite the focus of CBMH organizations on psychiatric rehabilitation, utilization of empirically based psychosocial interventions lags in these routine mental health settings (Drake et al., 2001). Psychiatric rehabilitation emphasizes mental health outcomes that include employment, community integration, independent living, academic achievement, recovery (substance use/mental illness), illness management, and social integration (Bond et al., 2000). The aforementioned psychosocial interventions variously support these rehabilitation outcomes. For example, while the IDDT model has demonstrated positive recovery and rehabilitation outcomes for persons with MI/SU problems, it is not widely available for this population (Brunette et al., 2008; Drake et al., 2001; Lehman & Steinwachs, 1998; Torrey et al., 2001).

EBP implementation in CBMH organizations. EBP implementation refers to the use of strategies and procedures to introduce evidence-based mental health interventions within specific settings (Drake, Torrey, & McHugo, 2003; Drake et al., 2001). According to Bond et al. (2000), successful implementation requires delivery of the intervention with fidelity— that is, the degree to which procedures and interventions follow those of the original study. Fidelity is significant to EBP implementation because adherence to standard measures can prevent "program drift" due to continual adaptations to on-the-ground situations (Stawar, 2003, p. 48). Adaptations by CBMH organizations to the necessary internal and external changes associated with EBP implementation can significantly comprise fidelity to implementation (Aarons, Sommerfield, Hecht, Silovsky, & Chaffin, 2009).

The emphasis on EBP implementation over 10 years has led to an increase in research in routine mental health settings (Aarons, 2004; Drake et al., 2001; Lehman & Steinwachs, 1998; Rosenheck, Desai, Steinwachs, & Lehman, 2000). Significant findings highlight organizational factors that influence implementation efforts (Glisson, 2002; Jaskyte & Dressler, 2005; Simpson, 2002). These include practitioner use of the EBP (Hutchinson & Johnson, 2004; Mullen & Bacon, 2003); intervention attributes (Henggeler, Lee, & Burns, 2002); and training and consultation (Corrigan & McCracken, 1998). The implication is that EBP implementation with fidelity requires significant changes in practitioner and services system behavior and structure (Lehman et al., 2004).

A major challenge is the lack of science related to implementation (Fixsen et al., 2005). The implementation research literature cuts across and borrows from other streams of research such as organizational change, diffusion and innovation, strategic decision-making, and quality improvement (Rogers, 2003; Shojania & Grimshaw, 2005). Yet, despite the voluminous research base on EBP implementation, little evidence exists that demonstrate the effectiveness of implementation strategies in routine mental health practice settings (Fixsen et al., 2005; Ganju, 2006; Hohmann & Shear, 2002).

Organizational context and EBP implementation. Recent findings indicate that organizational context factors play a fundamental role in implementation (Ganju, 2006; Rohrbach, Grana, Sussman, & Valente, 2006; Schoenwald & Hoagwood, 2001). These factors include readiness to change, leadership and decision making, workforce capacity and training, organizational culture, and information technology support (Ganju, 2006; Luongo, 2007; Schoenwald & Hoagwood, 2001; Simpson 2009). The

organizational context of the actual practice setting is one of the multi-tiered components of the change process important to implementation (Chambers, 2008; Ganju, 2006; Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou, 2004; Shortell, 2004). Inadequate attention to the organizational context may compromise the quality of clinical care, service provision, and the fidelity of implementation (Bond et al., 2000; Ganju, 2006).

Contextual organizational dimensions: The change process, organizational culture, and absorptive capacity. Perceived as an innovation, the implementation of an evidence-based practice in CBMH organizations entails a change process. Agencies are required to make significant changes at the practitioner and agency levels; those with an external focus toward innovation and creativity support change, while agencies with an internal focus that maintains stability and the status quo can impede the change process (Quinn & Kimberly, 1984).

As part of the context in which implementation occurs, organizational culture serves as a guide to understand the behaviors of organizational members and the internal aspects of organizational life. Shared norms and values, assumptions, and interpretations are critical to leadership and management styles, decision-making structures, and tolerance for change (Schein, 1990). As organizations adapt to implementing a change initiative, this may create an internal organizational culture not conducive to change.

EBP implementation also involves the transfer of new and technical knowledge that require organizations to adapt and redesign their capacities. This contributes to the absorptive capacity that refers to the ability of the individual or agency to identify, assimilate, and exploit new knowledge (Cohen & Levinthal, 1990). The organization's

response to the change process, the underlying organizational culture, and absorptive capacity, can facilitate or hinder opportunities for organizations to implement the EBP with fidelity.

Interest in the Problem

Interest in the need for quality, effective, mental health services through the implementation of evidence-based practices stems from over 15 years as a professional social worker in a private, non-profit community-based agency. Twelve of these years centered on program development and administration, with efforts to address the needs for persons with cognitive disabilities, mental illness, and substance abuse, and other complex needs. This is a marginalized population living at or below poverty levels, and epitomizes social work's primary mission to enhance human-well-being to meet the basic needs of all, particularly those most vulnerable and oppressed (NASW Code of Ethics, 1999).

This writer's professional experience afforded a broad, critical perspective of the ways in which EBP implementation is influenced by complex interactions at the direct, mezzo, and macro levels of service delivery (Fixsen, et al., 2005; Ganju, 2006). Financial and human resources challenges confront CBMH organizations in their efforts to shift from a traditional, paternalistic way of service delivery to one informed by and based on research. This shift also requires adaptations by the organization to enhance an internal organizational culture that fosters learning, and develops a workforce capacity that supports the implementation of empirically based interventions.

The focus in this study is to contribute to the literature on the dimensions of organizational culture, absorptive capacity, and the change process in relation to fidelity of EBP implementation. It is important to understand the context of practitioners' response to the organizational dynamics of the introduction of a change initiative such as implementing an EBP.

Purpose of the Study

As an exploratory study, this secondary analysis is two-fold. Specific to CBMH organizations, it seeks (i) to understand the influences of organizational culture and the change process on the level of fidelity achieved in implementing the Integrated Dual Disorder Treatment (IDDT) model, and (ii) to address the dual influence of organizational culture and absorptive capacity and their relationship to fidelity of IDDT implementation. The context is a multi-state study of implementation of the IDDT model, a psychosocial mental health intervention that promotes positive rehabilitation and recovery outcomes for persons with mental illness and substance use problems.

Research Questions

As this study employs a mixed methods research design utilizing both qualitative and quantitative methodologies, two questions are proposed:

1) **Qualitative Research Question**: How do organizational culture and the change process influence fidelity to the implementation of the IDDT model?
2) **Quantitative Research Question**: To what extent do organizational culture and absorptive capacity relate to the fidelity of the implementation of the IDDT model in community-based mental health organizations?

Hypothesis

Hypothesis: Community-based mental health organizations with an organizational culture characterized by a developmental/open systems model typology and high levels of absorptive capacity will experience higher fidelity outcomes.

Assumptions

Several assumptions are made in this study. As IDDT implementation requires major change in the organization, the first assumption is that organizational culture influences the level of fidelity to IDDT implementation. This can hinder or facilitate change. The second is based on the study's hypothesis: Organizations that promote an *organizational cultural typology* that fosters creativity, innovation, vision, and risk-taking, and leadership motivated by the growth of the organization, will evidence a higher degree of fidelity to EBP implementation. Such an organizational cultural type enhances implementation of new initiatives (Tushman & O'Reilly, 1997). The third assumption is that there is a relationship between absorptive capacity and fidelity of the implementation of IDDT, as IDDT requires the transfer of new and complex knowledge. The fourth assumption is the change process influences fidelity outcomes.

Significance of the Research to Social Work

This study is significant to social work in many ways since providing effective interventions and quality services is an ethical responsibility in social work practice. The study addresses ethical issues pertinent to the client, the professional, clinical practice, and education. The study also contributes to the knowledge regarding emerging practices based in research, about which the social work practitioner must keep abreast.

Competence for social work professionals lies in practice based in empirically documented knowledge relevant to social work and its Code of Ethics (NASW, 1999). As educators, social work professionals are required to provide instruction based on the most current knowledge and information available to the profession (NASW, 1999).

This study also contributes to the presence of social work professionals in mental health research. In 2006, mental health and substance abuse social work professionals represented 20% (122,000 of 595,000) of the total social work professional workforce (Occupational Outlook Handbook 2006-2007, 2007). Mental health services traverse diverse service sectors that include education, family and child welfare, criminal justice, and geriatric care, all of which employ social work mental health professionals (Brekke, 2007). EBP implementation in these service sectors is also critical to NIMH's agenda to bridge the gap between research and practice.

Findings from this study may provide an impetus for social workers' involvement in participatory-based mental health research in EBP implementation. At the direct, mezzo, and macro levels of services in these settings, social work professionals have a significant understanding of the day-to-day impact of institutional and organizational forces on mental health services. Their immersion in client, practitioner, agency, and community knowledge can continue to inform ways in which CBMH organizations address the fidelity of EBP implementation.

This study's focus on organizational culture and absorptive capacity has the potential to contribute to the knowledge base of the organizational complexities of EBP implementation. Though widely studied in the organizational research and innovation

literature, absorptive capacity is an organizational dimension nascent to human services. Its application in this study can add to the preliminary discussions around the development of a theory of implementation effectiveness. At the policy level, the study may highlight the existing disparities in resources required for successful implementation of EBPs. Findings can further advance the role of advocacy to promote the goal of NIMH (2006) that emphasizes recovery and quality of life for persons with mental illness.

Overview of the Chapters

Chapter One introduces this study and includes the problem statement and background, the author's interest in the problem, purpose of the study, and significance and contribution of the research to social work. Chapter Two provides a comprehensive review of the literature that includes a history of mental health services and a review of evidence-base practice in mental health, with specific attention to fidelity and the Integrated Dual Disorder Treatment model. This chapter also introduces the study's variables, and reviews Quinn and Rohrbaugh's (1981, 1983) Competing Values Framework; Cohen and Levinthal's (1990) conceptual model of Absorptive Capacity; and theoretical frameworks of organizational change and innovation. Chapter Three provides the methodology of the study, the paradigmatic foundation for the research design, and a description of data collection instruments. Also provided is a description of the data analysis plan. Chapter Four presents the quantitative research question and the quantitative findings related to the study's hypothesis. This chapter also details demographics of the study's sample. Chapter Five provides a description of the qualitative analysis methodology and qualitative findings. Chapter Six presents a detailed

analysis, interpretation, and synthesis of the qualitative and quantitative findings. Finally, Chapter Seven provides a brief overall summary of the study, its limitations, contribution to social work, and implications for practice and future research.

Chapter II: Review of the Literature

With a national priority to understand how evidence-based practice (EBP) translates into the 'real world' practice settings, the emphasis on implementation research is to enhance the fit between effective interventions and the context of delivery in diverse care settings. Context refers to the setting or the institutional environment whose structure and underlying culture support the implementation of innovative practices (Poole & Van de Ven, 2004). Understanding organizational context is critical as research suggests dimensions of the organizational context influence fidelity (Fixsen et al., 2005). For CBMH organizations, the introduction of a new initiative or innovation (such as IDDT) requires changes in routine processes, procedures, and behaviors. Few studies in the social work literature have investigated fidelity of EBP implementation from the perspective of innovation and change.

This chapter reviews the literature pertinent to the implementation research of mental health evidence-based practices and organizational change. The review leans heavily on the social work/mental health literature, in addition to areas of organizational change, innovation, and translation research. The chapter is organized around five areas of knowledge. First, a brief historical analysis of the U.S. mental health system reviews the milestones that propelled transformative changes through the turn of the 20th century. This analysis details the relationship between mental health and social work in the U.S. and the inception of community-based services. Second, the discussion focuses on evidence-based practices with attention to mental health and social work, and the relationship to translational sciences in mental health reform. This follows with a discussion of the Integrated Dual Disorder Treatment (IDDT) model. The rationale for

integrated treatment for mental illness and substance use (MI/SU) problems, IDDT implementation in CBMH organizations, and fidelity, the dependent variable is described. The fourth section focuses on factors relevant to organizational context and implementation. The fifth section analyzes the conceptual models of Quinn and Rohrbaugh's (1981, 1983) Competing Values Framework (CVF), and Cohen and Levinthal's (1990) theoretical framework of Absorptive Capacity. The CVF model frames the independent variable of organizational culture. Cohen and Levinthal's (1990) framework of Absorptive Capacity supports the second independent variable, absorptive capacity. The change process is addressed from various theoretical concepts of innovation and change. Theoretical and empirical studies support the discussion of all major concepts. The conclusion provides a brief summary of the chapter.

Pre 20th Century Mental Health in the United States: A Brief Historical Overview

The end of the 20th century signified a critical juncture in the development of mental health services in the United States. It reflects the devolution of a mental health system characterized by institutional care, authoritarian decision-making, and a fragmentation of mental health services. The history and care of the mentally ill in the United States has left an indelible imprint on the development of mental health policy and services, particularly community-based mental health services. Its impact emerges in today's mental health funding mechanisms, service delivery systems, and the evidence-based approach. It is useful to frame this history in the context of the National Institute of

Mental Health's priority to enhance clinical relevance in mental health care (NIMH, 2006).

Several distinct periods define the history and care of the mentally ill and the development of mental health services. Late 17th and 18th century colonial America was a period dominated by the Elizabethan influence that rendered religious and secular themes into the attempts to understand insanity (Grob, 1994). Calvinistic ideas about the virtue of hard work influenced societal perception of mental illness. Victims of mental illness, unable to care or provide for themselves and without family members to help, became subject to the Poor Laws (Trattner, 1999). Implemented as a punitive measure, the Poor Laws were designed to increase the fear of insecurity and to emphasize that it was a crime to be poor. Asylums emerged during this period in response to the general medical/primary care needs of the mentally ill. These institutions, later on known as mental hospitals, laid a foundation for the development of a human services sector in mental health care.

The turn of the 19th century introduced the approach known as "moral treatment," the first of four reform eras in mental health services in the United States (Goldman & Morrissey, 1985). The era of 'moral treatment' marked social welfare's efforts to garner additional support from the federal government for the care and treatment of the mentally ill (Trattner, 1999). Dorethea Dix, most associated with this era, was one of the first social welfare reformers and a tireless proponent for institutional care and treatment for persons with mental illness. Through sustained education and outreach, Dix advocated for a more humane treatment of the mentally ill.

Evident in the reform era of 'moral treatment' was the beginning of a "de facto" mental health system in the United States was (Grob, 1994). State government mental health policies lacked long term planning. Never examined was the link between mental illness treatment and the legal and financial systems, dependency, and social and class factors. Exponential growth in asylums across all states brought changes in institutional structure that centered on bureaucracy, and functions that emphasized rigidity and coerciveness.

The late 19th and early 20th centuries initiated a new era of 'mental hygiene' that introduced emerging concepts of public health, scientific medicine, and social progressivism (U.S. Surgeon General's Report, 1999). Principles specific to this movement included the belief of early treatment, prevention of chronic mental illness, outpatient treatment, and follow-up with discharged mentally ill patients. Yet, despite the documented progress in care and treatment of the mentally ill through the end of the 19th century, dealing with chronic mental illness remained unresolved (Grob, 1994).

The Role of Social Work and Mental Health Care in the United States during the 20th Century

Advocacy and activism defined the first decade of the 20th century in response to the federal and state governments' lack of progressive action to move beyond the custodial institutions of the asylum. Social workers were part of a broader coalition focused on the need to enact change in the structure and organization of mental hospitals, develop alternatives to institutional care, and provide public supervision. "Civic medicine" replaced custodial and institutional care, and was seen as a first step in

individualized community-based mental health programs. Civic medicine emerged as 'aftercare' and would become one of the most important features of services for mentally ill persons in the 20th century.

Aftercare work encapsulated the manifestation of a socially progressive movement. According to Trattner (1999), the early 20th century period highlighted science joined with reformism, as the rise in aftercare work paralleled not only the rise in social welfare, but also psychotherapy in psychiatry, behaviorism in psychology, and public health in medicine. At the end of the first decade in the 20th century, psychiatric social work emerged as a fundamental role in mental health aftercare, that emphasized the causes, treatment, and prevention of mental illness through public education. Perceived as a cost effective measure for social betterment and an important adjunct to successful clinical work, social services focused on the reduction in mental illness.

By the second decade of the 20th century, the 'professionalization' of social work emerged, with an emphasis on "specialization, technique, and expertise in casework, including psychiatric casework" (Trattner, 1999, p. 186). The role of social work in mental health was reinforced by World War II with the utilization of volunteer social workers to screen registrants deemed mentally unfit to serve in the military service. Data collected by social workers would have significant influence on the first major piece of legislation enacted to enhance mental health care and treatment in the 20th century.

The Inception of Community-Based Mental Health Services: Mid to the End of the 20th Century Federal Reforms

The enactment of the National Mental Health Act (NMH, 1946) was the first step in U.S. federal mental health policy to address quality care issues and the treatment of mental disorders. National statistics gathered by social workers during the screening processes supported the high incidence of psychiatric disorders among the armed forces. The NMH Act (1946) laid the foundation for the establishment of the research center (now known as the National Institute of Mental Health). The principle focus was the development of preventative health measures, research, professional training, and the establishment of community mental health programs (Trattner, 1999).

Ongoing research in psychiatric epidemiology, and the advent of new drugs for the treatment of psychosis and depression, advanced a widely held perspective that supportive community-based programs were better treatment options over institutional care. The congressional report *Action for Mental Health* (JCMIH, 1961) provided an impetus for the new era of "deinstitutionalization" and "community mental health." The mental health advocacy movement that coalesced in 1950 was instrumental in shaping public awareness to support community mental health.

Community-based mental health services. A critical influence that expedited the transition from institutional care to one based in a community orientation was the enhanced social welfare role of the Federal Government (Grob, 1994). This mental health reform era of "community mental health" (1955-1970) represented the onset of deinstitutionalization and social integration. It set the stage for the development and

redevelopment of service models of community-based mental health (CBMH) services, shifting persons with serious mental illness (SMI) to the least restrictive environments within the communities (Bachrach & Clark, 1996; Levine & Perkins, 1997).

The Community Mental Health Centers Construction Act (CMHCC, 1963) and the Community Mental Health Centers Act (CMHC, 1965) required states to provide plans on how they would structure mental health services in order to qualify for the authorization of federal grants (Beigel, 1982). The mandate for CBMH centers was to provide five essential services: outpatient treatment, inpatient treatment, crisis intervention, consultation, education, and partial hospitalization (Hadley, Culhane, Mazade, & Manderscheid, 1994). However, this also brought challenges to CBMH centers where staff persons were unprepared to deal with a population defined by their long histories of institutionalization and complex, serious mental illness. Professionals trained in psychotherapeutic approaches avoided this population and they eventually received services by persons without degrees in mental health (Farkas, Cohen, & Nemec, 1988). This perpetuates into current day mental health staffing and workforce competencies issues.

Several factors contributed to the failure of federal reforms initiated during the reform era of "community mental health" (Rochefort, 1984). The CMHC Act (1965) did not establish linkages with state mental hospitals nor did it provide funding to staff these centers. The social and political conflicts of the sixties affected federal assistance and support for these centers. In addition, there was a lack of evidence to support the efficacy of a community policy, and a need for a social services support system to address the

unmet needs of the projected hundreds of thousands of individuals with mental illness and other disabling and debilitating conditions entering the community.

The 1970s and 1980s: A transition period for community-based mental health services. The decades of the seventies and eighties propelled an advocacy movement instrumental in new reform efforts. The impetus was to address the persistent issues of poor recovery and functioning of individuals with serious mental illness (SMI) now living in the community. Fragmentation of services, the upheavals in the 1970s political arena (Vietnam War, Watergate, partisan ideologies), and the ongoing lack of evidence to support the efficacy of CMH centers exacerbated the national debate on the quality of mental health care and services in the U.S.

The General Accounting Office's (1974) acknowledgement of a mental health system defined by inadequacy, inaccessibility, and lack of continuity and coordination necessitated further action by the federal government (as cited in Reuter, 1996). In 1975, new legislation amended the original mandates of the original CMHC Act (1963) from five to no less than twelve services. Mandated services included screening, follow-up care and therapy for released patients, as well as specialized services for children, the elderly, and alcohol and drug abusers (Grob, 1994).

Other significant CBMH programs to evolve during this time include the self-advocacy movement. The movement centered on a consumer-oriented, quality of life approach that de-emphasized the disease-oriented definition to mental illness (Drake, 2005). The clubhouse movement would later influence other consumer-driven, self-help responses such as consumer advisory boards (CAB) and peer advocates. Today, these

self-help consumer-driven networks wield significant influence in the ongoing development of community-based services.

A new mentally ill population: The dual diagnosed patient. The 1970s saw the emergence of a new and younger adult population with severe mental illness (SMI), concurrent with ongoing changes in the mental health system. The process of deinstitutionalization emphasized a decentralized system of mental health care and treatment (Grob, 1994, Rochefort, 1984). High incidences of alcohol and drug abuse among this population, their mobility, and non-compliant behaviors resulted in increased homelessness and incarceration (Ditton, 1999; Fischer & Breakey, 1991).

For this new group of mentally ill adults, recurring visits to the emergency units and psychiatric units of general hospitals were avenues for treatment and care. Non-compliance with treatment, inconsistent use of medication, and high use of services, "created powerful emotions of helplessness and inadequacy among professionals whose background and training had not prepared them for such a clientele" (Grob, 1994, p. 299). The lack of access to basic needs such as housing and social supports, and an uncoordinated, fragmented mental health system exacerbated the situation.

The Mental Health Systems Act (MHS, 1980, S.1177) supported planning and accountability in the mental health system, linkages with medical facilities, and the availability of care and treatment in community settings for those with mental illness and substance abuse. Under the Reagan Administration, all provisions of the MHS Act (1980) were repealed and replaced with the Omnibus Budget Reconciliation Act of 1981. The result was the provision of state block grants for mental health services and substance

abuse. Mental health care and treatment reverted to the states and local communities already overwhelmed with social and economic issues (Accordino, Porter, & Morse, 2001).

While the reform era of "community support" emphasized social supports (housing, employment, and social networks), it also ushered in legislation such as the creation of the Community Support Program (CSP, 1977). Funded by the National Institute of Mental Health (NIMH), this legislation once again changed the trajectory of state mental health services. The CSP (Turner & TenHoor, 1978) involved a federal/state partnership that supported states in developing community support programs for adults with severe mental disorders. Demonstration programs emphasized case management as the primary service intervention for effective community-based services (Drake, 2005). Other funding through the State Comprehensive Mental Health Services Plan (1979), supported states in introducing changes in their mental health systems. This era marked the emergence of innovative interventions in mental health services with treatment options in the form of new psychotic medications and psychosocial interventions. This facilitated the movement's objectives of recovery and rehabilitation in the community.

Innovative interventions emerge in community-based mental health services. With increased focus on functioning and rehabilitation, advocates of mental health care turned to experimental CBMH programs. The design of the first innovative CBMH program assisted patients discharged from long-term hospitalization to integrate in the community. An early version of Assertive Community Treatment (ACT), an experimental community living program, emerged in 1970 (Drake, 2005).

The first randomized controlled trials (RCTs) identified in mental health research was ACT (Stein & Test, 1985). As an innovation, ACT focused on integration and provided services in the community, and would later become the first evidence-based practice (EBP) implemented in psychiatric rehabilitation through clinical trials during the 1980s and 1990s. It is now one of six psychosocial evidence-based practices (EBPs) recommended and supported for implementation (SAMHSA, 2003).

Mental Health Evidence-Based Practice (EBP) in the United States

Evidence-based practice. Evidence-based practice (EBP) evolved during the 1950s in the United States. Its advent coincided with the transformation of the mental health system and subsequently, in care and treatment. As cited in Leff (2004), the knowledge of effective practice began with the first randomized clinical trials in 1948; followed by Campbell and Stanley's (1966) introduction of experimental and quasi-experimental designs; Kefauver-Harris's "Safe and Efficacious" concept; advances in meta-analysis (Glass, 1976), and the inception of the Cochrane Collaboration (1993).

Specific to the social sciences has been the emergence of the Campbell Collaboration. The Campbell Collaboration reflects an international effort to assist people to make well-informed decisions by preparing and maintaining systematic reviews of studies on the effects of social and educational policies. Research occurs in the areas pertinent to social work professionals and includes mental health, substance abuse, child welfare, criminal justice, education, employment and training (Campbell Collaboration, 2001).

The proliferation of the evidence-based practice movement is multi-faceted; it cuts across major disciplines and industries that include health, mental health, social services, nursing, and even business. Archie Cochrane, a pioneer of evidence-based medicine, focused on upgrading medical evidence using randomized controlled trials (Mechanic, 1998). Others include Sackett, Rosenburg, and Haynes (1997), who defined evidence-based medicine as "the conscientious, explicit, and judicious use of current best evidence from clinical research in making decisions about the care of individual patients." This definition is one of the most widely cited and influential definitions in the EBP literature.

Other notable and influential pioneers of the EBP movement include Haynes, Devereaux, and Guyatt (2002) whose evidence-based clinical decision making model includes clinical expertise, patient preferences, and research evidence. Inherent in the numerous EBP definitions is the effectiveness of the practice supported by a body of evidence (Azrin & Goldman, 2005).

Today, a range of effective treatments is available based on patient preferences and provider skills (Lehman et al., 2004). These include effective psychotropic medications for most mental illnesses, combined treatments (medication plus psychosocial interventions), and empirically supported psychotherapies such as cognitive-behavioral (CBT) (Linnehan, 1993). Included are psychosocial treatments that meet a "threshold of evidence" for efficacy and effectiveness by the Substance Abuse Mental Health Administration (SAMHSA, 2003).

EBP challenges in social work. As cited in Trattner (1999), social work traces its role in research and evidence to the beginning of the 20th century with Abraham Flexner's 1915 report. This report concluded social work was not a profession as it lacked its own individual technique that is communicable through an educational process. In the decades following this blunt critique, the measured steps of the social work profession have ensured the legitimacy of the profession through utilization of empirical knowledge. Today, the emphasis on the relationship of empirical knowledge and practice is supported by the Council on Social Work Education (CWSE, 2002), Standard 4.6 of the Educational Policy and Accreditation Standards, and is clearly identified in the National Association of Social Workers' Code of Ethics (NASW, 1999).

Evidence-based practice is an emerging phenomenon that entered the social work lexicon at the onset of the 21st century (Gambrill, 1999). The current *Social Work Dictionary* (Barker, 2003) defines evidence-based practice as "the use of the best available scientific knowledge derived from randomized controlled outcome studies, and meta-analyses of existing outcome studies, as one basis for guiding professional interventions and effective therapies, combined with professional ethical standards, clinical judgment, and practice wisdom" (p. 149).

In the past decade, varying perspectives and theoretical definitions have emerged in the social work literature. Evidence-based practice is described as a "new, educational and practice paradigm to address the gap between research and practice" (Gambrill, 2006; Gray, 2002). This paradigm maximizes practice opportunities to reduce harm to clients and promote options for interventions. Gambrill (2006) defines evidence-based

practice from an educational context of "problem-based learning" designed to help practitioners link evidentiary, ethical, and application issues" (p. 339), while Rosen (2003) frames its significance within the context of the profession's commitment to the client's best interest, values-guided practice, goal-directed practice, accountability, and commitment to scientific standards of evidence.

While a large body of empirical knowledge pertinent to evidenced-based practices in the health/behavioral fields exists, it is most evident that mental health interventions based in research are not widely used in community treatment programs (Franklin & Hopson, 2007). Social work research advocates recognize this existing gap in the utilization of scientific knowledge to guide practice and have undertaken numerous attempts to bring the issue to the forefront (Gambrill, 1999, 2006; Jenson, 2005; Proctor, 2004; Rosen, 2003; Rosen, Proctor, & Staudt, 2003).

Although social work views evidence-based practice through a lens that lends greater credibility, rigor, and accountability to practice, there appears to be conflicting perceptions of evidence-based practice across the spectrum of disciplines and professionals (researchers, educators, practitioners, and administrators). This contributes to a dilemma not only in the adoption of practices, but also implementation at practice level in social service organizations (Gambrill, 2006; Rosen & Proctor, 2003; Sackett et al., 2000). A review of the literature highlights the challenges of evidence-based practice in social work. What emerge are several distinct perspectives held by social work pioneers in the evidence-based movement.

One school of thought endorses the process of evidence-based practice as a systemic philosophy and an evolving process of inquiry and practice (Gambrill, 1999, 2006; Sackett et al, 2000). Nathan & Gorman (2002) hold the view that scientific, credible evidence and certain interventions take precedence over others. Another perspective characterizes evidence-based practice by guidelines, practice manuals, and clinical expertise that enhance empirically based practices and improve outcomes (Howard & Jensen, 1999; Norcross, Beutler, & Levant, 2005; Rosen, Proctor, & Staudt, 2003). Gambrill (2006, 2007) criticizes the perspective of evidence-based practice by guidelines, practice manuals, and clinical expertise as a narrow view of EBP. Another perspective also criticized is the packaging of 'best practices' and 'exemplary programs' frequently used in community settings as evidence-based practices.

While all are legitimate concerns, the ongoing discourse and dissent around EBP in social work is disconcerting as it magnifies the challenge for social work to bridge the gap between research and clinical practice. For others, EBP implementation stifles clinical innovation, or increases the risks to patients through the strict adherence to treatment manuals, resulting in diminished care (Norcross, Beutler, & Levant, 2005;Tanenbaum, 2003).

Translational science. As a result of national reports that highlight the gap between actual practice and the advancement of empirical mental health knowledge, translational science has emerged as a top priority of the National Institute of Mental Health (NIMH) (Brekke, 2007). The significance of translational science is to move empirical mental health knowledge to community-based settings through research

conducted under actual conditions (Brekke, 2007; Rohrbach et al., 2006). This serves to enhance mental health service delivery to consumers in the routine practice settings of CBMH organizations.

Translation science is an umbrella term that incorporates various terminologies of diffusion, dissemination, and implementation and defines a wide range of complex processes interwoven with the vast literature and discourse of evidence-based practice. According to Brekke (2007), two phases of translational research help in understanding these terms. Phase 1 involves moving the testing of efficacious EBP developed under "sanitized," clinical conditions to the actual settings of clinical practice. Phase II involves two types of knowledge transfer that includes dissemination and implementation. The latter is central to the focus of this study.

Dissemination refers to the passive spread or diffusion of an innovation or in this case, an evidence-based practice (Greenhalgh, 2004; Rogers, 1995). The proliferation of dissemination efforts and strategies further acknowledges the importance of evidence-based practice in today's practice settings. The Campbell Collaboration focuses on dissemination of research studies relevant to interventions in health, behavioral, educational, and social settings. Important to evidence-based practices is SAMHSA with its National Registry of Effective Programs. All focus on the identification of promising, effective model programs, strategies, assessment tools and instruments based on scientific rigor and research (Jenson, 2005; Zlotnik & Galambos, 2005).

Implementation refers to the use of strategies to introduce or adapt evidence-based mental health interventions within specific settings (Drake, 2003). The national

attention ascribed to implementation results from findings that indicate efficacious interventions do not transfer to routine settings of practice, without adaptation or modifications to the original model of intervention (Schoenwald & Hoagwood, 2001). As such, empirically-based psycho-social mental health interventions for persons with serious mental illness (SMI) and other complex needs are not widely implemented or translated into the community-settings (Brekke, 2007; Franklin & Hopson, 2007; Glasgow, Lichenstein, & Marcus, 2003).

Social work's presence across diverse and multiple service sectors strategically positions it to have a significant and meaningful impact on clinical outcomes through research in EBP implementation (Proctor & Rosen, 2008). In mental health care settings, the need for mental health/substance abuse (MH/SA) social workers is projected to grow by 159,000 (30%) during the 2006-2016 decade (Occupational Outlook Handbook 2008-2009, 2008). Translational science research in mental health services seeks to bridge the science and service communities by moving promising evidence-based mental health interventions where most needed (Brekke, 2007). This ultimately enhances the quality of mental health care in the diverse settings where social work practice is prominent.

Section II described the emergence of evidence-based practice and its relationship to social work practice. As indicated, many challenges confront the profession ranging from the perceptions of evidence-based practice to the adoption, dissemination, and use in practice. While the profession has made progress on several fronts such as curriculum development and higher education, social work continues to lag in research specific to EBP implementation (Proctor & Rosen, 2008).

Integrated Dual Disorder Treatment (IDDT)

The following section addresses integrated treatment of MI/SU and the emergence of the Integrated Dual Disorder Treatment (IDDT) model. It highlights implications for mental health social work practitioners to enhance knowledge and practice skills of the IDDT model. This section introduces the dependent variable, fidelity, and its significance to evidence based practice (EBP) implementation.

Rationale for integrated treatment of mental illness and substance abuse. Today, substance use problems are a complicating factor for many people with mental illness, as the incidence of MI/SU has burgeoned to alarmingly high rates (Buckley, 2007). Not to be overlooked are the adverse effects of MI/SU problems to society and the individual. Persons with MI/SU problems are at greater risk for homelessness and are more likely to deny their MI/SU problems, to refuse treatment and medication, and to abuse multiple substances (Mercer-McFadden et al., 1998). An estimated 50% of adults with SMI who are homeless have a co-occurring substance use disorder (Fischer & Breakey, 1991).

Studies of incarcerated individuals heighten MI/SU problems (Metraux & Culhane, 2006), as almost 60% of offenders identified with MI report being under the influence of drugs and/or alcohol at the time of arrest (Ditton, 1999). Also of concern is the ever-increasing number of homeless individuals with MI/SU problems in the criminal justice system. A 2005 study that looked at homelessness and mental illness among a jailed population found that for almost 13,000 jail episodes examined, in 16% of the episodes the person in question was homeless at time of the arrest, and in 18% of the

episodes the person had a mental disorder at the time of the arrest (McNeil, Binder & Robinson, 2005).

Other adverse consequences highlight health related concerns. As cited in *Improving the Quality of Health Care for Mental and Substance-Use Conditions* (IOM, 2006), in 2001, 7.6% of all health care spending was related to mental illness and substance use (Mark et al., 2005). Swartz et al. (2006), in their NIMH study of substance abuse incidence among persons diagnosed with schizophrenia, found a high correlation for nutritional deficits, diabetes, hypertension, overall poor health functioning, and physical co-morbidities. Increased use of the health care system, of emergency room services, and of in-patient and outpatient mental health services creates a 'revolving door' syndrome for this population (as cited in IOM, 2006).

Such statistics confirm that MI/SU is a national health issue that requires an integrated system of treatment. More often that not, individuals who require MI/SU services interact with separate service delivery systems with minimal inter-agency linkages (IOM, 2006). The majority of individuals in need of care and treatment are indigent, dependent on SSI, SSDI, Medicaid, or Medicare, and receive care in a core service outpatient mental health organization. Recent statistics indicate utilization of mental health services in 2007 averaged 29.4 million adults (13.2%) 18 and older, of which 6.9 percent received outpatient services. Of the 5.4 million adults with a SPD and substance abuse/dependence disorder, 53.5 percent (2.8 million) received no care (NSDUH, 2007). Lack of appropriate treatment for co-occurring disorders has been

linked to antisocial, aggressive, and sometimes violent behaviors, and high rates of suicidal behavior and ideation in this population (IOM, 2006).

Integrated Dual Disorder Treatment (IDDT) model: Its significance as an evidence-based practice. According to the Institute of Medicine (IOM, 2006), access to integrated care for persons with MI/SU is unavailable. However, the past decade has seen major strides in mental health interventions. These range from supported housing for persons with mental illness and chronic homelessness (Rosenheck, Kasprow, Frisman, & Liu-Mares, 2003), to assertive community treatment (ACT) (Stein & Test, 1980) for persons with SMI. Progress in effective psychosocial and pharmacological treatment for drug and alcohol use is also apparent. New medications in the form of naltrexone for alcohol dependence (Kranzler & Van Kirk, 2001; O'Mally, 2003); cognitive behavioral therapy (CBT) (Beck et al., 1979); and motivational enhancement therapy (MET) (Rollineck & Millner, 1995) have all demonstrated efficacy (as cited in IOM, 2006).

Today, the delivery of effective, integrated mental health treatment for persons with MI/SU has emerged as a priority (SAMHSA, 2003). A common set of recommendations and a consistent, philosophical approach guides integrated treatment and the development of the Integrated Dual Disorder Treatment (IDDT) model. It combines both mental health and substance abuse interventions at the level of the clinical interaction, with services and interventions in one site that occur in a coordinated and seamless manner by a team of professionals (Drake, Torrey, & McHugo, 2003). IDDT's guiding philosophical tenets include the enhancement of quality of life for persons with mental illness, allowing them to lead a satisfying, functional life. These tenets also attest

that consumers and their families have not only the right to information, but also access to effective treatment based on evidence (SAMHSA, 2003).

As indicated by Boyle, Delos Reyes, and Kruszynski (2005), the IDDT model arose from a series of controlled experimental and quasi-experimental research studies in the early 1990s by a series of researchers affiliated with the Dartmouth Psychiatric Center (Mercer-McFadden, Drake, Clark, Verven, Noordsy, & Fox, 1998). SAMHSA (2003) recommends and supports IDDT as an evidence-based practice at the program level, as it indicates an evidence base for producing positive clinical outcomes for persons with mental illness and substance abuse. These domains include substance abuse, psychiatric symptoms, housing, hospitalization, arrests, functional status, and quality of life (Drake, Mueser, Brunette & McHugo, 2004; Mueser, Noordsy, Drake & Fox, 2003; Torrey et al., 2001).

As described by Biegel et al. (2003), the IDDT model builds on several program components that include continuous treatment teams, assertive community outreach, four-stage treatment approach, ongoing clinical training, and attention to research, program fidelity, and evaluation. Boyle, Delos Reyes, and Kruszynski (2005) describe the core components of the IDDT model as outlined by Mercer-McFadden et al. (1998). The following core components comprise the treatment factors in the IDDT model. They include: a) integration of services, b) comprehensiveness, c) assertive outreach, d) reduction of negative consequences, e) secondary interventions for treatment non-responders, f) time-unlimited services, g) stage-wise treatment, h) use of multiple psychotherapeutics modalities, and i) hope.

In addition to the treatment factors, organizational factors comprise a second category of the IDDT model. These are: a) program philosophy, b) eligibility/client identification, c) penetration, d) assessment, e) treatment planning, f) training, g) supervision, h) process monitoring, i) outcome monitoring, j) quality improvement, and k) client choice. These factors pertain to administrative elements necessary for IDDT implementation and sustainability.

Four stages of interaction that promote recovery are central to the model. They include engagement, persuasion, active treatment, and relapse prevention (Osher & Kofoed, 1989). The IDDT model also requires knowledge in four areas. These include: a) basic knowledge about drugs of abuse and their effects on mental health disorders, b) assessment of substance abuse, c) motivational counseling and the different stages of recovery, and, d) active substance abuse counseling for clients trying to become abstinent (Torrey et al., 2002).

Fidelity. According to SAMHSA (2003), evidence based fidelity is the extent to which a treatment approach as actually implemented corresponds to the treatment strategy as designed. Klein and Sorra (1996) define fidelity in terms of the strategic accuracy of the implementation process that refers to the actual use of the intervention as originally intended. This study conceptually defines fidelity as the adherence to the various components and processes of the IDDT model. Fidelity is significant to EBP implementation as too often implementation of interventions in practice deviate from their administration in the original study (Lehman et al., 2004). IDDT is comprised of

two specific categories: organizational factors and treatment factors, and is described in Table 1.

Table 1

IDDT Fidelity General Organizational and Treatment Characteristics

Organizational Characteristic Items	**Treatment Characteristic Items**
Program Philosophy	Multidisciplinary Team
Eligibility/Client Identification	Integrated Substance Abuse Specialist
Penetration	Stage-Wise Interventions
Assessment	Access to comprehensive DD services
Treatment Plan	Long-term services
Treatment	Outreach
Training	Motivational Interventions
Supervision	Substance Abuse Counseling
Process Monitoring	Group Dual Disorder Treatment
Outcome Monitoring	Family Dual Disorder Treatment
Quality Improvement	Self-help Liaison
Client Choice	Pharmacological Treatment
	Interventions to reducing negative consequences
	Secondary interventions for Tx non-responders

Note. Adapted from "Implementation of the Integrated dual disorders treatment model: Stage-wise strategies for service providers: by R. Kruszynski and P. E. Boyle, 2006, *Journal of Dual Diagnosis, 2*, pp. 147-155.

The following is a description of the treatment characteristics listed in Table 1 that are make up the Fidelity Scale:

- A multidisciplinary team that includes case managers, social workers, psychiatrist, nurses, residential staff and vocational specialist, and who work in collaboration with one another.
- An integrated substance abuse specialist who works in close collaboration with the treatment team, modeling IDDT skills and training other staff in IDDT.
- Stage-wise interventions that support treatment consistent with the client's stage of recovery, that is engagement, motivation, action, and relapse prevention.
- Access for IDDT clients to comprehensive dual diagnosis services that include residential services, supported employment, family psycho education, illness management, and assertive community treatment (ACT) or intensive case management (ICM).
- Time-unlimited services that include substance abuse counseling, residential services, supported employment, family psycho education, illness management, ACT or ICM.
- Outreach, where the program demonstrates consistently well thought out strategies and uses outreach to the community for housing assistance, medical care, crisis management, and legal aid.
- Motivational interventions that clinicians employ through various strategies to engage IDDT clients. Clinicians use strategies (1) express empathy, (2) develop

discrepancy between goals and continued use, (3) avoid argumentation, (4) roll with resistance, and (5) instill self-efficacy and hope.

- Substance abuse counseling provided to clients who are in the action stage or relapse prevention stage.
- Group dual diagnosis treatment offered to IDDT clients that address both mental health and substance abuse problems.
- Family psycho-education on dual diagnosis provided to family members and significant others.
- Participation in self-help groups such as Alcoholics Anonymous (AA) and Narcotics Anonymous (NA).
- Pharmacological treatment provided by prescribers who employ five strategies. These include (a) psychiatric medications despite active substance abuse, (b) work closely with team/client; (c) focus on increasing adherence, (d) avoid benzodiazepines and other addictive substances, and (e) use clozopine, naltrexone, and disulfiram.
- Interventions provided by the treatment team to promote health.

Table 1 describes key criteria for the organizational and treatment characteristics central to fidelity of implementation of the IDDT model. Adherence to these program measures aims to prevent "program drift" and is important to achieving better outcomes in EBP implementation (Bond et al., 2000; Lehman et al., 2004). Fidelity to the program model (IDDT) has been shown to correlate positively with consumer outcomes (Jerrell & Ridgely, 1995).

Measuring fidelity has gained traction among stakeholders invested in evidence-based practice, as fidelity in EBP implementation is central to both effectiveness and efficiency (Lehman, 2004). In a large Veterans Affairs (VA) study of the implementation of an assertive community treatment (ACT) program called Intensive Psychiatric Community Care (IPCC), sites that implemented IPCC with high fidelity to the ACT model realized decreased costs and improved outcomes. In contrast, sites that experienced low program fidelity, showed increased costs and poorer outcomes (Lehman et al., 2004).

Fidelity monitoring is also a means of accountability through external, self-evaluation (Bond et al., 2000). Most commonly used measures of fidelity are adherence to the program, dose (amount of the program delivered), quality of program delivery (skill in using the technique or methods prescribed), and participant reactions or acceptance (Dane & Schneider, 1998). In mental health evidence-based practices, fidelity monitoring has been most prominent in supported employment (SE) (Becker, Smith, Tanziman, Drake, & Tremblay, 2001; McGrew & Griss, 2005), and in assertive community treatment (ACT) (McHugo, Drake, Teague, & Xie, 1999; Teague, Bond, & Drake, 1998).

In addition to a means of accountability, there are several advantages of fidelity monitoring. Identified in Table 1, a team of practitioners carries out the implementation of IDDT. Their role is critical to fidelity, as shared norms and behaviors exist among this team as they adjust to new knowledge and complex EBP implementation processes and procedures. According to Bond and colleagues (2000), fidelity monitoring serves as a

'roadmap' for the team. It provides a common language among practitioners, and serves as a frame of reference for thinking about the implementation of a new and complex program intervention.

Fidelity measurement takes into account the structural aspects of the program (caseload, size, practitioners' qualifications), location of services (community settings), and other activities (integration of treatment and rehabilitation), in addition to the practitioner's behavior (Bond, et al., 2000). With all these components critical to fidelity, there is great potential for inconsistencies in IDDT's implementation.

This study contends implementing EBP entails a change process and that dimensions of the organizational context play a crucial role in the fidelity of IDDT implementation. Ganju (2006) describes context as the organizational matrix that provides leadership, a supportive organizational culture, administrative support, and adequate technology. While these and other organizational dimensions have been addressed in the literature, there is a renewed interest in organizational context and its significance to evidence based practice implementation and effectiveness (Galambos, Dulmus, & Wodarski, 2005; Greenhalgh et al., 2004; Proctor et al., 2008).

The following section briefly highlights organizational context and implementation of an EBP.

Organizational Context and Implementation

With implications for mental health, Fixsen et al. (2005) lay out the most comprehensive synthesis of the literature on implementation. This seminal work describes three significant yet interdependent implementation components. They include

the *core* component, the *organizational implementation* component, and *influence factors* identified by social, economic, and political factors. Critical to implementation is the core component that targets behavior change of the practitioners and other personnel identified as key providers of evidence-based practices in organizations (Fixsen et al., 2005). Research in the effectiveness of evidence-based practice has placed strong emphasis on factors that influence the core component. Studies include practitioner use of the EBP (Hutchinson & Johnson, 2004; Mullen & Bacon, 2003); intervention attributes (Henggeler, Lee, & Burns, 2002); training and consultation (Corrigan & McCracken, 1998; McFarlane, McNary, Dixon, Hornby, & Cimett, 2001); and practitioners' attitudes toward adopting EBP (Aarons, 2004; Aarons & Sawitzky, 2006; Drake et al., 2001).

The organizational component supports the core through established procedures, processes, administrative structure, and functions. This component encourages and supports high fidelity practitioner behavior (Fixsen et al., 2005). The literature suggests that various organizational dimensions define the organizational context that include readiness to change (Lehman, Greener, & Simpson, 2002; Simpson 2003), leadership and decision making (Jaskyte & Dressler, 2005); organizational culture (Glisson, 2002; Schoenwald & Hoagwood, 2001; information technology support, (Ganju, 2006); and absorptive capacity (Knudsen & Roman, 2004).

As researchers grapple with understanding what constitutes effective implementation strategies, there is consensus that the organizational context of the actual practice setting plays a fundamental role in implementation (Chambers, 2008; Ganju, 2006; Greenhalgh, 2004; Rohrbach et al., 2006; Schoenwald & Hoagwood, 2001). The

organizational context level is one of several levels where complex interactions interface with one another. The local service systems (public mental health authority or purchaser of services), the practitioner level (interdisciplinary and with mixed skills sets), the intervention itself (cost, complexity, compatibility), and the consumer (choice, perceived advantage) are all characteristic of the core implementation component (Fixsen et al., 2005; Ganju, 2006; Rohrbach et al. 2006).

The literature identifies leverage points that influence fidelity of EBP implementation in CBMH organizations. However, a comprehensive study of the full impact of organizational context on implementation requires a substantial investment in financial and human resources (Drake et al., 2001). As such, research has focused on single site studies, anecdotal, and a few multi-site studies.

As a secondary analysis, this current study draws heavily on organizational and innovation research. It seeks to explore dimensions of the *organizational context* that influence fidelity of implementation of IDDT. In this study, the term *organizational context* refers to the overall environment of CBMH organizations in which mental health practice takes place. *Organizational culture*, *absorptive capacity*, and the *change process* are dimensions of the organizational context that characterize this study.

The last section of this review identifies the study variables and conceptual frameworks that undergird this research. Theoretical and empirical studies support the significance of understanding these dimensions and their relationship to fidelity of an EBP implementation. The Competing Values Framework (CVF) (Quinn & Kimberly, 1984) examines organizational culture; the change process is explored from various

theoretical concepts; and Cohen and Levinthal's (1990) conceptual framework explains absorptive capacity.

Organizational Dimensions

Organizational culture. For decades, organizational research and innovation literature have studied organizational culture in relationship to change and innovation. Evidence-based practice meets the definition of innovation in that it can be 'a new product or service, a new production process technology, a new structure or administrative system, or a new plan or program pertaining to organizational members' (Damanpour, 1991, p. 556). The literature indicates an emerging relationship between organizational culture, core implementation components, and high fidelity practice (Fixsen et al., 2005). Few studies in the mental health literature have comprehensively taken into account the relationship between organizational culture and implementation of evidence-based practice (Glisson, 2002; Glisson et al., 2008; Hemmelgarn, Glisson, & James, 2006; Jaskyte & Dressler, 2005).

To understand how organizational culture can have an influence on the fidelity of an EBP implementation, it is necessary to address salient issues that make organizational culture a debatable concept with respect to its definition, measurement, and level of analysis (Kimberly & Cook, 2008). The following analysis draws from the work of Cameron and Quinn (2006) and the Competing Values Framework (CVF) (Quinn & Rohrbaugh, 1983).

Definitional issues of organizational culture. According to Cameron and Quinn (2006), the various definitions of organizational culture emerge from the two main

disciplines: anthropology, which supports the perspective that organizations *are* cultures; and, sociology that purports organizations *have* cultures. Two very different approaches to culture have emerged within these disciplines: a functional approach and a semiotic approach. From the functional approach, culture emerges from collective behavior. This approach views culture as an attribute possessed by organizations, measurable, and used to predict organizational outcomes. From a semiotic approach, an organization's culture resides in individual interpretations and cognitions, and is understood independent of any other phenomena (Cameron & Quinn, 2006).

Most organizational research studies define organizational culture from the more global definition to include basic assumptions, values, behavioral norms, and expectations characteristic of an organization or its subunits (Rousseau, 1990). It is important to note *organizational culture* is clearly differentiated from *organizational climate*. Studies conducted in children's mental health service systems indicate both *organizational culture* and *organizational climate* affect staff morale, staff turnover, service quality, and service outcomes (Glisson, 2002; Glisson & Hemmelgarn, 1998). The distinction between these two constructs is significant as organizational climate refers to a more subjective, temporary state of feelings, attitudes, and perceptions of individuals (Cameron & Quinn, 2006; Glisson, 2000).

This current study conceptually defines o*rganizational culture* as a pattern of shared basic values and assumptions that the organizational group uses to solve problems of external adaptation and internal integration (Schein, 1990). According to Schein (1990), group members learn culture as a means to solve problems of internal integration

and to survive in an external environment. Such learning involves a behavioral, cognitive, and emotional process. The integration of internal aspects of organizational life such as shared norms and values, assumptions, interpretations, tolerance for change influence the underlying organizational culture in CBMH organizations.

Dimensional issues of organizational culture. Important to this study are two categories of dimensions that include content and pattern dimensions (Cameron & Quinn (2006). Content dimension taps into the 'psychological archetype' referring to the categories from which people draw to interpret or make sense of information. Six content dimensions identify aspects of an organization that reflect members underlying assumptions and values. These include: a) the dominant characteristics of the organization, b) leadership style, c) management of employees, d) organizational glue that holds the organization together, e) strategic emphases, and f) criteria of success. A combination of these dimensions reflects the underlying values of an organization (Cameron & Quinn, 2006).

Three dominant pattern dimensions that define organizational culture are: a) cultural strength that refers to the dominant culture that exists in an organization, b) cultural congruence that refers to the extent to which other parts of the organization reflect culture, and, c) cultural type that refers to the specific type of culture that predominates in the organization.

Measurement issues of organizational culture. The perception of organizational culture as a "soft" measure compared to other organizational measures such as organizational structure, presents challenges for measurement (Kimberly & Cook, 2008).

Cameron and Quinn (2006) identify three strategies to measure organizational culture: a) a holistic, qualitative approach that may include participant observation; b) language approaches that include new language patterns through a review of documents, reports, and stories that seek out cultural patterns; and, c) quantitative approaches in which questionnaires are used to assess a specific organizational cultural attribute.

Frequently utilized in social science research, Cameron and Quinn (2006) make the case that it is important that survey instruments actually reflect the measurement of underlying values and assumptions of group members. Kimberly and Cook (2008) identify several psychometrically sound organizational culture measures, which include Zammuto and Krakower's (1991) *Organizational Culture* measure, and Cameron and Quinn's (1999) *Organizational Culture Assessment Instrument (OCAI).* Both instruments draw from Quinn and Rohrbaugh's (1983) Competing Values Framework (CVF), the underlying theoretical framework of the current study. The following section will address dimensions of the CVF.

Competing Values Framework (CVF). Originally developed for understanding underlying values and organizational effectiveness, Quinn and Rohrbaugh's (1983) Competing Values Framework (CVF) is based upon three dimensions: (1) differing preferences for structure (change and flexibility vs. predictability and order); (2) differing organizational focus (internal emphasis that stresses people vs. an external focus that places emphasis on the organization); and (3) differing focus of important organizational processes and outcomes (means vs. ends) (Zammuto & Krakower, 1991). The CVF was later applied to organizational culture by Quinn and Kimberly (1984).

Underlying all organizations are implicit norms, values, and beliefs. As Schein (1990) noted, group members learn culture that involves a behavioral, emotional, and cognitive process. It becomes apparent that organizational culture serves as a guide to understand the behaviors of organizational members, and how information processing occurs in the organization.This has significance for fidelity of EBP implementation as understanding and modifying organizational culture can determine the utilization of new interventions with clients (Cameron & Quinn, 1999; Franklin & Hopson, 2007). As a framework, the CVF (1984) has been applied to leadership development (DiPadova & Faerman, 1993; Zammuto, Gifford, & Goodman, 2002); and health services research (Gifford et al., 2002; Zazzali, Alexander, Shortell, & Burns, 2007).

Depicted along two axes are the core distinguishing dimensions among organizations. The vertical axis reflects the extent to which the organization has a control orientation, and runs from control to flexibility. The horizontal axis depicts the extent to which the organization has an external or internal focus, and runs from a competitive focus (external) to maintenance of the socio-technical system (internal focus). Four cultural types (quadrants) emerge from a configuration that defines core values about organizations (Quinn & Rohrbaugh, 1983). While the CVF identifies four dominant cultural types, they are not mutually exclusive. Organizations are more likely to have a mix of cultural types, although one type may dominate over another (Denison & Mishra, 1995). Briefly described, the four cultural types include:

1) Group Culture: Basic assumptions in the group cultural type include the development of human resources, norms, and values associated with affiliation,

teamwork, staff development, and members' commitment to the system. The major orientation is empowerment of organizational members through facilitation and decision making (Cameron & Quinn, 2006)

2) Developmental Culture: According to Zammuto and Krakower (1991), the developmental culture type is 'permeated by assumptions of change' (p. 87). It is defined as a dynamic, entrepreneurial, and creative workplace; it is visionary, innovative, and risk-oriented. The focus is the organization, its adaptability and readiness for growth, and resource acquisition. Organizations that depict a developmental cultural type encourage leadership that is inventive and risk-taking, motivated by the growth of the organization. Subunits with a developmental culture might also exist within the more dominant culture of the larger organization (Cameron & Quinn, 2006).

3) Hierarchical Culture: This cultural type characterizes formal role, differentiation, rules, and regulations. Values and norms are associated with bureaucracy, stability, control, and effectiveness. The long-term concerns of this organizational culture type are stability, predictability, and efficiency.

4) Rational Culture: According to Quinn and Kimberly (1984), core value dimensions of the rational culture type include control, planning, goal setting, production, and efficiency. Key characteristics are competence, a focus on transaction, and an orientation toward results.

The CVF (1984) provides a framework from which organizations can understand values underlying the organizational culture and adapt necessary changes for desired outcomes. Moreover, the CVF explores how the organization's cultural type, strength,

and level of congruence influence organizational innovative changes. The CVF is an appropriate framework for this study, as it seeks to explore the influence of organizational culture on the fidelity of implementing the IDDT model in CBMH organizations.

Applicability. In the 'real-world' of CBMH organizations, there are competing priorities. External demands emphasize quality and outcomes, measures and standards, efficiency and effectiveness, data collection, plus reporting and evaluation. Across the spectrum of human services agencies, internal demands include resource acquisition, qualified personnel, high rates of turnover, leadership attitudes, tolerance for change, decision making structures, and ingrained routines (Compton, Stein, Robertson, et al, 2005; Glisson & James, 2002; Rosenheck, 2001; Simpson, 2002). Staff commonly express being overwhelmed with responsibilities, and little to no time to stay abreast of empirical research and evidence-based practices (Gira, Kessler & Poertner, 2004; Rosenheck, 2001).

This study seeks to explore the relationship of organizational culture and its relationship to fidelity of EBP implementation. It contends that CBMH organizations with a developmental organizational typology and high levels of absorptive capacity influence high fidelity outcomes. From a theoretical perspective, an organization with a developmental cultural typology supports innovation and creativity. It is flexible, visionary, and risk-oriented (Zammuto & Krakower, 1991). Norms and values of this nature are consistent with the values of learning and innovation, and as such, the

argument is that organizations with a developmental typology are more inclined to utilize evidence-based practices.

Subunits with a developmental culture might exist within the more dominant culture of the larger organization (Cameron & Quinn, 2006). As mentioned, a guiding philosophical component to the IDDT model is a team-based approach to implementation. Understanding the existing culture within the team can also contribute to developing tailor-made training that enhances the team's absorptive capacity and influences fidelity of the IDDT implementation.

The literature recognizes that organizational culture plays a critical role in EBP implementation and requires further investigation. Proctor (2004) identifies the organizational culture of agency practice as the leverage point for acceptance of evidence-based practice. Rousseau (1990) looks at organizational culture in relation to staff morale and organizational performance, with an emphasis on norms such as teamwork, achievement, innovation, cooperation, and affiliation. These are norms and values reflective of a developmental culture type. Other research areas in organizational culture include its relationship with organizational effectiveness (Denison & Mishra, 1995), quality of work life (Gifford et al. 2002), and attitudes of evidence-based practices and leadership (Aarons, 2006; Aarons & Palinkas, 2007).

Few studies have addressed the context from which organizational culture influences fidelity and implementation effectiveness. Most noted in the literature is Glisson's (2007) work in children's mental health service systems, where the *Implementation Model for Mental Health and Social Services* addresses not only the

importance of the technical domain, but includes the social context of the organization. According to Glisson (2007), “norms, values, expectations, perceptions, and attitudes of the members of the organization" affect service delivery (p. 737). This influences adoption of best practices, fidelity to established protocols, and relationships between service providers and consumers. Jaskyte and Dressler’s (2005) study on organizational culture and innovation in nonprofit human service organizations demonstrate evidence for the inclusion of organizational culture in innovation models. Although findings indicate an inverse relationship between organizational innovativeness and cultural consensus (degree of agreement), the implication for social work is that implementing evidence-based practice requires change and a cultural shift in shared values.

Studies in health services research demonstrate support for the Competing Values Framework (1984). Findings from a study on organizational culture and physician satisfaction with group practice demonstrated that a group (human relations) cultural typology supported physicians’ satisfaction with staff and human resources, technology, and price competition. The study also indicated a negative association between hierarchical and rational cultures, and no significance with a developmental culture typology (Zazzali et al., 2007). A study on quality of work life for nurses and hospital culture demonstrate unit (team) organizational culture affects quality of work life factors (Gifford et al., 2002). The study also demonstrates cultural values associated with the group (human relations) cultural type positively related to organizational commitment, job involvement, empowerment, and job satisfaction.

The paucity of literature that addresses organizational culture and the influence it has on fidelity to EBP implementation in the mental health field requires attention. Understanding how practitioner attitudes, underlying values, and norms may influence work behavior and ultimately implementation of an EBP is important. The following section on organizational change reinforces the relationship of evidence-based practice as an innovation that requires attention to the process of change.

Organizational change process. The implementation of EBP entails a change process, yet few studies in the literature have explored the context of change. Critical to change is innovation. Tidd, Bessant and Pavitt (2001) define innovation as two types of change in the form of 'product' and 'process'. That refers to change in what an organization offers (product), and change in service delivery (process). From their perspective, "innovation is a process of turning opportunity into new ideas and of putting these into widely used practice" (Tidd, Bessant & Pavitt, 2001, p. 38). Poole and Van de Ven (2004) describe change as introduced by the organization for a specific purpose and reflected in new products and processes. From the perspective of Pettigrew, Ferlie, and McKee (1992), the change process refers to the actions, reactions, and interactions of various stakeholders as they negotiate around proposals for change.

Applied to CBMH organizations, the primary purpose of implementing IDDT or other empirically based mental health interventions is enhanced treatment options for consumers. However, the selection of evidence-based programs may be a requirement of funding. The introduction of a new mental health practice/intervention (product) in addition to the practitioners' adaptation to required procedures and processes (process)

ultimately involves a change process. According to Stetler and colleagues (2007), strategic change and management of organizational dimensions specific to EBP are necessary to make routine evidence-based practices in organizations.

The literature identifies several areas important to the relevance of implementation and organizational change. Fixsen et al. (2005) describe implementation outcomes in three categories that are pertinent to understanding the change process. These are changes in adult professional behaviors that include knowledge and skills of practitioners; change in organizational culture and structure to enhance and support changes in the practitioners' behaviors; and changes to consumers, stakeholders, and other system. This combination of 'micro' and 'macro' approaches to implementation of EBP is a perspective supported in the literature.

Galambos, Dulmus, and Wodarski (2005) identify several methods used in organizational change applicable to human services organizations. These include (a) knowledge diffusion; (b) staff development or training to improve employee performance (Doueck & Austin, 1986); (c) personal compacts or agreements between employees and organizations regarding their mutual responsibilities (Strebel, 1996); and (d) employee participation. One way to effect change is through the development of norms and expectations aligned with an innovative and adaptive organizational culture (Barriere, Anson, Ording, & Rogers, 2002). From this view, leadership that supports norms reflective of adaptability and readiness for change influences the behaviors of staff members. Johnson and Austin (2006) assert the importance of an evidence-based organizational culture that fosters research in social work practice. Glisson's (2002)

approach to implementation effectiveness entails consideration of three service system domains that include the consumer, technical, and the organizational domains.

Central to change and innovation (such as implementing IDDT) is delineating the role of people in the process (Bennis, 1966). Poole and Van de Ven (2004) identify the three "least common denominators" (p. 16) of people, space, and time that thread through any change and innovation theory. They identify people in the role of *human agency* as significant to organizational change and innovation, particularly when it is planned change. Woodman and Dewett's perspective (2004) is that the process of change is an interaction between the individual and the organization. This implies that while individual change from the behavioral, cognitive, affective, and conative (motivation) domains influence organizational change, so does the organization play a role in creating individual change. They propose four significant organizational influences that include socialization, training, managerial behavior, and organizational change programs.

This interactionist perspective lends support to the influence of the organizational context described in the implementation literature (Ganju, 2006; Greenhalgh, 2004; Rohrbach et al., 2006; Schoenwald & Hoagwood, 2001). A recent study that examined fidelity adherence to the implementation of an empirically validated parenting program found that effective supervision and monitoring of group team leaders, collaboration by the supervisor through engagement with team leaders, and training on the parenting program model were significant factors that contributed to adherence measures of fidelity (Stern, Alaggia, Watson, & Morton, 2008). Training and managerial behavior as organizational influences significantly changed practitioners' behavior.

Leadership skills that define managerial behavior also influence the 'team culture' of the practitioners involved with the EBP implementation. Aarons' (2006) study on the association of transformational and transactional leadership with service providers' attitudes toward the implementation of EBP supports the association of higher levels of positive leadership with more positive attitudes toward EBP. Transformational leadership inspires and motivates followers, while transactional leadership is based more on reinforcement and exchanges. Aaron's study (2006) highlights the significance of leadership in shaping direct services workers' perceptions and attitudes toward EBP, and their response to organizational change. These findings are congruent with the literature that identifies transformational leadership as promoting inspiration, intellectual stimulation, and individual consideration, while transactional leadership assists team members to maintain effective programs through goal setting, reinforcement, feedback, and self-monitoring (Corrigan et al., 2001).

As CBMH organizations move forward with implementing IDDT or other empirically based psychosocial mental health interventions, fidelity to implementation is critical. The literature supports reinforcement of individual change (behavioral, cognitive, affective, and conative) through supportive leadership, socialization, and opportunities for education and training. This supports practitioners: a) to become more knowledgeable and familiar with the EBP content such as modules, guidelines, fidelity measures; b) to enhance their skill competencies; c) to work in supportive teams; d) engage in peer-to-peer communication; and, e) in knowledge sharing (Torrey et al., 2002). Within this organizational context, these factors all play an influential fundamental role in the change

process, which ultimately may affect the stipulated adherence measures of fidelity of the implementation of an evidence-base practice model program, such as IDDT.

Absorptive capacity. In the past decade, the organizational innovation field has seen an increased use of absorptive capacity (AC) to study complex organizational phenomena. Its advent coincided with the development of the resource-based view (RBV) and then that of the expanded knowledge-based view (KBV) (Wernerfelt, 1984). Absorptive capacity has developed into a significant construct that traverses multiple interest areas in the innovation and organizational research literature. This includes industrial organizations, strategic management, international business, and information technology in relation to innovative capabilities.

The most widely cited definition of absorptive capacity is Cohen and Levinthal (1990), who define absorptive capacity (AC) as the ability to value, assimilate, and apply new knowledge from its environment. Other notable definitions in the literature are worth consideration. Zahra and George (2002) reconceptualized absorptive capacity as a dynamic capability pertaining to knowledge creation and utilization that enhances a firm's ability to gain a competitive advantage; and Kim (1997) defined AC as learning capability and problem-solving skills. Despite definitional variations, consensus in the organizational and innovation research literature indicates the role and outcomes of AC are specific to the organization's abilities to manage knowledge (Zahra & George, 2002).

The original conceptualization of absorptive capacity as a unit of analysis was at the organization level. However, its flexibility as a concept now encapsulates the individual level and the national level. From Cohen and Levinthal's (1990) perspective of

absorptive capacity, there exists an interrelationship among these levels, as a nation's absorptive capacity depends on that of firms, which depends on individuals' absorptive capacities (Cohen & Levinthal, 1990).

From the organizational research literature, EBP fits the definition of an innovation. According to Poole and Van de Ven (2004), innovation is reflected in new products and production processes. Yet, despite its applicability as an innovation, the organizational research literature overlooks EBP. Similarly, for all its scope and breath in the organizational innovation and management literature, absorptive capacity as a concept has not filtered into the implementation literature as a potential influential organizational dimension.

While nascent in the EBP implementation literature, there is support that, as a construct, absorptive capacity requires consideration. According to Knudsen and Roman (2004), evidence supports absorptive capacity in its facilitation of the use of new technologies, processes, and services. The literature suggests that organizations with greater processing capabilities for new external knowledge are more likely to enhance assimilation and utilization of innovations (Cohen & Levinthal, 1990; Greenhalgh et al., 2004). Daghfous (2004) suggests that absorptive capacity allows an organization to acquire and utilize external information as well as its internal knowledge, which in turn affects the organization's ability to adapt to its changing environment.

Cohen and Levinthal's (1990) Theoretical Framework of Absorptive Capacity

Dimensions of absorptive capacity. This current study conceptually defines a*bsorptive capacity* as an organization's human capital characterized by mastery of a

broad knowledge base, competencies, and the ability to process new information. It explores the absorptive capacity construct from the level of individual collectivity in the CBMH organization. Discussed are the implications for the absorptive capacity of CBMH organizations theoretical relationship of fidelity of implementation of the IDDT model.

Cohen and Levinthal (1990) define three dimensions of the theoretical framework of absorptive capacity (AC). The dimensions describe dynamics within the organization that lead to enhanced innovative capabilities. These innovative capabilities collectively constitute absorptive capacity. Lane, Koka, and Pathak's (2002) analysis of absorptive capacity (AC) in the literature identifies the complexity of the AC construct and the difficulty operationalizing the term. Developed as a process, each described dimension of absorptive capacity seeks to incorporate this process.

Dimension 1: The ability to recognize and value new knowledge. According to Cohen and Levinthal (1990), a firm has to meet two criteria to facilitate understanding and valuing a new external knowledge. First, a firm must have some prior knowledge basic to the new knowledge that it seeks. That is, a general understanding of the practices and techniques requires a discipline base. The implication is that the understanding of basic, prior knowledge shapes how the new knowledge will be evaluated. Without a basic understanding of the new discipline, there is an inability to recognize or value new knowledge. The second criterion is the necessity for the external, new source of knowledge to be diverse and specialized. This allows for the "effective, creative utilization of the new knowledge" by the firm (p. 136). Simply put, familiarity of the

context of knowledge being absorbed makes for easier utilization of the new knowledge (Lane & Lubatkin, 1998).

For CBMH organizations, the IDDT model constitutes new and technical knowledge, developed and introduced into CBMH organizations by external stakeholders. A knowledge fund specific to mental health, co-occurring disorders, and therapeutic clinical skills serves as a foundation to shape and evaluate the introduction to integrated treatment (IDDT model). New knowledge includes IDDT's core components (described in Section III). Therefore, in order for CBMH practitioners to recognize and value knowledge relevant to IDDT implementation and fidelity measures, prior knowledge and competencies in mental illness and other related disorders are critical.

Yet, many practitioners in CBMH organizations lack prior skills and knowledge necessary to implement EBP into routine mental health treatment (Corrigan et al., 2001). The workforce of CBMH organizations is interdisciplinary in nature, with a mix of social work, nursing, and psychology disciplines at the Bachelor and Master's levels. Licensed social workers and counselors have limited graduate training in serious mental illness or even evidence practice knowledge (Corrigan, et al., 2001; Gold, Glynn, & Mueser, 2006). The ability to recognize and value new knowledge rests in the knowledge, educational training, and skill competencies of a CBMH workforce. This has implications for staffing issues as CBMH organizations move forward with EBP implementation.

Dimension 2: The ability to assimilate new external knowledge. This dimension refers to the firm's knowledge processing systems for the acquisition and transferring of knowledge. Kim (1997) defines assimilation as the routines and processes that allow the

organization to understand, analyze, and interpret information from external sources. A firm's accumulated prior knowledge enhances the ability to assimilate knowledge related to the existing knowledge base (Levinthal & March, 1993). Once the firm has acquired the new knowledge, the next step is the internalization of this new knowledge.

External knowledge such as IDDT is context specific. Practitioners' knowledge level and skill competencies (described in dimension 1) may prevent understanding or replication of this knowledge (Szulanski, 1996). Practitioners who lack a prior knowledge fund may also lack absorptive capacity, which manifests in their inability to assimilate and apply this new knowledge. Szulanski's (1996) study on transfer of best practice within an agency suggests the lack of absorptive capacity among staff is a barrier to knowledge transfer. The implication is that the inability to assimilate complex EBP knowledge can be a barrier to knowledge transfer such as the movement of an EBP into routine mental health settings.

Other implications for this current study are specific to the fidelity of EBP implementation. The literature identifies typical barriers to knowledge diffusion and transportability in the EBP implementation to include lack of motivation, buy-in, commitment, incentives, and resistance to change (Gioia, 2007; Simpson, 2002). Yet, Szulanski's findings suggest, underlying such typical barriers may be practitioners' inability to assimilate the complex knowledge of an EBP.

Dimension 3: The ability to commercialize new knowledge. This dimension refers to the ability of the organization to apply commercially newly acquired external knowledge to achieve the organizational objectives (Lane & Lubatkin, 1998). According

to Cohen & Levinthal (1990), the ease of learning and knowledge utilization to further the goals of the organization is dependent on whether the external knowledge targets the individual needs and concerns of the organization. The importance of this dimension lies in the utilization and implementation of new knowledge by the organization (Zahra & George, 2002).

CBMH organizations emphasize psychiatric rehabilitation and utilize psychosocial interventions that enhance quality of life issues and functioning (Bond et al., 2000). IDDT demonstrates evidence for producing positive clinical outcomes for persons with mental illness and substance abuse in domains that include substance abuse, psychiatric symptoms, housing, hospitalization, arrests, functional status, and quality of life (Drake et al., 2004; Mueser et al., 2003; Torrey et al., 2001). Implementation of IDDT with fidelity targets a significant organizational goal for CBMH organizations: better clinical outcomes that meet the needs of persons with mental illness and substance abuse problems.

Determinants that influence absorptive capacity. Internal and external factors influence absorptive capacity (Daghfous, 2004). Attention is given to the internal factors that are more applicable to the focus of this study. Internal factors include prior knowledge base, individual absorptive capacity, level of education and academic degrees of employees, diversity of backgrounds, gatekeepers, organizational structure, cross functional communication, organizational culture, firm size, organizational inertia/responsiveness, investment in research and development (R&D) activities, and human resource management. The following discussion addresses six of the internal

determinants that contribute to the understanding of absorptive capacity and its relationship to fidelity of EBP implementation.

1) *Prior knowledge* base supports the organization's ability to recognize, assimilate and apply new knowledge. For organizations, it becomes critical to exploit their prior knowledge base in order to enhance absorptive capacity, through "refinement, efficiency, and execution of routines already located in the organizational knowledge base" (March, 1991, p. 71). For a majority of mental health agencies, the incorporation of EBP into clinical practice relates to funding requirements and other external stakeholders' demands. Prior knowledge is of significance in the decision-making process as agencies select an EBP that has relevance to their service population, familiarity with EBP program components, and an accessible prior knowledge base.

2) Like prior knowledge, *individual absorptive* capacity depends on the collective absorptive capacity of the organization's members (Cohen & Levinthal, 1990). In the Van den Bosch, Volberda, and DeBoer study (1999) of absorptive capacity, combinative capabilities, and different organizational forms, three types of combinative capabilities that influence collective absorptive capacity were identified. Major findings indicated that systems capabilities that refer to an organization's policies, procedures, and manuals used to integrate explicit knowledge for organizational members have a negative impact on the level of collective AC.

A second finding indicated that coordination capabilities such as training opportunities that coordinate, control, and help absorb knowledge, in addition to liaison devices that facilitate individuals or units participation in the decision making process

with supervisors, enhanced knowledge absorption. The EBP implementation literature strongly supports professional training that emphasizes EBP compatibility with professional values, accountability, and quality of care (Corrigan et al., 2001; Proctor, 2004; Schoenwald et al., 2008).

In the third finding, socialization capabilities that refer to an organization's ability to create a shared ideology based in a shared language, system of ideas, a coherent set of beliefs, and a high degree of shared values, left little room for absorbing outside sources of knowledge. This last finding differs from studies in the EBP literature (adoption, dissemination, and implementation) that indicate organizational culture affect adoption of EBPs, adherence to treatment protocols, receptivity of organizational change, and innovation (Glisson, 2002; Rosenheck, 2001; Shortell, 2004).

3) *The level of education and academic degrees* of a firm's workforce affects absorptive capacity in the assimilation phase (Vinding, 2000). As discussed earlier, IDDT requires CBMH practitioners to have the ability to evaluate the technical and complex knowledge of co-occurring disorders of mental illness and substance abuse, assimilate, and apply it to enhance clinical outcomes (Corrigan et al., 2001; Gold, Glynn, & Meuser, 2006). Research conducted in substance abuse services and innovation implementation suggests positive association between greater professionalism of staff and implementation (Knudsen & Roman, 2004).

However, a study of directors employed in mental health services for children found a negative correlation between licensed mental health practitioner and new treatment implementation (Schoenwald et al., 2008). A study on contingency

management (CM) for substance abusing adolescents also indicated clinical staff with more experience were less likely to implement the CM intervention (Henggeler et al., 2008). Despite mixed findings on *level of education and academic degrees*, this current study contends a level of professionalism plays a role in assimilation of complex EBP knowledge.

4) For Cohen and Levinthal (1990), *diversity of backgrounds* is important to absorptive capacity. Homogeneity in knowledge backgrounds restricts creativity, and the chance that new knowledge relates to existing knowledge in the organization. As described earlier, CBMH organizations make up a diverse, interdisciplinary workforce, with varying professional and educational backgrounds. Such diversity of backgrounds has the potential to promote understanding and the integration of new knowledge, thereby enhancing assimilation.

5) *Gatekeepers* act as either a 'boundary spanner' or an 'interface' between the organization and its external environment (Cohen & Levinthal, 1990). A critical role, the gatekeeper seeks to reduce the communication gap that may arise between the producers of external knowledge (university research community) and the organization's users of new information (IDDT teams). In CBMH organizations, the IDDT team leader assumes the role of 'gatekeeper', who maintains ongoing communication as the interface between team members, the internal administrative leadership, and developers of the IDDT model.

6) According to Daghfous (2004), *organizational culture* has important implications for absorptive capacity. Organizations that value innovation, growth, and development also value a professional workforce that augments the organization's

capacity to learn and apply new knowledge. CBMH organizations open to employees' innovative and risk-taking styles are associated with the use of new practices (Jaskyte & Dressler, 2005). When organizations maintain the status quo for stability and control, they relegate decision-making and authority to the administrative management. A higher probability exists to enhance absorptive capacity when organizational cultures support shared decision making at the leadership and practitioners' levels.

Summary

In summary, Chapter II discussed the literature pertinent to implementation of evidence-based practices in CBMH organizations. It specifically addressed challenges to implementing the Integrated Dual Disorder Treatment (IDDT) model with fidelity in diverse, community-based practice settings. The chapter described five specific areas of knowledge in the literature. The first area of knowledge provided an overview of the history of mental health services and put into context the relationship of mental health and social work. The second area provided a discussion of evidence-based practices, with attention to the mental health field and social work practice. The third area explored fidelity of implementation and the development and implementation of the Integrated Dual Disorder Treatment (IDDT) model. The fourth area highlighted factors relevant to organizational context and implementation. The fifth area reviewed the Competing Values Framework (1981, 1984) and its relationship to organizational culture as an independent variable; and the change process. It also provided an overview of Cohen and Levinthal's (1990) theoretical concept of Absorptive Capacity. Chapter III moves into the methodology employed in this secondary data analysis.

Chapter III: Methodology

This chapter addresses the design of the National Implementing Evidence-Based Practices Project (NIEBPP) and identifies the NIEBPP data utilized to conduct this secondary analysis. Though implemented in three phases, the study emphasizes Phase II of the NIEBP project from which this secondary data analysis was drawn. Outlined are the purpose of the current study, the research design, research questions, and hypothesis. The chapter discusses in detail the methodology of this study as well as its paradigmatic framework. Also outlined and described are the study population, conceptualization, and operationalization of the variables. The chapter also describes the data analysis plan and limitations to the data. This is followed by a brief summary of the chapter.

Purpose of the Study

Specific to community-based mental health (CBMH) organizations, the purpose of this study is two-fold. It seeks to: a) understand the influences of organizational culture and the change process on the level of fidelity to the implementation of the IDDT model, and, b) address the dual influence of organizational culture and absorptive capacity and its relationship to fidelity of IDDT implementation.

Study Design

Designed as a mixed methods study, the NIEBPP was a multi-state, longitudinal, project over a five-year period. Identified were three distinct phases of the project, each with clearly stated objectives. As the secondary analysis study only utilized data from Phase II (2001-2004) of the original study, it is necessary to describe this phase, followed by the current study.

Phase II of the NIEBPP project focused on evaluating the implementation process of five evidence-based practices (EBPs) for adults with mental illness in routine mental health settings across eight states. Phase II studied 53 sites over a two-year period. The focus of the study was to evaluate an implementation model that consisted of toolkits, consultant/trainers, and implementation monitors (NH-Dartmouth PRC, 2004). Key objectives addressed the study of the implementation process (barriers and facilitators), EBP model fidelity, and the monitoring of outcomes. The NIEBPP project was a mixed methods study and employed both qualitative and quantitative research methods, respectively, to evaluate the implementation process and the evaluation outcome. Essential to the NIEBPP was an understanding of organizational change and the process of EBP implementation in community-based mental health settings. The project utilized qualitative methods to understand this concept, and quantitative measures of EBP fidelity for the evaluation of the implementation outcome.

Present Study

This study is a secondary analysis of Phase II of the NIEBPP. As an exploratory study, the overall goal is to enhance understanding of the organizational dimensions (change process, organizational culture, and absorptive capacity) relevant to organizational context, and how this relates to or influences fidelity of EBP implementation. The study focused on the Integrated Dual Disorder Treatment (IDDT) model, one of the five evidence-based practices utilized in the NIEBPP. Following the original NIEBPP study, this current study employed a mixed methods design (Tashakkori & Teddlie, 1998). This design allowed for the integration of different perspectives to

provide knowledge significant to understanding the change process, organizational culture, and absorptive capacity. It also allowed for alternative perceptions about the implementation of a new and complex initiative such as an evidence-based practice in CBMH organizations.

This study is dominantly qualitative in design and to a lesser degree, quantitative. A "QUAL-quant" design defines this study, and according to Creswell (1995), this type of study is conducted "within a single dominant paradigm with a small component of the overall study drawn from an alternative design" (p. 177). The rationale for a QUAL-quant design is that the main question of this study explores the more subjective nature of the change process and culture of the organization. An emphasis on a more dominant qualitative design allowed data and information to be obtained in a more naturalistic way. This lends to "discovery and consciousness-raising," a major goal of qualitative research (Drisko, 2003).

NIEBPP's extensive body of qualitative data and information afforded the opportunity to garner knowledge, and the insights and experiences of stakeholders involved in IDDT implementation. The availability of data allowed for the study to explore differences in three sites that experienced high model fidelity scores and three that experienced low model fidelity scores. These data were collected through intensive qualitative, in-depth interviews and observations of the stakeholders (EBP providers, program leaders, trainers, consultants, and clients), plus field notes and observations of the Implementation Monitors. The contextualization of this information lends to more depth and insight not necessarily captured in a quantitative study.

The quantitative method examined the extent to which standardized measures of organizational culture and absorptive capacity relate to the fidelity of the implementation of IDDT. The quantitative data (scores from measures of organizational culture, absorptive capacity, and mental health provider characteristics) were used to enhance themes derived from the qualitative design.

Research Questions. This study explored two research questions:

1) Quantitative Question**:** To what extent do organizational culture and absorptive capacity relate to the fidelity of the implementation of the IDDT model in community-based mental health organizations?
2) Qualitative Question: How do organizational culture and the change process influence fidelity of the implementation of the IDDT model?

Hypothesis

Statement of the hypothesis: Community-based mental health organizations with an organizational culture characterized by a developmental/open systems model typology and high levels of absorptive capacity will experience higher fidelity outcomes.

Epistemological Paradigm

"Critical realism" (e.g. "neo-realism) guides the methodology for this study. According to Guba and Lincoln (1994), critical realism refers to that paradigm of knowing whereby reality exists, yet never fully understood. As Philips (in Guba, 1990) indicates, it is undeniable that different realities exist for different people in different societies. From a critical realism ontological perspective, only one reality is the correct one. The question becomes whether or not that correct reality can be determined at any

given moment. Despite how the "reality" is defined, the critical-realist contends that such a "reality" is researchable. From a critical realist's epistemological paradigm, the nature of the relationship between the researcher and the researched (knower and the known), while regulated by the goal of "ideal" objectivity, is guided by a modified "objectivity" (Guba, 1990). A modified objectivity allows for the recognition of biases, and subjects all aspects of the research to scholarly review (such as peer reviews).

A particular reality or environment defines CBMH organizations that are subject to systemic changes and organizational factors. Examples include readiness to change, leadership and decision making issues, hierarchical structures, culture, tolerance for change, and workforce capacity and training (Ganju, 2006; Luongo, 2007; Schoenwald & Hoagwood, 2001; Simpson, 2002). The current study views this 'reality' from two conceptual frameworks. The primary framework is Quinn and Rohrbaugh's (1981, 1983) Competing Values Framework (CVF), while the secondary one is Cohen and Levinthal's (1990) conceptual framework of Absorptive Capacity.

It is important to pay attention to the subjective processes involved in understanding the change process. Also critical is the organizational context and the implementation of evidence-based practices. Relevant to routine practice settings of CBMH organizations are organizational culture and absorptive capacity, two understudied concepts specific to EBP implementation and fidelity. The change process, organizational culture, and absorptive capacity requires a detailed understanding as to how these organizational dimensions influence or relate to fidelity of IDDT implementation. This helps put into context the paradigmatic inquiry of issues salient to

EBP implementation in CBMH organizations. More significantly, it frames an issue that has high relevance not only for mental health practitioners, but also for CBMH organizations that are at the forefront of critical mental health interventions and services for persons with serious mental illness and substance use (SMI/SU) problems.

As an evidence-based practice, IDDT has a basis for reality. The model's foundation is a specific protocol of program components that guides fidelity, is researchable, and has varying perceptions of outcomes. These program components allow for an inquiry, and one can measure elements in the model to determine fidelity of implementation. This ability to research, measure, and determine evidence supports the reality of fidelity of the implementation of IDDT, and frames this critical realist epistemological stance.

Study Population

The unit of analysis for the NIEBPP was the community-based mental health (CBMH) organization. This study focused on Ohio, Kansas, and Indiana, three states that participated in the NIEBPP study, and selected IDDT as one of the five EBPs for implementation. State mental health directors employed various methods to recruit mental health agencies across three states. This included the solicitation of proposals for IDDT implementation, and less formal procedures such as collaboration and communication with local mental health boards. Purposively selected to participate in IDDT implementation were 11 public-sector CBMH organizations. Padgett (1998) describes this type of sampling as the selection of respondents based on their knowledge and ability to provide needed information. Three criteria guided the selection of these 11

sites. First, organizations had a stable history as a mental health provider; second, there was an interest in implementing the IDDT model at their agency; and third, CBMH organizations had a willingness to implement the IDDT model (Brunette et al., 2008).

While all 11 CBMH organizations provided services to persons with serious mental illness (SMI), sites varied in size and geographic region served. They ranged from large, urban mental health sites to a very small, predominantly rural site. As these organizations have the knowledge of the population and service delivery experience relevant to the focus of the study, purposive sampling ensured the sample could provide richness to the data (Drisko, 2003).

Measurement

Dependent variable. The dependent variable is *fidelity* of the Integrated Dual Disorder Treatment (IDDT) model. The conceptual definition of fidelity is the adherence to the principles and procedures of 13 dimensions specific to the IDDT model. An IDDT Fidelity Scale with ratings from 1 to 5, where 1 indicates no adherence and 5 indicates full adherence, operationally defines fidelity. Researchers and their colleagues at the NH-Dartmouth Psychiatric Research Center developed this scale, with the NIEBPP version finalized in November 2002. The IDDT Fidelity Scale measures each dimension rated on its adherence to the IDDT model (See Appendix A). The average of the item ratings yields a total fidelity score. A total score of 4.0 or greater indicated high fidelity scores, scores between 3.0 and 4.0 indicated moderate fidelity, while scores less than 3.0 indicated low fidelity.

The following is a description of the items included in the Fidelity Scale:

1) A multidisciplinary team that includes case managers, psychiatrist, nurses, residential staff and vocational specialist, and who work in collaboration with one another. Also required is an integrated substance abuse specialist who works in close collaboration with the treatment team, modeling IDDT skills and training other staff in IDDT.
2) Stage-wise interventions that support treatment consistent with the client's stage of recovery, that is engagement, motivation, action, and relapse prevention.
3) Access for IDDT clients to comprehensive dual diagnosis services that include residential services, supported employment, family psycho education, illness management, and assertive community treatment (ACT) or intensive case management (ICM).
4) Time-unlimited services that include substance abuse counseling, residential services, supported employment, family psycho education, illness management, ACT or ICM.
5) Outreach, where the program demonstrates consistently well thought out strategies and uses outreach to the community for housing assistance, medical care, crisis management, and legal aid.
6) Motivational interventions that clinicians employ through various strategies to engage IDDT clients. Clinicians use strategies (1) express empathy, (2) develop discrepancy between goals and continued use, (3) avoid argumentation, (4) roll with resistance, and (5) instill self-efficacy and hope.

7) Substance abuse counseling provided to clients who are in the action stage or relapse prevention stage.
8) Group dual diagnosis treatment offered to IDDT clients that address both mental health and substance abuse problems.
9) Family psycho-education on dual diagnosis provided to family members and significant others.
10) Participation in self-help groups such as Alcoholics Anonymous (AA) and Narcotics Anonymous (NA).
11) Pharmacological treatment provided by prescribers who employ five strategies. These include (1) psychiatric medications despite active substance abuse, (2) work closely with team/client; (3) focus on increasing adherence, (4) avoid benzodiazepines and other addictive substances, and (5) use clozopine, naltrexone, and disulfiram.
12) Interventions provided by the treatment team to promote health.
13) Secondary interventions that are available for substance abuse treatment non-responders.

Reliability and validity. The IDDT Fidelity Scale (2002) is practical to use, reliable, comprehensive; has face validity; is sensitive to change over time; discriminates from usual practice; and predicts outcomes associated with the IDDT model (Bond, 2008). The scale was developed based on a template from other previously validated fidelity scales for assertive community treatment (ACT) and supported employment (SE). These are two of the five evidence-based practices used in the NIEBPP study. The

validated fidelity scales are the Dartmouth ACT Scale (DACTS) (Teague, Bond & Drake, 1998), and the Supported Employment Fidelity Scale (Bond et al., 1997), two of the earliest and most validated EBP fidelity scales (Bond, 2008). As the core concepts of the IDDT Fidelity Scale (2002) have their basis from the measurement methodology of these two scales, a brief description of their validity is necessary.

The DACTS demonstrated discriminant validity in a study of ACT and three other program types that include Veterans Administration (VA) intensive case management (ICM), homeless case management, and traditional case management. Fidelity scores were 4.01 for ACT, 3.52 for the VA ICM, 3.42 for homeless CM, and 2.38 for traditional case management (Teague et al., 1998). This study supported discriminant validity in that it clearly distinguished between the different types of case management programs, was simple to use, and the measures made sense to the clinicians (Bond, 2008). Several studies established predictive validity for the ACT Fidelity Scale that identified critical ingredients that were most predictive for high ACT fidelity scores (McGrew, et al., 1994; McGrew et al., 2002; McHugo, Drake, Teague, & Xie, 1999) (as cited in Bond 2008).

The SE Fidelity Scale also demonstrated discriminant validity of the correlation between supported employment and competitive employment rates in studies across multiple states (Becker, 2001; McGrew & Griss, 2005). It is also supported in a study that compared fidelity scores of supported employment programs (also referred to as Individual Placement and Support) that demonstrated high fidelity to that of other supported employment programs (marginal fidelity), and other vocational models (low fidelity) (Bond, 2001). A study of correlations with competitive employment rates in 10

Vermont mental health centers demonstrated predictive validity (.76) of the SE Fidelity Scale (Becker, 2001).

Independent variables.

Organizational culture. For this study, the conceptual definition of organizational culture is a pattern of shared basic values and assumptions that the organizational group members (workforce) use to solve problems of external adaptation and internal integration (Schein, 1990). The operational definition is the profile scores obtained from Zammuto and Krakower's (1991) *Organizational Culture* measure, a worksheet with five items to identify the current and dominant organizational culture. It is adapted from Cameron and Quinn's (1999) Organizational Culture Assessment Instrument (OCAI), based on the Competing Values Framework (CVF) theoretical framework. Originally developed by Quinn and Rohrbaugh (1983) for understanding the underlying values and organizational effectiveness, Quinn and Kimberly (1984) later applied the CVF to organizational culture, and referenced hereafter in this study. A brief description of the OCAI ensues as the *Organizational Culture* (Zammuto & Krakower, 1991) measure worksheet draws from the OCAI.

Employed in over a thousand organizations, the OCAI is both useful and accurate in diagnosing important aspects of an organization's underlying culture. It is used to identify the organizational culture profile based on the core values, assumptions, interpretations, and approaches that characterize organizations (Cameron & Quinn, 1999). Based on empirical evidence, it has face validity, discriminant and convergent validity, and integrates various dimensions specific to organizational effectiveness

(Quinn & Spreitzer, 1991). Four dominant culture types/models emerge from the CVF and serve as the foundation for the OCAI. These are the group culture/human relations model, developmental culture/open systems model, hierarchical culture/internal process model, and rational culture/rational goal model. The OCAI assesses six dimensions of organizational culture, each of which has four alternatives (the culture types). The six dimensions identified are dominant characteristics, organizational leadership, management of employees, organizational glue, strategic emphases, and criteria of success (Cameron & Quinn, 1999).

For this study, Zammuto and Krakower's (1991) *Organizational Culture* measure assesses five organizational dimensions (Appendix B). These include organizational character, managerial attributes, cohesion, emphases, and rewards. *Organizational character* assesses the degree to which the environment is: a) personal, b) dynamic and entrepreneurial, c) formalized and structured, and, d) production oriented. *Managerial attributes* reflect whether managers are: a) warm and caring, b) risk-takers, c) rule-enforcers, and/or, d) coordinators and coaches. *Organizational cohesion* assesses the degree to which the organization is based on: a) loyalty and tradition, b) commitment to innovation and development, c) formal rules and policies, and/or, d) tasks and goal accomplishment. *Emphases* assess the degree to which an organization stresses: a) human resources, b) growth and acquiring new resources, c) permanence and stability, and/or, d) competitive actions and achievement. *Rewards* are measured by whether or not they are based on: a) their distribution as equal among organizational members, b) individual initiative, c) rank, and/or. d) achievement of objectives (Kimberly & Cook, 2008).

Completion of the *Organizational Culture* (1991) measure averages 10 to 15 minutes, and its responses produce an independent rating of the organization's culture. Scoring the *Organizational Culture* worksheet is simple, with 100 points distributed among the four alternative cultures for each dimension. The highest number of points is given to the alternative culture that is most similar to the respondent's organization, and the lowest given to the alternative that is least similar. To compute the average score for each dimension, all the responses in each alternative culture (represented by A, B, C, and D) are added and divided by five. Each of the scores is plotted on a worksheet that produces a graph of the organization's culture. Alternative culture A represents a group culture/human relations model; B represents developmental culture/open systems model; C represents hierarchical culture/internal process model; and D represents rational culture/rational goal model.

In addition to the identification of the dominant cultural type, this study explored organizational culture (IV) from several other dimensions. Scales were developed from scores obtained from the IDDT Baseline (BL) Internet Survey and the Mental Health Provider Baseline Characteristics (MHPBLC) questionnaires, and are described in Table 2. It is important to point out that was no standardization to the roles and responsibilities of the individuals that completed the IDDT Baseline Internet Survey at the 11 CBMH organizations involved with the NIEBP study. There was no determination as to whether the individuals that completed the Baseline Internet Survey were members of the IDDT team, or involved with implementation through the 24-month time period.

Table 2

Constructs for the Independent and Dependent Variables

Variable	Dimensions	Items	Data Source	Scale	Cronbach's Alpha
Organizational Culture (IV)	(i) Cultural Profiles adapted from Cultural Values Framework (Quinn & Kimberly, 1984) Group, Developmental, Hierarchical, Rational	Q1-q20	BL Internet Survey	N/A	N/A
	(ii) Workplace Affiliation	q.21-q23, q25- q28, q30 (Deleted- q24, q29, 31)	BL Internet Survey	Past Workplace Environment Scale	.880
		q.32-q34, q36-q39, q41 (Deleted- q35, q40) Recoded q42	BL Internet Survey	Expected Workplace Environment Scale	.886
	(iii) Innovation Influence	q.44-q49 (deleted q43)	BL Internet Survey	Workplace Change Scale	.812
	(iv) Leadership collaboration	q59-q62 (deleted q63)	BL Internet Survey	Workplace Preparation Scale	.837
	(v) IDDT Values	q64- q71 (q71 reverse coding; deleted q72)	BL Internet Survey	IDDT Attitude Scale	.861

Variable	Dimensions	Items	Data Source	Scale	Cronbach's Alpha
	(vi) IDDT Support	q16CDd (i) To what degree are there competent personnel to carry out this EBP? Q16CDf (i) To what degree does the agency give a high priority to implementing the EBP? Q16CDg (i) To what degree does the flow of daily work (meetings, supports, paperwork, policies, clinical supervision) support this EBP? Q16CDh (i) To what degree do funding mechanisms support this EBP?	Mental Health Provider Baseline Characteristics (MHPBC)	Agency – Innovation Support Scale	.860
	(vii) IDDT Change Readiness	Q15CD: What is the likelihood that this EBP will be implemented within 9 months at your agency?	MHPBC	N/A	N/A
Absorptive Capacity (IV)	(i) Familiarity	Q73: How familiar are you with Dual Diagnosis?	BL Internet Survey	N/A	N/A
	(ii) Experience	Q74: How much experience do you have working with Dual Diagnosis?	BL Internet Survey	N/A	N/A
	(iii) Professionalism	Q78: What is your highest school level?	BL Internet Survey	N/A	N/A

Variable	Dimensions	Items	Data Source	Scale	Cronbach's Alpha
Fidelity (DV)	Fidelity ratings	(i) multidisciplinary team (ii) integrated substance specialist (iii) access for IDDT clients to comprehensive services (iv) time-unlimited services (v) program outreach to community (vi) motivational interventions (vii) substance abuse counseling for clients in action stage or relapse prevention (viii) group DD Tx (ix) family psycho education on DD (x) participation in AOD self help groups in community (xi) pharmacological Tx (xii) interventions to promote health (xiii) secondary interventions for SA tx non responders	IDDT Fidelity Scale	Mean IDDT Fidelity Score	N/A

Other dimensions of organizational culture are:

a) *Workplace affiliation*, refers to employees' association and connection to their agencies operationalized by the Past Workplace Environment (PWPE) and Expected Workplace Environment (EWPE) scales.

b) *Innovation influence*, refers to what influences workplace change, and is measured by the Workplace Change (WC) scale. This can include administrative action, practitioner action, collaborative action, model practitioners or practices, committee, consumer involvement, and family involvement.

c) *Leadership collaboration* refers to the degree to which administrators (stakeholders) have prepared the workforce for EBP implementation (in this case, the IDDT model). The Workplace Preparation (WP) scale measures leadership collaboration.

d) *IDDT values* refer to practitioners' attitudes toward implementation of the IDDT model and operationalized by the IDDT Attitude scale. This scale measures organizational members' personal feelings and attitudes toward IDDT implementation. It included acquisition of new skills and knowledge, IDDT understanding, advantage of IDDT compared to other services, commitment and motivation to IDDT implementation, consistency with personal philosophy and mission of care and current practice, and willingness to change current practice to include IDDT.

e) *IDDT support* refers to the degree to which the agency supports the implementation of an innovation such as the IDDT model. Scores obtained from

the Mental Health Provider Baseline Characteristics (MHPBLC) were used to develop the Agency-Support (AS) scale to measure *IDDT Support*.

f) *IDDT change readiness* refers to the likelihood the EBP (IDDT model) will be implemented within 9 months at the agency was measured by the score from one question of the MHPBLC.

Absorptive capacity. The conceptual definition of absorptive capacity is an organization's human capital characterized by mastery of a broad knowledge base, competencies, and the ability to process new information. Three indicators operationally define absorptive capacity, and include: a) the degree of workforce professionalism, b) familiarity of the IDDT model, and, c) experience utilizing IDDT. Scores obtained from the IDDT Baseline Internet Survey of practitioners for the NIEBPP study measured these three indicators (See Appendix C). The degree of workforce professionalism was measured by the highest school level attained. Ratings ranged from less than a master's degree (=0), and included technical school, some college, college degree, some graduate or professional school; and a master's degree or higher (=1) that included a doctoral or MD degree. Ratings for *familiarity of the IDDT model* ranged from not at all (=1); slightly (=2); moderately (=3); very (=4); and extremely (=5). Ratings for the degree of *experience utilizing IDDT* ranged from 3 months or less (=1); 4-12 months (=2); 13 months -3 years (=3); 4-5 years (=4); 6-10 years (=5); 11-15 years (=6); 16-20 years (=7); and > 20 years (=8).

Data Analysis

Qualitative data management and analysis. According to Padgett (1998), the goal of qualitative data management is to organize and store the data for easy retrieval and analysis. This current study managed two types of data from the NIEBPP project. The first data type was partially processed data that included the transcription of the in-depth interviews and observations of the stakeholders (EBP providers, program leaders, trainers, consultants, and clients), field notes, and observations of the Implementation Monitors. The second data type included the codes and categories of the transcriptions of this data, managed through ATLAS.ti (Muhr, 1989).

The study utilized a case study analysis of the existing NIEBPP qualitative data. It emphasized open coding and the identification of concepts, possible categories, and themes to emerge from the data. Conceptualization of the data was through open coding on ATLAS.ti. According to Glaser and Strauss (1967), open coding refers to the process of taking apart of the raw data, either by individual sentences, paragraphs, phrases, and giving each different phenomenon a name (hence phenomenology). Open coding led to numerous concepts, later classified into categories (Appendix D). The code manager in ATLAS.ti identified some of the emerging categories. The number of codes repeated helped to analyze these emerging categories.

The scope of the qualitative data analysis highlighted three IDDT sites that experienced high fidelity outcome scores, and three that experienced low fidelity outcome scores. Used in the analysis were a number of primary documents specific to these six sites. The qualitative analysis viewed this current study through a lens of the

various dimensions of organizational culture, absorptive capacity, and the change process.

Rigor and Trustworthiness

As this study employed a multi-state case study analysis of the qualitative data obtained from the NIEBPP study, it is necessary to identify potential threats that may have influenced its rigor and trustworthiness. Rigor refers to the authenticity of the study's findings and most importantly, credibility of its interpretation (Lincoln & Guba, 1985). Threats to trustworthiness of this current study may have resulted from three sources in the NIEBPP study. The first is reactivity, which refers to the potentially distorting effects of the researchers in the field (Padgett, 1998).

Instrumental to understanding the implementation process in the NIEBPP study was the competency and reliability of the Implementation Monitors (IMs) (NH-Dartmouth PRC, 2004). They represented the "eyes and ears" of the implementation team, and functioned as independent observers of implementation. Implementation monitors held a key role in the original study, mainly responsible for data collection of the EBP implementation process. Completed through site visits, the IMs conducted qualitative interviews, observed meetings, recorded focus groups, reviewed records, and maintained field notes. Their interactions were at the provider level, in addition to the client and family members' levels (NH-Dartmouth PRC, 2004). The presence of the IMs had the potential to distort respondents' attitudes, feelings and behaviors at both of these levels.

A second potential threat may have come from the IMs' biases. There was a possibility for these individuals to filter observations and interpretations that favored sites in their states. The third threat comes from respondents' biases, in that, there was the possibility for respondents to withhold or distort information to avoid negative study findings, or the opposite, exaggerate or give too helpful responses to enhance positive findings.

Despite the potential threats to trustworthiness, the NIEBPP study employed several strategies to enhance its rigor. Triangulation of sources of data (interviews, observations, field notes), of methods as both qualitative and quantitative were used, and of researchers (implementation monitors and fidelity assessors). Monthly site visits to collect systematic qualitative and quantitative data allowed for persistent observation by the implementation monitors. Peer debriefing on a monthly basis with other members of the NIEBPP research team allowed for the clarification of the IMs' interpretations and potential biases that may influence credibility of findings. The meticulous tracking on the process and outcomes of implementation by investigators enhanced a dependability audit, which refers to the clear and precise documentation of all steps of the research process (Lincoln & Guba, 1985).

Quantitative Analysis

The quantitative data were analyzed using descriptive statistics. In addition, a Pearson Correlation analysis determined if there exists a relationship between the measures of organizational culture, absorptive capacity, and fidelity outcomes. The development of scales measured other dimensions of organizational culture as described

earlier (See Table 2). Table 2 represents constructs of measures used in this data analysis. SPSS was the appropriate statistical software for analysis of this data.

Human Subjects Concern

This research is exempt due to secondary analysis of an existing data set from NIEBPP. The data listed have no identifying participant information and are approved by the Dartmouth Committee for the Protection of Human Subjects. This study was also approved by the Institutional Review Board (IRB), Catholic University of America (CUA).

Limitations to Secondary Analysis of Data

This secondary analysis identifies potential limitations to the data. First, a random process did not identify the 11 selected sites. Rather, these sites volunteered to participate in the implementation of the IDDT model, which has the potential to bias the outcomes toward more favorable results. Sampling was purposive based on the sites' ability to provide needed information, and the methods used to select sites differed across the three states. This limits the generalizability of the findings. A second limitation was the use of existing qualitative data (interviews, observation, field notes), documented and recorded by the NIEBPP's Implementation Monitors (IMs). The disadvantage is that, any filters placed on the data by the implementation monitors may bias the secondary analysis. In this study, there was also dependence that the data collected by the Implementation Monitors reflected accuracy and quality. The mostly descriptive study results are not a limitation as the study employed a more dominant qualitative design.

Summary

This chapter described a secondary analysis study of the National Implementation Evidence Based Practices Project (NIEBPP). Initial attention was given to Phase II of the NIEBPP study from which this secondary data analysis drew variables. The chapter outlined the purpose of the current study, the research design, research questions, and its hypothesis. As a mixed methods (QUAL-quant) research design, discussed in detail is the methodology of this study, as well as a rational for this researcher's paradigmatic framework. Described were the study population, conceptualization, and operationalization of the measurement variables. Outlined and described in detail is a description of the data collection instruments, in addition to information on reliability and validity of scales that were utilized in the study. The data analysis plan described both qualitative and quantitative aspects of the study. Specific attention was given to potential threats to trustworthiness of the qualitative findings, and methods employed by the NIEBPP study to enhance rigor. Last, human subject concerns and the limitations to the data of this secondary analysis were addressed. Chapter 4 will now focus on the findings from the detailed analysis described in this chapter.

Chapter IV: Quantitative Data Analysis

This chapter presents the quantitative findings from the study. First, general demographic information of the study sample (n=11) is summarized as reported by the Chief Executive Officers (CEOs) of the mental health agencies. Reported data include areas on general agency organizational characteristics, staffing characteristics, training, quality improvement, and an interpretation of these findings. This follows with a discussion of the descriptive analysis of the independent and dependent variable measures, and a description and interpretation of the results of the reliability analysis of scales developed as additional independent variable measures. The bivariate correlation analyses of the independent and dependent variables are presented, with an explanation of significant findings. This follows with a summation of critical findings of the study.

Demographic Findings

The research sample consisted of 11 community-based mental health (CBMH) organizations from three states, as illustrated in Table 3. Four (36%) of the sites in the sample were from Ohio, four (36%) from Indiana, and three (27%) from Kansas. All 11 sites (100%) identified as private non-profit organizations, of which two (18%) were affiliated with a hospital. For each of the 11 sites, local governance included a local board of directors, of which two (18%) also had a Local Advisory Board. Ten (91%) of the sites included consumers on the board, while nine (82%) included family members. Responses from 10 sites to geographic settings, four (40%) identified their geographic setting as urban; three (30%) as small city; two (20%) as rural/suburban, and one (10%) as rural. The total annual operating budgets (in dollars) for these mental health agencies ranged

between three million ($3M) and $32M, with 55% of the agencies reporting budgets over $10M.

The number of clinical sites for these mental health agencies ranged from one to nine sites. Similarly, the range for number of consumers served annually varied between 1500 and 17,000. With 10 sites reporting, approximately 60% served less than 5,000 consumers annually, 20% served between 5,000 and 10,000, and 20% served more than 10,000 consumers. Four (44%) agencies provided less than 50,000 hours of service annually, while just over half (55%) provided more than 100,000 hours of service. There were missing data for two agencies on annual number of services provided. With 10 sites reporting at the time of implementation of the Integrated Dual Disorder Treatment (IDDT) model, full-time staff ranged between 65 and 520 employees. Approximately a third (30%) of the agencies reported less than 100 full- time equivalent (FTE) staff persons, 2 (20%) between 100 and 200, and 5 (50%) more than 200 full-time employees.

Also identified are several organizational characteristics pertinent to staff who work with persons with serious mental illness (SMI). Of the 11 mental health agencies, seven (64%) identified staff that have a strong focus on their professional guild. Eight (73%) agencies indicated a lack of segregation by profession that refers to separation of staff personnel by professional discipline. Two (18%) affirmed professional segregation, and one (9%) neither affirmed nor disaffirmed professional segregation. Ten (91%) of the agencies indicated team functioning of a multidisciplinary nature. Five (45%) indicated paid consumers on staff, three (27%) had both paid consumers and family members, and three (27%) had neither paid consumers nor family members on staff. Of the 11 agencies,

only four (36%) included paid peer support specialists on staff. Two (18%) of the 11 agencies had staff with allegiances to professional organizations such as unions.

Ninety (90%) of the agencies indicated a formal staff training program, with only one agency indicating no staff training. This agency reported on-the-job training as a means for staff orientation to work duties and responsibilities. More than three quarters (72%) of the agencies reported a formal quality improvement program, while three (27%) reported the agency's quality improvement program was comprised of one agency employee. Table 3 illustrates the demographic findings as described above.

Table 3

Demographic Characteristics of Sample

	n	%
Organization's legal structure		
• Private non-profit	11	100
Governance		
• Local Board of Directors (LBD)	11	100
• Inclusion of a Local Advisory Board	2	18
• Inclusion of family members on LBD	9	82
• Inclusion of consumers on LBD	10	90
Geographic setting		
• Urban	4	40
• Small City	3	30
• Rural/suburban	2	20
• Rural	1	10
Annual operating budget (in dollars)		
• Less than $10M	5	45
• Between 10M - $20M	3	27
• Greater than $20M	3	27

	n	%
Number of clinical sites		
• Less than 3 sites	3	30
• 3 to 6 sites	4	40
• 6 and more sites	3	30
Number of consumers (served annually)		
• Less than 5,000	6	60
• Between 5,000-10,000	2	20
• More than 10,000	2	20
Number of annual hours of service		
• Less than 50,000	4	44
• More than 50,000	5	56
Number of FTEs Employees		
• Less than 100 FTEs	3	30
• Between 100-200 FTEs	2	20
• More than 200FTEs	5	50
Staffing Characteristics		
• Strong focus on professional guild	7	64
• No focus on professional guild	4	36
• Lack of professional segregation	8	73
• Affirmed segregation by profession	2	18
• Both affirmed and disaffirmed segregation by profession	1	9
• Multidisciplinary team functioning	10	91
• No multidisciplinary team functioning	1	9
• Inclusion as paid consumers as staff	5	45
• Inclusion of both paid consumers and family members	3	27
• Inclusion of neither paid consumers nor family members	3	27
• Inclusion of paid peer support specialists	4	36
• No inclusion of paid peer support specialists	7	64
• Staff allegiances to professional organizations	2	18
• No staff allegiances to professional organizations	9	82
Training Characteristics		
• Formal training program	9	90
• No formal training program	1	10
• Quality Improvement program	8	73
• No formal quality improvement program	3	27

Note. FTEs = Full-Time Equivalent; M=millions

Interpretation of Demographic Findings

The descriptive data indicate a wide variation in the size of the CBMH organizations that implemented IDDT. This is represented by the annual operating budgets (slightly more than 50% had budgets more than $10M); number of clinical sites (almost 75% with over three sites); number of consumers served annually (60% with less than 5,000 consumers); and the number of full-time employees (50% of CBMH organizations had over 200 FTE's). As discussed in Chapter II, human capital is an important organizational resource. Employees' 'buy-in', their tolerance for change, and ability to adapt to complex new knowledge, processes and procedures, play a critical role in the implementation of evidence-based practice (Corrigan et al., 2001; Rosenheck, 2001).

The staffing characteristics in the sample are noteworthy, as represented by the strong focus on professional guilds/associations (over 50% of the organizations), and emphasis on multidisciplinary team functioning (over 90%). The literature suggests environmental scanning that refers to the use of external sources of information, is a means to investment in the organization's absorptive capacity (Damanpour, 1991). One can infer that the workforce's investment in professional associations may enhance their mental health knowledge of empirically based treatment interventions, and the critical role of EBP in mental health services. The literature identifies the use of a multidisciplinary team as a significant treatment characteristic of the IDDT model (Biegel, et al., 2003). In the present study, over 90% of the CBMH organizations emphasized multidisciplinary team functioning, coupled with the lack of segregation by

profession (73%). The implication is the development of cohesion, mutual values and norms around IDDT implementation.

Almost three-quarters of the sample included consumers and family members as paid staff, which is critical to the service planning and decision-making processes of recovery-oriented quality improvement programs (Torrey & Wyzik, 2000). Approximately 75 % of the sample identified a quality improvement program integral to the organizations. Ninety percent (90%) of the sample reported the inclusion of a formal training program. This aligns with the literature that identifies training and professional development activities as a means to enhance absorptive capacity (Cohen & Levinthal, 1990).

Independent and Dependent Variable Measures

Descriptive analysis of the independent and dependent variable measures is depicted in Table 4. The independent variable measure for organizational culture (OC) was Zammuto and Krakower's (1991) *Organizational Culture* measure, a worksheet with five items that help to identify the current and dominant organizational culture type. Six additional dimensions of OC are identified, and scales were developed to measure five of these dimensions. These are discussed in the following summary. The second independent variable, absorptive capacity, was measured using three indicators and scores obtained from the IDDT Baseline Internet Survey of practitioners. They include (1) familiarity of the IDDT model, (2) experience utilizing IDDT, and (3) the degree of workforce professionalism.

Mean scores shown in Table 4 suggest that CBMH organizations in the current sample did not identify with a dominant organizational cultural type. Differences between

Table 4

Descriptive Statistics for Independent and Dependent Measures

	n	Mean	SD	Alpha
Organizational Culture				
Organizational Culture Type				
Group	11	28.85	7.76	-
Developmental	11	19.01	3.69	-
Hierarchical	11	22.54	5.26	-
Rational	11	29.61	6.42	-
Work Place Affiliation				
• Past Workplace Environment	11	3.44	.36	.880
• Expt. Workplace Environment	11	3.68	.28	.886
Innovation Influence				
• Workplace Change	11	2.80	.32	.812
Leadership Collaboration				
• Workplace Preparation	10	2.84	.56	.837
IDDT Values				
• IDDT Attitude	10	3.97	.30	.861
IDDT Support				
• Agency-Innovation Support	11	2.27	.45	.860
IDDT Change Readiness	11	4.10	.70	-
Absorptive Capacity				
Familiarity	10	3.25	.45	-
Experience	11	3.81	.60	-
Professionalism	11	.53	.26	-
Fidelity at 24 months	11	3.42	.53	-

the rational (mean score 29.61) and group organizational cultural types (mean score 28.85) were minimal. Hierarchical organizational cultural type indicated a mean score of 22.54 and developmental, a mean score of 19.01. Standard deviation (SD) scores for all four organizational culture types indicate that the variables for all four measures are relatively equal.

The variations in organizational cultural types of these CBMH organizations can be attributed to the varying sizes and organizational characteristics described in Table 3. A rational organizational cultural type values organization and control, with a focus on production and efficiency. The group culture values people, flexibility, and the focus is the development of human resources that emphasizes cohesion and morale development (Quinn & Kimberly, 1984).

Six additional dimensions of organizational culture (IV) were identified in this study. These include workplace affiliation, innovation influence, leadership collaboration, IDDT values, IDDT support, and IDDT change readiness. All six OC dimensions are discussed in Chapter III. Table 4 depicts the scale mean, standard deviation (SD), and cronbach's alpha of the scales developed to measure the first five dimensions of organizational culture. No scale was developed to measure the sixth OC dimension, IDDT change readiness as this was a single item.

The Past Workplace Environment (PWPE) and Expected Workplace Environment (EWPE) scales measured *workplace affiliation* that refers to employees' association and connection to their agencies. Item responses include a 5-point scale ranging from (=1) strongly disagree to (=5) strongly agree. The PWPE scale measured how employees experienced their workplace in the past 12 months, and the EWPE scale measured their

expectations for the workplace in the next 12 months. Both PWPE and EWPE scales have high internal consistency with .880 and .886, respectively. Both mean scores of 3.44 (PWPE) and 3.68 (EWPE) indicate average affiliation, both past and expected, by employees to their workplace.

The Workplace Change (WC) scale measured *innovation influence* that refers to what influences workplace change, such as the implementation of the IDDT model. Item responses are on a 5-point scale ranging from (=1) rarely to (=5) most of the time. Conceptually, this researcher was attempting to discover data related to what most influenced innovation and the change process in these CBMH organizations. Influences ranged from action by practitioner, collaboration, model practitioners or practice, committee, consumer, and family. A mean score of 2.80 suggests innovation and change in the workplace did not occur frequently through the aforementioned actions.

The Workplace Preparation (WP) scale measured *leadership collaboration* that is, the degree to which administrators (stakeholders) have prepared the workforce for the implementation of the evidence-based practice (in this case, the IDDT model). Item responses were on a 5-point scale ranging from minimal (=1) to very great (=5). Preparation and collaboration by stakeholders are critical to the implementation process in CBMH organizations. This dimension of organizational culture identified various ways by which this can occur. They include (a) stakeholders explaining to organizational members the reason for IDDT implementation, (b) the purpose and goal of IDDT, (c) organizational members input in the planning process of IDDT implementation, and (d) the opportunity to participate in IDDT implementation. One question (q. 63) specific to mandating participation was deleted in the development of the WP scale, which resulted

in an alpha score of .837. A mean score (2.84) infers somewhat weak leadership collaboration with workforce members of CBMH organizations.

The development of the IDDT Attitude scale measured *IDDT values* that is, practitioners' attitudes toward implementation of the IDDT model. This scale measured organizational members' personal feelings and attitudes toward IDDT implementation. Item responses ranged from strongly disagree (=1) to strongly agree (=5). A mean score of 3.97 suggests a majority of the CBMH organizational members valued IDDT and held positive attitudes toward its implementation. The IDDT Attitude scale demonstrated an alpha of .861.

IDDT support, the degree to which the agency supports the implementation of an innovation such as the IDDT model, was measured by the development of the Agency-Innovation Support (AIS) scale. Items responses ranged from not all (=1) to very great (=5). A mean score of 2.27 suggests less than average IDDT support by the agency through the hiring of competent personnel, agency priority to IDDT implementation, work support for IDDT, and funding for IDDT implementation. The AIS scale showed very high internal consistency (.860).

IDDT change readiness refers to the likelihood the EBP (IDDT model) will be implemented within 9 months at the agency. No scale was developed for this dimension, and it was measured by the score from one question from the MHPBLC (see Table 2). The item response ranged from not at all (=1) to completely (=5). A mean score of 4.10 suggests a majority of the CBMH organizational members supported the likelihood that IDDT will be implemented within 9 months at their individual agencies.

Table 4 shows mean scores for absorptive capacity measures. Item responses for *familiarity of the IDDT model* ranged from not at all (=1) to extremely (=5). A mean score of 3.25 suggests the majority of the workforce was moderately familiar with the IDDT model. Item responses for *experience utilizing IDDT* ranged from 3 months or less (=1) to greater than 20 years (=8). A mean score of 3.81 indicates the majority had between one to three years of IDDT experience. Item responses for *workforce professionalism* measured highest school level attained, and ranged from less than a master's degree (=0) to a master's degree or higher (=1). As a dichotomous variable, the mean score (.53) indicates just over a majority of the workforce, that is 53%, involved with IDDT implementation had a Master's degree or higher, while 47% of the workforce had some college education but less than a Master's degree.

Fidelity, the dependent variable, was measured by the Dartmouth IDDT Fidelity Scale (2002). Thirteen dimensions specific to fidelity at 24 months were measured, and item responses ranged from no adherence (=1) to full adherence (=5). The mean score of 3.42 indicates a moderate fidelity adherence to IDDT implementation.

Bivariate Analysis of Independent Variables

Pearson's Product Moment Correlation was used to investigate the bivariate relationships among the independent variables, organizational culture and absorptive capacity. Table 5 depicts the bivariate correlation for these variables. Included in this correlational analysis were (1) the four organizational culture types (group, developmental, hierarchical, and rational); (2) the additional dimensions of organizational culture (workplace affiliation, innovation influence, leadership collaboration, IDDT

Table 5

Bivariate Correlation Matrix for Independent Variables

	1	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. OC Group		.231	-.637*	-.822**	.479	.335	.665*	.080	-.078	.274	-.121	.014	-.321	-.278
2. OC Developmental			-.560	-.396	.435	.340	.370	.356	.333	.336	.382	.489	.219	-.180
3. OC Hierarchical				.274	-614*	-.538	-.512	-.180	.209	-.794**	-.472	-.350	-.061	.230
4. OC Rational					-.326	-.158	-.598	-.160	-.299	.125	.314	-.008	.313	.253
5. Past Work Place Affiliation						.919**	.624*	.069	-.269	.538	.527	-.041	-.183	-.270
6. Ex. Work Place Affiliation							.519	-.117	-.340	.539	.605*	-.249	-.206	-.341
7. Innovation Influence								.397	.233	.351	-.023	.227	-.138	-.045
8. Leadership Collaboration									.697*	.088	.138	.871**	.429	.741*
9. IDDT Values										-.132	-.166	.566	.177	.574
10. IDDT Support											.561	.286	.118	.00
11. Change Readiness												.144	.194	-.066
12. Familiarity													.628	.658*
13. Experience														.605*
14.Professionalism														

* Correlation significant at the 0.05 level (2-tailed)
** Correlation significant at the 0.01 level (2-tailed)

values, IDDT support, and IDDT change readiness; and (3) the three dimensions of absorptive capacity that are familiarity, experience, and professionalism,.

Interpretation of Bivariate Correlation Matrix for Independent Variables

As shown in Table 5, there was a negative correlation between group typology and that of hierarchical ($r = -.64$, $p < .05$) and rational culture types ($r = -.82$, $p < .01$). The analysis supports the differences in characteristics and traits of these three organizational culture types (Zammuto & Krakower, 1991). A moderate positive correlation exists between group culture and innovation influence ($r = .67$, $p < .05$). Organizations that emphasize human relations and empowerment involve organizational members and other stakeholders to influence innovation change through decision-making and facilitation. There was a negative moderate correlation between hierarchical culture type and workplace affiliation ($r = -.61$, $p < .05$). Organizations that emphasize bureaucracy, rules and control are less likely to have organizational members with a strong affiliation to their workplace. The analysis also indicates there was a high negative correlation between hierarchical culture type and IDDT support ($r = .-80$, $p < .01$). Organizations that emphasize a "top-down" leadership approach, with an emphasis on enforced rules and procedures are less likely to have the support for innovation a change initiative such as IDDT implementation.

Although there was no correlation with each other, the correlation matrix indicated similarity of the group and developmental culture types ($r = .231$), and that of hierarchical and rational culture types ($r = .274$). A possible interpretation is the overlap of organizational characteristics between group and developmental organizational culture types. Both emphasize organizational members' growth and development, leadership,

decision-making, and creativity. Hierarchical and rational culture types' emphases are more on control, goal setting, and results-oriented (Cameron & Quinn, 2006). There was no significant correlation between development organizational culture type and any dimensions of organizational culture and absorptive capacity.

There was a very high correlation between the organizational culture dimension of workplace affiliation (past) and expected ($r=.92$, $p<.01$). This high correlation demonstrates the possibility of multicollinearity between past and expected workplace affiliation, in that, both constructs measure the same dimension of affiliation. As such, workplace affiliation (expected) was dropped from the analysis. Workplace affiliation (past) also had a moderate correlation with innovation influence ($r=.62$, $p< .05$). A possible explanation for the moderate correlation is that organizational members involved in previous organizational change initiatives may experience a positive affiliation for their workplace in the past 12 months.

The matrix indicates there was a moderate correlation with leadership collaboration and IDDT values ($r= .70$, $p< .05$), a high correlation with the absorptive capacity dimensions of familiarity ($r=.88$, $p<.01$), and moderate correlation with professionalism ($r=.74$, $p< .05$). Practitioners in the workplace, prepared by various administrators (leadership collaboration) to implement the IDDT model, may value IDDT implementation. Similarly, with leadership preparation, practitioners may experience more familiarity with IDDT. In addition, the extent of preparation for IDDT implementation by the leadership may relate to the level of education of practitioners (professionalism).

Among the absorptive capacity dimensions, there was a moderate correlation between familiarity and professionalism ($r=.66$, $p< .05$), and experience and professionalism ($r=.61$, $p< .05$). This indicates a relationship between practitioners' familiarity and experience with IDDT and their level of education (professionalism).

Bivariate Analysis of Organizational Culture and Absorptive Capacity by Fidelity

Pearson's Product Moment Correlation was used also, to investigate bivariate relationships among the independent variables and the dependent variable. Table 6 depicts the bivariate relationships among the independent variables of organizational culture and absorptive capacity, and the dependent variable of fidelity.

As can be seen in Table 6, there was a significant correlation between leadership collaboration and fidelity at 24 months ($r=.79$, $p < .01$), and between IDDT values and fidelity at 24 months ($r=.72$, $p < .05$). The analysis suggests there is a positive linear relationship between leadership collaboration and fidelity in CBMH organizations. Those CBMH organizations that demonstrate leadership collaboration are more likely to experience higher fidelity scores at 24 months. The analysis also suggests a positive linear relationship between IDDT values and fidelity in CBMH organizations. Those organizations in which members value IDDT and hold positive attitudes toward its implementation are more likely to experience higher fidelity scores at 24 months. The analysis suggests that there is no significant relationship between organizational culture type and fidelity at 24 months. It also suggests there is no significant relationship between workplace affiliation, innovation influence, IDDT support, and IDDT change readiness and fidelity at 24 months.

Table 6

Organizational Culture and Absorptive Capacity Variables by Fidelity

Organizational Culture	IDDT Fidelity (24 months)
Group	.07
Developmental	.10
Hierarchical	-.04
Relational	-.10
Work Place Affiliation	-.13
Innovation Influence	.31
Leadership Collaboration	.79**
IDDT Values	.72*
IDDT Support	.072
IDDT Change Readiness	.08
Absorptive Capacity	
Familiarity	.60**
Experience	.43
Professionalism	.75**

** $p < .01$ level
* $p < .05$ level

Table 6 also shows a moderate correlation between familiarity and fidelity at 24 months ($r=.60$, $p < .05$). The analysis suggests CBMH organizations that have organizational members who are familiar with the IDDT model will more likely experience higher fidelity scores. There is a strong correlation between professionalism and fidelity at 24 months ($r=.75$, $p < .01$). CBMH organizations with a more professional workforce will more likely experience higher fidelity scores at 24 months.

Interpretation of Bivariate Analysis of Organizational Culture and Absorptive Capacity by Fidelity

A goal of this study was to understand the influence of organizational culture and absorptive capacity on the fidelity of implementation of the IDDT model in CBMH organizations. The hypothesis of this study is that community-based mental health (CBMH) organizations with an organizational culture characterized by a developmental/open systems model typology and high levels of absorptive capacity will experience higher fidelity outcomes. Findings from the bivariate analysis indicate no significant relationship between organizational culture type and fidelity. The analysis did not support organizational culture type characterized by a development typology and a relationship with fidelity at 24 months.

Several reasons may attribute to this lack of support. One possible explanation may lie with the small number (n=11) of sites in the current study's data set. Analysis of organizational culture by typologies indicates this may not be a sensitive measure to capture organizational culture, with only 11 sites. Another possible interpretation is that implementation of the IDDT model is more specific to a team of practitioners in CBMH organizations, and not the organization in its entirety. Perhaps an analysis of the organizational culture that exists within the team of practitioners implementing IDDT may be more influential on fidelity at 24 months.

However, study findings indicate other dimensions of the organization's culture are important to fidelity of EBP implementation at 24 months. Data indicates there is a positive linear relationship between leadership collaboration and fidelity in CBMH organizations. The literature supports leadership as critical to the organizational context

in which implementation occurs (Ganju, 2006), significant in shaping organizational members' perceptions and attitudes toward EBP (Aarons, 2006).

The study also shows IDDT values, a second dimension of organizational culture, has a positive linear relationship with fidelity in CBMH organizations. The literature suggests values, perceptions and attitudes of members of the organization affect service delivery, which influences fidelity to established protocols (Glisson, 2007). The inference from the data is that, these two dimensions of organizational culture, leadership collaboration and IDDT values are more specific to a sub-unit or team of practitioners responsible for implementing the IDDT model.

Both indicators of absorptive capacity, familiarity and degree of professionalism demonstrated a positive, linear relationship with fidelity. Familiarity had a moderate correlation with fidelity, and professionalism had a significant correlation. The analysis suggests CBMH organization with higher levels of absorptive capacity as demonstrated by practitioners' familiarity with IDDT, and degree of professionalism, will more than likely experience fidelity to IDDT implementation. The literature supports prior knowledge or familiarity as important to innovation implementation (Cohen & Levinthal, 1990). The literature also supports the employment of a professional workforce enhances absorptive capacity and are positively associated with the use of treatment innovations (Knudsen & Roman, 2004).

Summary

Chapter Four addressed the demographic results and quantitative findings for the study. Results and analyses of the findings were presented along with interpretations. The sample consisted of 11 community-based mental health (CBMH) private non-profit

organizations, whose geographic locations were distributed mainly in urban and small cities. Organizational characteristics indicated variations in size of these sites. Annual operating budgets ranged between less than $10M (45%) and evenly split between those with budgets of $10M to $20M (27%) and more than $20M (27%). Sixty percent (60%) of the sites reported serving less than 5,000 consumers on annual basis.

CBMH organizations employed between 65 and 520 employed full time employees that demonstrated a wide range. Fifty percent employed more than 200 full-time employees. Consumers and family members were included as paid staff for over 50% of the sites. Multidisciplinary team functioning was significant in 90% of the agencies; likewise focus on professional guild involvement (64%), and a lack of professional segregation (73%). The majority of sites reported the inclusion of a formal staff-training program (90%) and a quality improvement program (73%).

Related to the hypothesis of the study, the data did not fully support the stated hypothesis. Correlation analysis indicated no significant relationship between organizational culture type and fidelity at 24 months. However, there were significant correlations associated with other dimensions of organizational culture, the independent variable. There was a significant correlation between leadership collaboration and fidelity at 24 months ($r=.79$, $p < .10$). The analysis suggests CBMH organizations that prepare practitioners for IDDT implementation through demonstrated leadership collaboration are more likely to experience higher fidelity scores at 24 months than those that do not. There was also a significant correlation between IDDT values and fidelity at 24 months ($r=.72$, $p < .05$). This suggests that CBMH organizations in which members value IDDT and

hold positive attitudes toward its implementation are more likely to experience higher fidelity scores at 24 months.

The study's hypothesis indicated partial support for the second independent variable, absorptive capacity and fidelity at 24 months. There was a moderate correlation between familiarity and fidelity ($r=.60$, $p < .05$). The analysis suggests CBMH organizations that have organizational members who are familiar with the IDDT model will more likely experience higher fidelity scores. A strong correlation existed between professionalism and fidelity at 24 months ($r=.75$, $p < .01$). This suggest CBMH organizations with a more professional workforce will more likely experience higher fidelity scores at 24 months.

Chapter Five will present a detailed description and interpretation of the qualitative findings of the study. The chapter will attend to threats to rigor and trustworthiness, researcher's biases, and strategies to enhance rigor.

Chapter V: Qualitative Findings

This exploratory study and secondary analysis was two-fold in purpose. Specific to community-based mental health (CBMH) organizations, this study sought (i) to understand the influences of organizational culture and the change process on the level of fidelity to the implementation of the Integrated Dual Disorder Treatment (IDDT) model, and (ii) to address the dual influence of organizational culture and absorptive capacity and its relationship to fidelity of IDDT implementation. Chapter 5 presents findings specific to the study's primary purpose: to understand the influences of organizational culture and the change process on the level of fidelity to the implementation of the IDDT model in CBMH organizations.

The introduction of new, innovative practices requires changes across multiple levels in the agency, and agencies grapple with integrating a new approach to services into embedded practices and procedures. An underlying assumption in this study is that the existing organizational culture and the change process itself shape organizational members' behaviors, attitudes, and ways of thinking about the implementation of new, innovative mental health interventions. As program developers, administrators, and other stakeholders seek to implement an EBP with fidelity, a better understanding of the influence of these two concepts may highlight salient organizational issues pertinent for consideration.

The first section of this chapter addresses qualitative data analysis methods employed in the study of six of the 11 sites that implemented the IDDT model, a psychosocial mental health intervention that promotes positive rehabilitation and recovery outcomes for persons with mental illness and substance use problems. The

second section offers a detailed description of the six sites selected for analysis through utilization of the final 24-month (24M) IDDT Implementation Reports. To protect their anonymity, the analysis used pseudonyms for the selected sites. The third section addresses the six major findings obtained from the patterns, themes, and conceptual categories derived from the data analysis. Descriptions of findings are supported with excerpts of quotations from the interviews and reports. The chapter concludes with an overall summary.

Analysis Plan

As a secondary data analysis, this study focused on six of the 11 sites that implemented the IDDT model across three states. Three sites experienced high model fidelity scores, and three experienced low model fidelity scores. A decision was made to utilize a subset of data collected at five time points in the original study. A review of 97 documents, in addition to the 24-month (24 M) final implementation reports for the six sites, provided the data to answer the following qualitative research question: How do organizational culture and the change process influence fidelity of the implementation of the IDDT model?

Documents reviewed for this analysis included: a) fidelity reports that documented the ratings on the General Organizational Index (GOI) and the IDDT Fidelity Scale; b) reports that evaluated the implementation process from the perspective of the Implementation Monitor; c) interview transcripts with the consultant-trainer and program leader associated with each study site; and, d) the 24M IDDT final implementation reports.

Protocols defined the implementation monitors' summaries and interviews with the trainer/consultants and program leaders. The purpose was to determine which strategies and facilitators were effective in bringing about high fidelity implementation of the IDDT components, barriers to implementation of IDDT, stakeholder involvement, and an assessment of the impact of the implementation intervention (Implementation Resource Kit and consultant/trainer). Protocols also defined the 24M final Implementation Report. This included an executive summary and detailed descriptions of the mental health agency, the preparation phase, the intervention, implementation outcomes (fidelity and penetration), the implementation process, and the sustaining phase. Reports and interviews recorded at five time points through a 24-month period included those obtained at baseline, 6M, 12M, 18M, and 24M time points. The final implementation report was completed at the 24M time point. Table 7 displays the types of documents used in the analysis, a description of each document type, who completed the document, and how often it was completed.

Table 7

Documents Used in Data Analysis

Type	Description	Reported By	Time Point(s) Reported
Fidelity Report	Summary of the General Organizational Index and the IDDT Fidelity Scale	Consultant/Trainer	BL, 6M, 12M, 18M, 24M
Implementation Monitor Summary	Description of program's overall implementation efforts	Implementation Monitor	BL, 6M, 12M, 18M, 24M
Program Leader Interview	Transcript of interview conducted with the Program Leader of the IDDT implementation project	Program Leader	BL, 6M, 12M, 18M, 24M
Trainer Interview	Transcript of interview conducted with consultant/trainer for the IDDT implementation project	Consultant/Trainer	BL, 6M, 12M, 18M, 24M
Final Implementation Report for Each Site	A final report that describes the MH agency; preparation phase; intervention; implementation outcomes (fidelity & penetration); implementation & sustaining process; and the sustaining phase	Implementation Monitor	24M

Note. BL = baseline; M = month

Due to the large amount of raw data in the original study, the computer software program, ATLAS.ti (Muhr, 1989) was utilized to manage all data pertinent to this study. ATLAS.ti allowed for management of content with easy retrieval for analysis. The data analysis plan called for a review of 120 primary documents (PDs) from the original *hermeneutic unit* (HU). The HU is the foundation for managing a project in ATLAS.ti and refers to the analytic unit that provides the data structure for each research project.

However, in the original study, implementation issues that arose in certain sites resulted in the lack of completion of various reports at several time points. As such, the HU for this current analysis consisted of 97 documents for review and coding. This allowed for a longitudinal sampling across each of the six sites, in addition to *data triangulation*. Triangulation is a valuable means to enhance rigor in qualitative research (Padgett, 1998). Denzin (1978) identifies four types of triangulation relevant to qualitative research that includes theory, methodological, observer, and data triangulation. In this analysis, multiple informants (observers) and more than one data source (original reports and interview transcripts) allowed for multiple perceptions and clarification, while adding meaning to the interpretation of high and low fidelity of IDDT implementation.

A case study research analysis was employed for this study, and according to Creswell (2007), "case study research involves the study of an issue explored through one or more cases within a bounded system" (p. 73). As a collective case study, the analysis involved a study of six sites, three with high fidelity scores and three with low fidelity scores. The qualities and characteristics specific to the concepts of organizational culture and the change process on the level of fidelity to IDDT implementation were defined through a detailed examination of the multiple sources of information described in Table 7. According to Yin (2003), case study research draws on multiple sources of information such as direct observations, interviews, documents, participant-observations, and archival records.

The analytic strategy involved identifying issues within each site. Conceptualization of the data to identify characteristics, themes, and patterns specific to

organizational culture and the change process occurred through open coding. As described by Glaser and Straus (1967), open coding refers to the process of taking apart the raw data, either by individual sentences, paragraphs, or phrases, and giving each different phenomenon a name (hence phenomenology). Using open coding, the raw data were analyzed from the specific and then to the general, and then coded again from an inductive approach. In addition to open coding, *in vivo* coding, which refers to coding based on the language used by participants during interviews, formed the basis of this inductive analysis.

The iterative process of open coding led to numerous concepts, later classified into categories (Appendix D). The code manager in ATLAS.ti helped to identify the various emerging categories, analyzed through the repetition of codes. At the same time as the coding process, the writing of memos aided in documenting salient aspects of the research in addition to the emerging issues across sites at various time points. *Memoing,* a concept coined by Strauss (1987), refers to the internal dialogue that goes on within the researcher. It involves the writing of notes, memos, or journal entries specific to areas of interest that emerge through the reading and coding of the data (Bloomberg & Volpe, 2008). The memo manager in ATLAS.ti assisted with categorization of the various emergent themes, and served as an audit tool for this analysis.

With saturation in data coding, a review of the various categories over numerous times allowed for the extrapolation of several patterns and themes that constituted the final coding scheme (Appendix E). As part of the *peer debriefing* strategy to guard against bias and enhance rigor (Padgett, 1998), the emergent coding scheme and thematic categories were discussed with dissertation committee members for verification of the

analysis. Peer debriefing allowed for external insight into the data analysis and findings from experienced researchers and the investigator of the original study.

Description of Sites

The following section describes characteristics of the study sites and frames the context of IDDT implementation. Descriptions are drawn from the final 24M Site Reports for IDDT Implementation. With the exception of one site (LF2) affiliated with a hospital, all other sites were private non-profit mental health agencies that involved governance by a local board of directors. Agencies differed across characteristics. Table 8 highlights the major characteristics of the agencies categorized by high fidelity (HF) and low fidelity (LF) scores. These included setting types; annual operating budgets; number of consumers served per year; number of consumers with serious mental illness (SMI) served per year; size of full-time personnel employed with the agency; number of clinical sites; inclusion of consumers, families, and peer support as paid staff; a focus on professional guilds; and allegiance to professional organizations. All sites employed a multidisciplinary approach to service delivery.

Table 8

Characteristics of Sites with HF and LF Scores at 24 months.

Characteristics	Sites					
	LF1	LF2	LF3	HF1	HF2	HF3
24M fidelity score	2.79	2.79	2.71	3.86	4.21	4.21
Legal structure	private nonprofit	governmental entity (501C1)	private nonprofit	private nonprofit	private nonprofit	private nonprofit

Characteristics	Sites					
	LF1	LF2	LF3	HF1	HF2	HF3
Number of clinical sites	4	8	9	8	1	3
Setting type	suburban/ rural	urban	small city	small city	Rural	suburban/ rural
Total annual operating budget	$4.2m	$32m	$21m	$9m	$3.4m	$5.45m
Number of consumers served by agency/year	3,000	14,000	8,204	1,564	1,700	2,973
Total hours of service by agency/year	42,736	300,000	131,997 (out-patient)	missing data	47,188	48,700
Number of FTE in agency	76	520	280	missing data	65	110
Number of SMI consumers served/year	1,000	12,870	800	320	130	550
Total hours to SMI/year	approx 25,600	184,348	21,368	16,000-25,000	missing data	missing data
Total FTE for SMI program/year	40	303	80	missing data	19	missing data
Consumers/family members on paid staff	consumers	consumers	no	no	Both	consumers
Paid peer support specialists	yes	yes	no	no	No	no
Allegiance to professional organizations	no	yes	yes	no	No	no

Note. SMI=Serious Mental illness; FTE= Full Time Equivalent; LF=low fidelity; HF=high fidelity; m= million

In addition to the demographics listed in Table 8, other pertinent information gathered from the 24-month site reports gives initial insight into these CBMH organizations. Extrapolated from these site reports, the following section highlights additional information for each of the six sites.

Sites with low model fidelity scores. LF1 was a site that expressed interest and enthusiasm around implementing the IDDT model. There was strong support from both the local Mental Health Authority (MHA) and LF1's Board due to the stability of this agency's administrative team. This team had been in place since 1992 and represented a solid foundation. Two factors contributed to LF1's selection to participate in the IDDT implementation project: ongoing communication with the state's Substance Abuse Mental Illness Coordinating Center of Excellence (SAMI CCOE), and the agency's report that elements of IDDT were already in practice at the agency. Also factored into consideration was LF1's long-standing and client-driven philosophical approach to SMI services.

As a CBMH agency, LF1 represented a merger of child and adult agencies due to the lack of funding with children's services. The decision was at the behest of the local MHA that defunded the other agency. As reported, the merger was one of three change efforts undertaken by the agency; the others were preparation for a Medicaid audit approximately five years ago, and implementing elements of IDDT within the past year. LF1 had no previous experience in EBP implementation.

Of the six sites in this study, LF2 was the largest with an annual budget of $32m. As described in Table 8, the agency employed 520 employees and served annually almost 13,000 consumers with SMI. Affiliated with a large urban hospital, LF2 served as the

Department of Psychiatry, and identified as the largest CBMH organization in the state. However, due to its affiliation with an urban hospital, LF2 primarily served a large, indigent population that contributed to its history of financial instability. The lack of payment for services by the hospital's patients, in addition to the low Medicaid reimbursement rates to the hospital, contributed to ongoing financial struggles experienced by LF2.

LF2 reported no prior EBP implementation efforts. A recent change initiative to implement home-based services was described as "crashing' and then okay. According to the staff, initial reactions to change initiatives were painful, later modified to adjustment with education and communication around the change initiative. The agency's selection to participate in the original IDDT implementation study was based on their application to the Request for Proposal (RFP) from the state's authorizing entity. Enthusiasm and interest in the integration of mental health and substance abuse services within the agency, and its adoption of a recovery model of services, appeared to be factors that contributed to LF2's selection. LF2's philosophical approach to services with the SMI population centered on services in the community, wrapped around the consumer's need. This approach to services aligned with the newly adopted recovery model for services at the agency that emphasized collaboration with the client, and utilization of resources to enhance quality of life.

Of all sites in this study, LF3 had the most experience with attempts at implementing change initiatives that centered on several evidence-based psychosocial mental health interventions. Although this agency had a history of financial stability, there were issues of recent staff turnover in the SMI program. It also appeared that

tension existed between LF3 and the state's funding entity due to LF3's perception of inadequate funding allocation for IDDT's implementation.

As a mid-size CBMH organization with nine treatment facilities, LF3 served a small city with a population of approximately 70,000. However, there were no reports of consumers or family members as part of the agency's paid staff, and their inclusion in program planning seemed limited. Similarly, LF3 had no quality improvement programs in place, nor any systematic tracking of consumer outcomes. Any insight to LF3's philosophical approach to services for their SMI consumers was lacking due to the interviewee's inability to express his understanding of the meaning of philosophical approach. As documented in the 24M IDDT report, LF3's overall priority was controlling administrative costs.

Sites with high model fidelity scores. HF1 was one of nine sites selected statewide to participate in the original study. Its selection generated interest and enthusiasm due to the availability of the state's SAMI CCOE to provide technical assistance and training to the agency. As a selected site, HF1 joined the group of other state providers implementing the IDDT model. Conflict and political instability between staff members and members of the administration existed at HF1. This revolved around the reallocation of funding for the implementation of another EBP within the agency. Staff's pressure on the leadership resulted in the selection of the IDDT model, despite no previous EBP implementation at the agency.

As identified in the 24M report, HF1 engaged in three recent change initiatives. The first was a merger between the mental health and the substance abuse agencies

during the mid nineties. The second was a failed attempt at a union campaign, and the third was an initiative to implement elements of IDDT.

HF2 served both adults and children in a rural county. Table 8 indicates this CBMH organization was the smallest of all sites identified in this study. In addition to outpatient mental health and substance abuse services, the agency offered a wide array of services to its consumers. This included case management, supported employment, group and respite living, medication services, and psychosocial programming. HF2's philosophical approach to services for persons with SMI was based in a strengths-based service delivery model. The agency fostered a relationship with the local Consumer Run Organization, and was a site for a weekly Alcoholics Anonymous (AA) meeting.

HF2's selection by the state's local MHA to participate in the original study was the result of the organization's expressed interest, stability, need, and location. The selection of IDDT was due to the lack of integrated mental health and substance abuse services in the county that resulted from the closure of the state hospital. Recent change initiatives identified by HF2 included the addition of weekend services, adding new psychosocial groups to the list of services, and implementing a program to transport a group of consumers to a job site located in the city.

For HF3, the third high fidelity study site, its participation in the original EBP implementation study was strongly encouraged by the local MHA, despite HF3's reported financial concerns. In addition, the agency had no prior experience with implementing an EBP, and the selection of IDDT was the only option offered by the local MHA. As a study site, HF3 provided services to consumers over a large geographical

area that included two counties. The agency's philosophical approach to the SMI population was to provide quality, affordable, clinically appropriate, recovery services.

HF3 served two counties characterized by very distinct geographic and cultural differences. The main site, located in a suburban setting in the southern county, included three clinical sites. The CEO of this study site described the location of HF3's facilities in the southern county as one of the 15 fastest growing cities in the United States, with a population of 130,000. Located in the more rural northern county was HF3's second site that offered mental health services through one clinical site. This site also participated in the implementation of IDDT, and served a geographic area with a population of approximately 30,000. According to HF3's Program Leader, northern county residents were more suspect of mental health services than those in the southern county. The accessibility of resources was greater in the southern county than the rural northern county, which experienced greater poverty.

Findings

This section presents the key findings obtained from 97 documents collected at five time points (baseline, 6, 12, 18, and 24-month), and six final 24M implementation reports for sites that implemented IDDT. Five major findings or themes that emerged strongly influenced the 24M fidelity scores across the six sites. Findings clustered around their relevance to dimensions of organizational culture and the change process.

One major finding relevant to organizational culture was:

1) Site differences were characterized by a philosophical orientation toward consumer-based mental health treatment that was evidenced by (a) the level of congruence between the agency's philosophical approach to mental health

services and the IDDT model; (b) norms, values, and beliefs; and (c) the concept of a team culture.

Findings relevant to the change process (how change occurs) include:

2) The role and influence of leadership, and to a lesser degree the external stakeholders, were critical to IDDT support.
3) Site differences in the level of adaptability (flexibility and change) versus maintenance of the status quo (stability and control) were evidenced by (a) consensus and buy-in; (b) changes in agency practices and practitioner behaviors; (c) role delineation among staff personnel; and (d) management of existing competing organizational demands.
4) Site differences in learning the use of the IDDT model language were demonstrated by: a) training investment; b) mastery of skills, knowledge, and competencies; and, c) a high level of clinical sophistication.
5) Site differences were characterized by the prioritization of supervision.

Table 9 presents a summary matrix of global ratings for each of the sub-themes at the high fidelity and low fidelity sites. For some sites, themes were very pronounced in their influence on fidelity to implementation. In others, although themes were present, their overall influence on fidelity was not clear-cut. The plus sign (+) indicates a general presence and influence of the theme, while the negative (-) sign indicates a general absence of the theme's influence on fidelity. The neutral (ø) sign indicates there was no clear-cut direction to that theme's influence on fidelity of implementation. This matrix allows for a summary of implementation themes across all six sites.

Table 9

Summary Matrix of Global Ratings of Themes across High and Low Fidelity Sites

Themes	Sites					
	LF1	LF2	LF3	HF1	HF2	HF3
Theme relevant to organizational culture						
1. A philosophical orientation toward consumer-based mental health treatment evidenced by:						
1) level of congruence between the agency's philosophical approach to mental health services and the IDDT model	_	_	_	+	+	+
2) norms, values, and beliefs	+	_	_	+	+	+
3) concept of a team culture	+	Ø	_	+	+	+
Themes relevant to the change process						
2. Support for the EBP (IDDT model), influenced by:						
1) role of leadership	_	_	_	Ø	+	+
2) external stakeholders	Ø	_	_	+	+	+
3. Adaptability (flexibility and openness) versus maintenance of the status quo (stability and control) evidenced by:						
1) consensus and buy-in	Ø	_	_	+	+	+
2) changes in agency practice	_	_	_	+	+	+
3) changes in practitioner behaviors	_	_	_	+	+	+
4) role delineation among staff personnel	_	_	_	Ø	+	+
5) management of existing competing organizational demands	_	_	_	+	+	+

Themes	Sites					
	LF1	LF2	LF3	HF1	HF2	HF3
4. Learning the use of the IDDT model language, attained through:						
1) Training investment	+	Ø	_	+	+	+
2) Mastery	Ø	_	_	+	+	+
3) High level of clinical sophistication	_	_	_	+	+	+
5. Supervision priority	+	_	_	+	+	+

Note. Plus sign (+) = general presence of theme; Negative sign (-) = general absence of theme; Neutral sign (Ø) = neither an overall general presence nor absence of theme.

Following is a detailed discussion of each finding, supported by data obtained through the documents and interviews across sites and time points. The use of transcript excerpts and quotations taken from the various fidelity and implementation reports and from interviews with both the site's program leader and associated consultant/trainer illustrate the two focal concepts.

Finding 1: Site differences were characterized by a philosophical orientation toward consumer-based mental health treatment that was evidenced by:a) the level of congruence between the agency's philosophical approach to mental health services and the IDDT model; b) norms, values, and beliefs; and, c) the concept of a team culture. Specific to organizational culture, an important finding in this study was the philosophical orientation toward consumer-based mental health services in all six sites. Underlying this philosophical orientation were three themes that highlighted differences in the ideological fit of the philosophy of the IDDT model and that of high and low fidelity sites. These are: a) the level of congruence between the agency's

philosophical approach to mental health services and the IDDT model; b) norms, values, and beliefs; and, c) the concept of a team culture. Following is a discussion of each theme and how it influenced fidelity of IDDT implementation.

Level of congruence between the agency's philosophical approach to mental health services and the IDDT model. Significant in its influence to the final fidelity scores was the level of congruence between the agency's philosophy to mental health treatment and the IDDT model. From baseline through the 24M time points, fidelity reports identified a consumer-centered focus integral to the sites' philosophical approach to mental health services. Central to the IDDT model is an emphasis on the consumer. The congruence between agency philosophy and the IDDT model is described in the 6M fidelity report for HF3: "There is a pervasive culture of respect for the client self-direction at the agency that is very much in the spirit of recovery and consistent with the IDDT model." Similarly, at HF2: "Focus on and respect for client choice continue to be organizing principles of treatment at the agency," while at HF1: "Printed materials reflect a philosophy consistent with the principles of integrated treatment, including a stage-wise, client-centered approach to seamless and comprehensive SA and MI services."

These high fidelity sites also expressed the importance of the IDDT philosophy and its relevance to their agencies. At HF2: "There's a unified philosophy that supports the principles of the IDDT EBP," while at HF3: "There is a strong foundation at the agency to reach high fidelity on this item in terms of personnel and the prevailing philosophy." The following example best illustrates the high value placed on a consumer-based philosophical approach to mental health services in these high fidelity sites:

> I think the basic philosophy of the agency, the leadership team, the willingness to do the base work, to take the time because it is about improved outcomes for the clients. That is the bottom line here…. They're really committed to client focus. It just fits. Problem solving, solution focused, the best evidence makes sense. (HF2, 24M Program Leader Interview)

A philosophical approach toward mental health services centered on the consumer was also present in sites with low fidelity. For example, the 6M implementation monitor's report for LF1 indicated: "This observer finds an organization with extraordinary commitment and determination to serve dually diagnosed (DD) clients with the best services. Interviewees at multiple levels appear to embrace the integrated approach to treatment and basic principles of the model." Similarly, the baseline fidelity report for LF2 states: "The agency's adoption of a recovery philosophy is very much conducive to the implementation of the IDDT model." In addition, LF3 indicates: "The program philosophy (G1) articulated at baseline assessment by all parties included elements generally supportive of evidence-based practices, in that there is a strong commitment to improving clinical treatment services to the seriously mentally ill consumer."

Yet, despite the philosophical embrace of a consumer-focused approach to mental health services in low fidelity sites, the *level of congruence* between their expressed philosophy toward mental health services and the IDDT model differed significantly across time points during implementation. Through the 24M time-period, sites with low

fidelity demonstrated an inability to put into action components of the IDDT model, central to its philosophy. As reported in the fidelity report for LF2: "The team leader reported that no one probably understands the philosophy as much as they think they do. Also, the IDDT clients and family members may not be aware they are anything different than treatment-as-usual." This pointed to a *level of incongruence* with the agency's espoused philosophy and that of the IDDT model.

Illustrations of this *level of incongruence* are as follows:

> Program Philosophy Score (3): There continues to be a basic IDDT orientation articulated by all sources interviewed, however elements of the model that remain problematic, e.g. lack of group DD treatment, provision of substance abuse treatment outside the agency, and generic client goals/plans, have not progressed significantly, despite their centrality to the EBP's core principles. Although consumer and family interviews had been scheduled, the interviews did not take place. An agency brochure that communicates the IDDT philosophy has not yet been developed. Some stakeholders from other systems who refer clients to the agency (and elsewhere) do not yet exhibit a good understanding of the model's core components. (LF1, 24M Fidelity Report)
>
> Program Philosophy, score was 2. In speaking with staff, at various levels of the organization, a focus appears on getting to the destination of IDDT. Helping staff see this program in a long-term, if not permanent, manner, will likely help LF3 to more fully

> implement IDDT. Identifying ways for the team to communicate this to one another and to reviewers will assist this organization with fidelity. (LF3, 12M Fidelity Report)

Of interest is the 24M fidelity report for LF3 that indicated: "Program Philosophy: This rating will remain at 1. Senior staff have asked that this assessment be completed at which point they intend to eliminate IDDT as a separate program component". LF3 decided to eliminate the IDDT program at the end of the 24-month time point, despite the large number of consumers with a dual disorder in need of integrated services. This demonstrates incongruence of the philosophical commitment to the enhancement of clinical mental health services to the seriously mentally ill consumer.

Norms, values, and beliefs. Although agencies promoted a consumer-centered approach to mental health services, there were underlying norms, values, and beliefs embraced by staff members that reflected disconnect with the IDDT philosophy. The following descriptions address this point:

> Rather than outreach, motivational interventions, and other engagement techniques for people in the engagement and motivational stages of recovery, the team members seemed to talk more about setting boundaries for clients by not helping them find new housing when they lose old housing due to drug use. (LF2, Baseline, Fidelity Report)

> They are pretty down on this implementation as well. They see it as a barrier to their own productivity. They see the training as long and useless, and they really don't think this program has been very

> helpful to them. They don't see clients in the stage of change the way that IDDT promotes. They don't really see much hope for many of these clients. (LF3, 18M Implementation Monitor Summary)

Specific to LF2 and LF3, other citations underscore norms, values, and beliefs that were incongruent with the IDDT philosophy. An example was the attitude toward harm reduction versus abstinence of drugs as described in the 12M fidelity report for LF2: "Some team members were uncomfortable with IDDT's support for attempts to reduce rather than immediately eliminate substance use." With these sites, reports highlighted a sense of paternalism toward consumers as stated in the 12M implementation monitor summary for LF2: "There are however, a few resistant team members, according to the program leader, who are not comfortable with letting clients make their own choice." This attitude was highlighted in the 6M consultant/trainer's interview for LF3: "Their attitudinal set going into this was very paternalistic and controlling," in addition to "they don't really value consumers input all that much," while "some staff talked about clients in a non-professional and negative way."

In addition to the incongruence between existing staff norms, values, and beliefs and the IDDT philosophy, there was acknowledgement in the majority of agencies that organizational culture played a role in implementing IDDT. Agencies recognized that an "archaic" approach to services or the "watering down" of services was counterproductive. The 12M implementation monitor's summary for LF3 cited "there is something of a top-down…vent-less feel here," that allude to team members' difficulties in communicating programmatic concerns to the program leaders and other senior administrators. At HF3:

"Part of the goal here is to build this into the culture of the agency". Other sites reflected this latter perspective:

> That is the ongoing issue that this team has been dealing with since the beginning of this project. Trying to figure out where to put their IDDT team has been a huge issue for this team. I believe I read this is the largest mental health service agency in the state, so perhaps it's that bureaucracy that is preventing this organization from finding the proper place for its IDDT team. (LF2, 12M Implementation Monitor Summary)
>
> We've talked all along in the implementation process that if you anchor the program in a person or persons it's not going to fly. You have to anchor in the culture and they're one site where it's not anchored in the culture (HF1, 6M Trainer Interview)

Concept of a team culture. Fidelity reports across all six sites indicated multidisciplinary teams were integral to the agencies' approach to mental health services. As described in a 12M fidelity report for HF1: "Representatives from supervised housing communicate regularly with team members as needed, and are receptive to learning and applying IDDT principles." Other illustrations include the following:

> Those addiction specialists are supervised by addiction managers, but they are then inserted into different teams and agencies throughout the whole agency, which involves a lot of different sites. So they are like centrally managed, but they are actually

> working day to day on other teams spread throughout the agency. (LF2, 6M Implementation Monitor Summary)
>
> Clinicians report that when involved, professionals from other systems, e.g., child and family services, will attend a team or other inter-disciplinary meeting to collaborate on clients' treatment. In general, it was reported that there is good communication and easy access among the various disciplines. (LF1, 24M Fidelity Report)

The concept of a team culture characterized by a sense of cohesiveness, commitment, and collaboration among members was more definitive in four of the six sites. At HF2: "openness of the sharing of ideas and working as a team," and "you never feel like you're hanging out there alone and I think the staff has really supported each other," were comments indicative of that sense of team culture. Other examples include HF1: "the strengths I think are the team itself, " and from an interview with the consultant/trainer, "at the 12M they had an intact team that had basically all done training together and had really sort of been together fairly cohesive team." At HF3: "They are going to be just about as rock solid as you can get," and from the program leader at LF1: "So what's going well however is this team is dedicated to taking care of business and so they cover for each other." This strong value for teamwork to include leadership was described in the following way:

> Well, the program leaders I think…. we have tried to meet regularly to be very much involved, to define our roles, to encourage communication, top down bottom. I think there is a lot of teamwork. (HF2, 18M Program Leader Interview)

Overall, one major finding emerged relevant to organizational culture. Across sites, differences were evident in the agency's philosophy toward mental health services and the IDDT program philosophy. Three sites with high fidelity appeared consistent with the IDDT program philosophy. For sites with low fidelity, there was a seeming level of incongruence with their implementation of core components central to the philosophy of IDDT. This was also apparent in the disconnect with their norms and values toward a consumer-centered approach to mental health treatment. There was a perceived sense of paternalism and a "controlling" attitude by team members that sought to undermine consumers' value and sense of self-determination. The concept of a team culture was also significant, evident by a sense of cohesiveness and collaboration among the IDDT team members across high fidelity sites.

Finding 2: The role of leadership and to a lesser degree, external stakeholders, was critical to IDDT support.

The role of leadership. Agency leaders had significant influence on the IDDT implementation process. Leadership defined by strong decision-making skills that built on collaboration and inclusion was evident in sites that successfully implemented IDDT. As described by HF2: "The impetus for high fidelity at this site is the agency and program leadership," while "many of the strategies employed to increase fidelity were developed in the IDDT EBP leadership meetings." At HF3: "A good foundation at the agency was due to the leadership's knowledge and involvement." The inclusion of team members by leadership was evident in this program leader interview at HF3: "Let's do it in a way that helps the team understand why and what the reasons are behind it and so it

encourages them and gives them the tools to do it." Another example of inclusion by leadership is described as follows:

> The practitioners have played a part in developing and carrying out strategies. Several practitioners serve on the leadership committee. They were chosen for this committee because they showed interest in the EBP. Any practitioner that expresses interest in the IDDT EBP seems encouraged to participate in planning process. (HF2, 24M Implementation Monitor Summary)

Actions undertaken by the leadership to support implementation with fidelity and sustainability of the IDDT program were evident in sites with high fidelity. The 12M fidelity report for HF3 indicates: "The team leader/program leader and the Chief Operating Officer have developed an impressive document they issued to organize team meetings and structure consumer staffing," while the 24M fidelity report indicated "there continues to be plans to develop a new comprehensive assessment protocol/tool that will incorporate IDDT principles agency-wide." Other examples emblematic of leadership action focused on developing "internal experts" and the selection of appropriate personnel. An example is found in the 12M trainer interview for HF1: "The Program Leader got it and was helping them get it before I ever showed up."

Leadership's decision-making skills and involvement were also significant to fidelity scores. Despite its low 24M fidelity score, LF1 was cognizant of the role and influence of leadership as indicated: "Without a knowledgeable, available, and somewhat charismatic team leader to guide team members through everyday problems and thereby

apply the training, the skill sets required to deliver high fidelity IDDT are not mastered." Other examples are demonstrated in the following ways:

> At times, the leadership team members will negotiate alternatives to a recommendation if the proposal seems unrealistic. This negotiation is significant because the leadership team has excelled with following through on the initiatives they agree to implement. Lead by the executive director, they are able to weigh what they can realistically accomplish and what will have to wait, or be modified. (HF2, 12M Implementation Monitor Summary)
>
> Chief Operating Officer who is the champion of the model and herself a skilled clinician and supervisor. Her level of involvement, particularly in the planning and implementation stages was high, and she continues to be involved at this time in a more collaborative way with the CSP Coordinator. (HF3, 6M Implementation Monitor Summary)

Tantamount to the positive influences in sites with high fidelity scores, there was a negative influence by leadership in sites with low fidelity. This was characterized by poor decision-making skills, a non-cooperative and non-committal attitude to follow through with fidelity recommendations. As reported for the leadership at LF2: "I think there is definitely a misconception from program leaders. They are a little out of touch with what their staff does on a daily basis." The potential negative influence of leadership on team culture is illustrated in the following example:

> I think the program leader has not been extremely effective...he speaks very passively about he is just doing what his administrators tell him to do; he is not invested in the model. He doesn't care about the model. He doesn't particularly believe that the model will work better than what he is already doing and he disagrees with us in terms of how closely they adhere to the model (LF3, 6M Implementation Monitor Summary)

At low fidelity sites, leadership lacked insight into the complexities of IDDT implementation. As described in the 6M implementation monitor's summary for LF1: "The lack of clarity around this important part of the multi-disciplinary team is symptomatic of the way the program came to be structured." A further description indicates:

> Agency administration was astute in recognizing the value of IDDT over parallel services but underestimated the complexity of the model and what it would take to implement it. One way that this underestimation played out was the assignment of IDDT program roles to staff who were either not "with the program" or not adequately skilled to carry out those roles. (LF1, 6M Implementation Monitor Summary)

The lack of leadership understanding and buy-in of the IDDT model was not an empowering influence for the IDDT team. The following excerpt is an example of a program leader who lacked knowledge of motivational interviewing, a key clinical component of the IDDT model:

> She was just describing those behavioral acts as things they were motivational counseling. So, I don't really think she understands what it is. It is a very important part of stage wise interventions, it is a very important element of outreach and engagement but I just don't think she understands what it is so she is not able to lead her staff and tell them what motivational counseling is. (LF2, 6M Implementation Monitor Summary)
>
> As if the Program Leader or Registered Nurse went to Borders, bought a book on "here's this great new thing to do with your group" and just start doing it unbeknownst to the rest of the agency and that is the way it will probably happen and if somebody said you can interview the upper administration a year from now and say "so how is the…work you're doing here?" and they can say "what's that?" (HF1, 6M Program Leader Interview)

This last example is an anomaly as the site (HF1) experienced a high fidelity score at the 24M time point, despite "splitting" at the agency leadership. As described earlier, conflict and political instability existed between staff members and senior administrators at HF1. Yet, despite the initial lack of top-down buy-in, senior leadership, recognizing over time the benefits of the IDDT model, entrusted its implementation to the program leader and the team. Strong leadership at the mid-management level was the crux of HF1's attainment of high fidelity. Based on mid-management leadership, and the following description of senior management, this site warranted a neutral global rating for the presence of leadership:

> About [the CEO], ….in spite of whatever he brings to the table personality wise, he got that agency out of the red and into the black and his fiscal management was a clear strength. If you got underneath the questions, they were fiscal questions and that over time the fiscal viability of the team has been demonstrated to him, he's now sort of with the program. …….when he gets up there endorsing it, he's not endorsing fidelity, he's endorsing the viability of it, the outcomes and the fiscal viability (HF1, 24M Trainer Interview)

Role of external stakeholders. External stakeholders played a supporting role across sites. It was necessary for the consultant/trainer to be open, receptive, and effective, as this had an impact on sites' follow-through with fidelity recommendations. Their contribution was influential to implementation activities, and four of the six sites (HF1, HF2, HF3, and LF1) described a positive and collaborative relationship with the consultant trainer. At HF2: "The leadership team members seem to take the trainer's recommendations, weigh them, and implement them when possible," while at HF3: "Consultant/trainer has been immensely skilled in providing consultation to ….. all levels of the program." For LF1: "The consultant/trainer was able to take what was essentially a pretty dry recitation of the model and really bring it to life in a way that connected the people very well." This is in addition to "he's become very comfortable with the material and good at kind of knowing his audience and what do they need and how well these people learn best."

Other external stakeholders included the local board, the state MHA, families and consumers as members of the steering committee. Their supporting role and influence

focused on guidance, collaboration, and overall monitoring of IDDT implementation. Four sites (HF1, HF2, HF3, and LF1) expressed positive experiences with the Steering Committee. On this point, a description of HF2: “Involving all different parties has been real beneficial,” and “In ongoing steering committee or leadership team meetings, this is where we really have laid the ground work for setting up the design and structure of the IDDT program.” At HF3: “They are truly thinking about this steering committee as a way to involve others in the community through the implementation project.”

A level of interdependence was apparent between these four sites and the external stakeholders. In a 12M implementation summary for HF3: “Due to the abundance of skill and energy at the program leader level and continued Board involvement and support, the program is humming along.” At HF1: “This board will gladly be a part of future funding endeavors either inside this agency or elsewhere but there is no need to convince the board that this is a good thing.” The significance of the Board’s influence was also apparent at LF1: “They’ve got a good county board commitment and good organizational board top leadership, the top CEO is very much supportive of it and I think their providers are pretty right for it as well.”

At two sites with low fidelity, the steering committee's influence was minimal. As described in the 12M implementation summary for LF2: “Steering committee acts as steering committee for both the ACT and IDDT implementations. I suspect that having a steering committee overseeing both practices might be diluting the steering committee’s mission too much.” At LF3: “The former implementation monitor has noted that the consumer and family member involvement at this agency is very minimal. For example,

she said that the agency picked a consumer and a family member who would be non-assertive for this steering committee."

In summary, the influence and role of leadership were critical for support of the IDDT model and successful implementation. Site differences were evident in the senior administrators and middle management expressed commitment to implementing the IDDT model, and their actions to follow-through with recommendations and suggestions made by the external consultant/trainer, to enhance fidelity. This finding also highlighted the supporting roles of the external stakeholders (trainers/consultants, steering committee members, and local board members.

Finding 3: Site differences in the level of adaptability (openness and flexibility) versus maintenance of the status quo (stability and control), were evidenced by: a) consensus and buy-in; b) changes in agency practices and practitioner behaviors; c) role delineation among staff personnel; and, d) management of existing competing organizational demands. The third finding centered on the adaptability of these mental agencies to modify structural processes and procedures. Based on recommendations and suggestions from the consultant/trainer, modifications promoted higher fidelity scores. At the 24M time-point, fidelity scores reflected the site's level of adaptability to change or a preference for maintenance of the status quo.

Consensus and buy-in. Critical to the change process were consensus and buy-in across the multiple stakeholders. This influenced whether sites were open to necessary adaptations, or preferred the status quo. The notion of buy-in varied across sites, but was more prominent in sites with high fidelity compared to those with low fidelity that

appeared more resistant to change. Mutual consensus and buy-in to IDDT by senior leadership and practitioners significantly influenced adaptability at the structural and behavioral levels based on IDDT implementation. In a 6M fidelity report, HF2 indicated they were "strongly committed to build high fidelity integrated dual diagnosis programming within this agency." A 6M consultant/trainer's interview also indicated "The willingness to make change; the openness to feedback that the agency has had, and the enthusiasm by staff and administration."

Other sites with high fidelity scores reinforced this notion of openness and buy-in. A description for HF3 indicates: "A fidelity plan was developed following the 6M site visit and recommendations, and has driven activities to improve the program since that time." HF3's response to improving fidelity was following "a blueprint" while "reaping the success." HF1 acknowledged at the baseline time point: "Buy-in at both board level and provider level and some of the managers," while at the 18M time point, "everyone's excited about the program and what we're doing."

Across sites, there was acknowledgement of the importance of staff buy-in to IDDT and its implementation. Interviews with program leaders validated this point as described at HF2: "I don't think without the staff buy-in and without their work and energy and imagination and practical ideas and follow-through, that's absolutely essential." Similarly at LF3: "They need to buy in that this, will overall make their job easier and will make the outcomes of their clients; they have to believe that."

The lack of consensus and resistance to buy-in was evident in sites with low fidelity scores. As reported for LF1: "Well, the first thing they did was, well, just say this was something we're going to do, which kind of doesn't leave people a lot of choice, you

either buy into it or leave." An interview with the program leader (senior administrator) underscores resistance and lack of buy-in for the IDDT model at LF3: "If we totally eliminate IDDT, I don't think there would be a dramatic change in their quality of life." The following descriptions clearly capture the lack of buy-in and consensus by practitioners and the leadership:

> I think another one is just kind of well, "this whole intensive thing is just a little bit much for me, I kind of like the idea of a 40-1 deal where it's more generic and I don't have somebody that wants to kill themselves every week," and so I think there are some people who are hanging in on the team because they're good people and they're team players but they're not particularly invested in where they are. (LF1, 6M Program Leader Interview)
>
> ...So there is a range in attitude toward the model with some people being somewhat enthusiastic about it all the way down to people where you can just tell they are rolling their eyes and they don't want to be involved. It is just a real mix of how they can really get this model going. I asked a couple of people why they think they were on the team and they had no idea, they were just drafted basically. (LF2, 6M Implementation Monitor Summary)
>
> The administrators at this agency, they've been more of a source of barriers I would say than strategies. They really are bitter; they don't feel like this is a project that is very well funded……..they would rather just have the State give them the money rather than

> giving us money to train them. You can tell that they are skeptical about the effectiveness about the model, how much it costs, so there is definitely consensus building going on with the administrators right now. (LF3, 6M Implementation Monitor Summary)

Without buy-in, the administration failed to support implementation activities as described in the following example:

> It does not appear that the Implementation Resource Kit (IRK) materials have been used outside of intensive trainings with the consultant/trainer in ways that could address some of the clinical issues. My impression is that once the IRK trainings were over, the materials got shelved. (LF1, 6M Trainer Interview)

Consumer buy-in to integrated mental health care was evident in sites with high fidelity scores. At HF2: "The consumers have played certain key roles in the IDDT implementation," or "having people come in who tell me who are safe enough and secure enough to say this is what's going on….that's happening far more now than it used to." A 24M fidelity report at HF3 reflected "client participation in goal setting and feedback." The following description aptly described consumers' buy-in:

> The last steering committee that we had…. for the purpose of reviewing the six-month, fidelity was as good as any we've had yet with real strong consumer participation. It was the second time across the steering committees where I felt the consumers who were on the committee really stepped up and made a meaningful

contribution to where we were going in terms of wanting to. (HF1, 6M Trainer Interview)

Changes in agency practices. High fidelity sites demonstrated adaptability to new practices to enhance mental health services, while low fidelity sites seemed to maintain the status quo. More open to structural changes based on fidelity recommendations, high fidelity sites viewed their goal to implement IDDT as broad in scope. As described by HF3: "The agency's broad goal for providing IDDT services to dual diagnosis clients is to develop a solid treatment approach and then spread the team's learning to other parts of the agency and community system(s)." Likewise, "there continues to be plans to develop a new comprehensive assessment protocol tool that will incorporate IDDT principles agency-wide."

The 18M report from the consultant/trainer succinctly captures the more broad vision for IDDT at HF2: "The most effective strategy that this agency has used so far has been to really structure the agency so that they could institutionalize change." Changes in agency structure and practitioner behaviors are reflected in a 24M consultant/trainer's report for HF2: "So it was a kind of two-fold thing between the ongoing competence with skills from the direct service staff as well as the agency structure to support the practice."

A consultant/trainer's 24M report further underscores adaptation within high fidelity sites. As described for HF3: "The culture of the way they do business is now built into those intensive teams: we stage, we do monthly staffing reports, we strategize by stage, we do family work, we do groups." An 18M fidelity report reflected the importance of structural changes to institutionalize change in agency practices at HF3: "Going forward, a structure exists for team members to maintain and enhance their IDDT

skills." This was in addition to "they inserted their psychiatric consultant as a pseudo leader, sort of clinically charged to run the team meetings as the agency of the program really wanted to get a medical model tone to those meetings." Other structural changes were seen at HF1: "A staging grid has been developed and implemented," and in the 24M fidelity report: "There is improvement in the consistency with which motivational stages is documented and interventions used in the clients' charts."

While the level of adaptability was more prominent in high fidelity sites, LF1 and LF2 reflected a level of openness to change. As described in the 18M fidelity report for LF1: "A significant effort has gone into the overhaul of agency documentation to incorporate IDDT language and concepts." Similarly, stated by the implementation monitor for LF2: "I think the organization's interest in implementing this model on such a wide basis comes from the fact that they really want the IDDT principles to be among the principles guiding this whole agency."

Of the three low fidelity sites, LF3 seemed the most resistant to change, and steeped in maintaining the status quo. In reference to consumers' mental health treatment and approach to services, the 6M implementation monitor's summary described LF3: "This agency still thinks we know best and we are going to take care of you," and "there is some resistance at this site particularly to the idea that there are things they need to change." The following example aptly illustrates this resistance:

> This is an organization that has clearly decided, "We're not gonna continue." I think their behavior around that, their chart notes, their efforts, their supervision, have been moving away from that. They are not attending to that. So, they, knowing that they're moving

> away from it, I think that they stopped putting an emphasis on it. (LF3, 24M Trainer Interview)

The emphasis on the status quo was evident in the more traditional approach to services, and perceived as strengths by two low fidelity sites. As described by the program leader for LF3: "Well, there are areas of strengths, I guess, because that is the way we have always done business here." The 24-month fidelity report captured this 'old school philosophy' as reported for LF3: "This group is focused on use of a 12-step informed process. Little is shared about psychiatric symptoms or coping techniques. Abstinence is expected. The group has been meeting for many years."

The baseline fidelity report described traditional service delivery for LF2: "The case manager appears to be more along the lines of traditional case manager with large individual caseloads (50-65). From our observations of the team in action and the chart reviews, the majority of services were provided in the office, rather than in the community."

This traditional way of service at LF2 changed little over the 24M implementation period based on the following description:

> It was difficult to integrate the practice into daily work because of high caseloads (around 40) and lack of time to perform IDDT activities that are not reimbursed….and the case manager responsible for the most IDDT clients declined IDDT mini-team involvement b/c he did not feel he had time for an extra meeting every week (not surprising considering the high caseloads). (LF2, 18M Implementation Monitor Summary).

Attempts at agency changes to improve fidelity were challenging for sites with low fidelity. As reported for LF3: "There is a strong belief that what they are doing meets the model, and yet getting them to demonstrate that through documentation has been difficult." The following description highlights the importance of an agency adaptation to meet the requirements of the IDDT model:

> At the 12M point they had gone out and basically recruited staff specifically who wanted to do the model as opposed to assigning staff. They had changed the team leader role so that the program leader/team leader was going to be the sole focus for the IDDT initiative both from a management standpoint and from a team leader standpoint. They did a real nice job getting the right people in there because that group was able to talk the talk better than the training group before they'd been trained. (LF1, 12M Trainer Interview)

Yet, despite attempts to adapt agency practices at LF1, a 24M fidelity report indicated: "A review of the client records shows a pervasive "cookie-cutter" approach" as "what we've been able to do so far is just tinker a little."

Changes in practitioner behaviors. Action undertaken to modify agency practices influenced changes in practitioner behaviors. At sites with high fidelity, practitioners demonstrated changes in their ways of thinking about the IDDT model, and its implementation. The 24M fidelity report highlighted changes in practitioner behaviors as demonstrated at HF1: "There is improvement noted in the consistency with which motivational stage is documented and interventions used, in the charts reviewed," and

"it's sort of a natural growth curve I guess for them in terms of just getting better at what they do by continuing to do it." Most succinctly captured is how consumers' improvement, due to the introduction of and implementation of IDDT, influenced adaptation in practitioner behaviors. A theme across high fidelity sites described it in the following way:

> Once case managers see consumers improve with the new programming, once they feel like they have some tools to be able to use with dual diagnosis consumers that are effective, there's a contagious effect, and I think that's been real positive that it builds on its own momentum so that they are more motivated to use the skills that are taught in IDDT and that helps sustain the practice. (HF2, 24M Trainer Interview)

Other sites expressed this sense of "harmonic convergence" between the alignment of staff's behaviors and consumers' outcomes. As described by LF1: "It's like they had a moment of clarity or something and harmonic convergence is upon them and they're starting to do some of that stuff." Similarly as reported in HF1: "One of the things that's emerged is that the principles of what's going on here have sort of taken on more importance than the personalities involved," and at HF3: "They're now able to engage clients that used to be seen only in emergency/crisis situations, cases that they "thought were hopeless."

However, the resistance to adapt or make changes in behaviors was evident in the three low fidelity sites. As reported for LF3: "Program leader stated that the use of stages in notes was not being encouraged because that "jargon" was not used throughout LF3."

While, at the 12M fidelity report for LF2 indicated: The team has not used information from previous fidelity visits to make needed improvements." Other examples of limited adaptation in staff' behaviors were evident as described at LF1: "They don't go out of their way to staff the clients who they've identified as IDDT recipients unless you [IM] or I are coming down." Also, indicated by the program leader for LF1: "They're still doing the same old treatment that they've always done, and they're not trying to incorporate some of the new stuff into there."

Role delineation among staff personnel. To a lesser degree, the delineation of roles for personnel reflected the agency's level of adaptability versus the maintenance of the status quo. In some sites, the demarcation of roles clearly defined tasks and responsibilities, including status associated with the role. Of significance were the program leaders at HF3 described in the 12M consultant/trainer's interview: "She offers the structure and he sets the clinical direction," and "your machine, your operation here is cranking and I think it's because each of the three of you brings something to the table." Similarly, flexibility of staff's roles at HF2 was viewed as "a harmonic convergence allowing people to bend their roles with an appropriate twist."

For other sites, role delineation was less clear, as apparent for LF1, in that: "Who's driving the bus is a question that really needs to be answered," and "the role which should have embodied both IDDT expertise and championship was seriously unfilled." At HF3, "there was a "that's not my thing" kind of feel to her around SMI stuff." The following examples describe the demarcation of roles at the senior leadership and direct services levels:

> The consultant/trainer has been aware all along of the mistakes that the agency leadership has made in the direction that the implementation has taken. He tried to steer them toward a more advantageous route but they had their own ideas. (LF1, 6M Implementation Monitor Summary)
>
> The program leader has received training, and she helps monitor the quality of the IDDT implementation. She also arranges for supervision and training. However, she is not totally empowered because of conflicts with trainer and lack of time. She does not service IDDT clients herself, and she does not have time to working to improve IDDT at LF2. (LF2, 18M Implementation Monitor Summary)

Management of existing competing organizational demands. The finding that low fidelity sites were more inclined to maintain the status quo and to engage in less risk-taking activities to modify practices and processes, reflected how they managed other competing organizational demands. For the three low fidelity sites, financial resources were the major organizational demand competing with IDDT implementation and the incorporation of fidelity recommendations. These concerns minimized any modicum of openness to change the agency's practices and procedures. The following examples capture this point:

> Comprehensive services- this is an area where deep cuts in funding have affected the program's ability to reach high fidelity, particularly around residential and vocational services….For

instance, where there are resources in the community/state, such as the IMR CCOE, the agency has been unable to mobilize the energy and time to access them. This is a product of downsizing, budget crunches, etc. that place a burden on the agency and makes it difficult for staff to tackle new projects. (LF1, 6M Implementation Monitor Summary)

In order for me to be able to do something, no matter what a great intervention technique, I have to be able to make money. If I'm not making money, then I can't do it no matter how wonderful it is and it would almost have to be designated state by state, because Medicaid and how it funds is different in every state you go to. ..It all boils down to we want to do good clinical treatment, evidence based treatment but at the same time, that's why we are having a problem. (LF3, 6M Program Leader Interview)

LF2 administration has made it clear through their indecision about how to form the team that they do not have the money (or maybe the will) to truly implement IDDT right now. Finally, DMHA is affecting the implementation in that it is not offering the same incentives for IDDT that it does for ACT. And….voc rehab provides a disincentive by not allowing supported employment reimbursement if the IDDT client can't be kept employed long enough. (LF2, 18M Implementation Monitor Summary)

As identified at LF3: “The themes in the areas where we have low fidelity to the model usually relate to cost and revenue production.” Related to fiscal concerns, time and productivity were other competing organizational demands across sites. LF2 described: “They just simply don’t have the time because of their large caseloads,” while at LF3: “Productivity remains paramount and time for training or other learning is restricted.”

While variations in the degree of concern over fiscal resources also existed across the three high fidelity sites, there was no apparent influence on fidelity to IDDT implementation. HF2 indicated the past five years as deficit neutral, yet other demands described include “staff has a lot of things on their plate outside of this project.” There was expressed concern with financial stability by HF1 and HF3. In the process of paying off its debts, senior administration at HF1 expressed in the 24M final implementation report: “The funding Board adds more administrative stuff, then lambastes us for productivity- requirements will go up 15-20%.” Another example of fiscal concerns is illustrated in the following:

> Consultant/trainer had misgivings about the fiscal policy/philosophy of the agency administration beginning with the first interview with the CEO…..thinks that fiscal uncertainty at HF3 probably lead to turnover of team personnel and threatened stability/sustaining of the program despite its clinical soundness. (HF3, 24M Final Implementation Report)

In summary, this third finding indicates the importance of agency adaptability versus maintenance of the status quo. Consensus and buy-in were critical at the

leadership and practitioner levels to implement the new practice. Adaptations were more evident in sites with high fidelity, where there was openness to institutionalize change and structural adjustments to support behavioral adaptations in practitioners. The delineation of roles was characterized by tasks, responsibilities, and influence. This in part, reflected the agency's level of adaptability, or its emphasis on the need to maintain the status quo. Sites with low fidelity scores appeared more resistant to change. There was a lack of buy-in and consensus from the top-down that presented a conflict for practitioners. Maintaining the status quo seemed necessary for these low fidelity sites due to other competing organizational demands, primarily the need for fiscal stability. The result was minimal adaptation at the agency and practitioner levels.

Finding 4: Site differences in learning the use of the IDDT model language were demonstrated by: a) training investment; b) mastery of skills, knowledge, and competencies and, c) level of clinical sophistication. It was not surprising that sites with higher fidelity scores demonstrated a commitment and investment in training and staff development. This allowed for personnel involved with IDDT implementation to master new skills and complex knowledge and to gain competencies. The following highlights how each dimension contributed to the ability of agencies to change in order to speak the language of the IDDT model.

***Investment in training*.** For the majority of sites, investment in training staff to use the IDDT model required support and commitment by the leadership. This was reflected by affording team members opportunities for internal and external training. Interviews with the consultant/trainer and reports from the implementation monitor at HF3 indicated "the managerial championing, the managerial investment because really

that is the commitment to training," in addition to, "every person on the team has gone to every training…..I credit a lot of their success to consistency because they're all hearing the same thing everywhere they go." Reports for HF2 describe this commitment to training in the following way: "we certainly have tried to pay attention with people coming on board, making sure that they have the orientation, and that we send them to training," and "we developed a weekly study group of IDDT material in addition to formal training."

Training investment by leadership was also evident in their efforts to enhance the skills and knowledge of the IDDT team. As illustrated:

> The consultant/trainer estimates that most team members have had upwards of 50 hours of IDDT training at this point. Due to this reinforcement around the skill sets such as motivational interviewing and stage-wise treatment, the team is solid clinically with respect to the model. (HF3, 6M Implementation Monitor Summary)

Across a few sites, the use of incentives was important as indicated in the 12M fidelity reports for LF1: "Senior administrators report that agency-wide cross training, workshops, and in-services seminars carrying CEUs will be used to both refresh clinicians already trained and further disseminate IDDT in the agency." Other sites describe similar efforts in the following way:

> We also have a kind of parallel situation in that the community college here has been supported ….and are developing a program for alcohol addiction training that will be certified at the state level.

> We have a number of people who are going through that process. Additional training for our people for SA will be able to help them. (HF2, BL Program Leader Interview)
>
> The Team Leader, dual diagnosis Program Manger and the Project Director have provided training for new hires (e.g., the new vocational specialist) and ongoing refresher and booster training both for the SAMI ACT team and to the wider agency staff. Training the new team member involved shadowing experienced staff, co-facilitating group, using the Implementation Resource Kit (IRK) manual, viewing the IRK videos, and meeting with the team leader and dual diagnosis program manager on an individual basis. (HF1, 12M Fidelity Report)

Agencies' investment in training also brought change in clinical staff perceptions of IDDT. Staff who participated in training described perceptions of IDDT by colleagues less familiar with the model as something different and 'foreign', and an inability to speak in an IDDT language. The following interview segments illustrate this perception:

> If you haven't been through the training, it's like speaking a foreign language to other clinicians. I think that they could easily pick up on it, but it's not something they use on a regular basis. It just doesn't make the work process easier to use in-terms that the person you're talking to doesn't understand. (LF3, 18M Program Leader Interview)

> I think we probably still need to be better at speaking the language, writing the language, whether in clinical staffings or in talking with clients or writing treatment plans, or progress notes. We continue to move kind of incrementally forward but I think people kind of philosophically do motivational interviewing but I don't know that they always speak it, their documentation and even in their presentations. (LF1, 24M Program Leader Interview)

One low fidelity site that demonstrated difficulty with the required training investment due to other competing organizational demands, framed the conflict as follows:

> It is hard to squeeze it all in. There is a lack of time. They have productivity concerns that are a barrier for them to receive more training. I think they would like to learn these things, and they would like to make time, but they also do not want to lose agency incentives on their productivity. They don't want to be punished for receiving training in the model. (LF3, 12M Implementation Monitor Summary)

Mastery of skills, knowledge, and competencies. Agency support and commitment to an investment in IDDT training equated to more skilled and competent teams implementing IDDT. At least three sites demonstrated mastery of IDDT skills, knowledge, and competencies. Indicated in the 6M fidelity report for HF3: "The team continues to develop, understand, and truly move toward mastery of the model's important skill sets," while the 12M fidelity report for HF3 illustrates: "Clinicians appear to have a good grasp of motivational techniques and descriptions of activities with clients

show solid understanding and appropriate use of the interventions." Likewise, in a 24M consultant/trainer's interview for HF2: "It was evident that many of the case managers understand the model and are able to integrate the model into their daily work."

There were sites that clearly did not achieve mastery required for successful implementation. As stated in a 6M implementation monitor's summary for LF1: "Although clinicians verbalize the principles of client choice, the lack of individual/personal goals actually incorporated into the treatment planning and documentation belies insufficient mastery of the principle." Similarly, in the 24M implementation monitor's summary for LF3: "Staff seemed to be trying to use motivational interventions in some notes, but they were still not getting it. This lack of mastery was also captured in the following example:

> Team staff reported that they tailored their treatments to clients' unique needs and goals. However, this individualized treatment was not documented in the progress notes of the charts we reviewed. In fact, some of the charts' progress notes contained identically worded typewritten statements with blank spaces where each client's name was written by hand. (LF2, 12M Fidelity Report)

Mastery of IDDT skills and knowledge was driven in part by a learning commitment, as reflected by high fidelity sites such as HF2: "learning the model, continuing to grow and practice in the model," and HF1: "conscientiously trying to master the skill set." Further illustrations include:

> By their own admission, the team's new clinicians are in the process of learning how to deliver and document stage-wise treatment, although interview responses suggest that this process is going very well and that they are developing a good understanding of the principles. (LF1, 12M Fidelity Report)
>
> That reflects everybody at least asking the questions. We're trying to get it, we want to understand what stage of change is, we want to understand stage of treatment, and how it goes together, all of the elements for IDDT and they're so excited about it. (HF1, 12M Program Leader Interview)

Level of clinical sophistication. The level of clinical sophistication among the IDDT's clinical staff was also associated with the mastery of skills, knowledge, and competencies. As experienced by all sites, this varied by the composition of the team as characterized by age, education, and experience. The lack of clinical sophistication by team members and failure to master skills were more apparent in sites with low fidelity scores than those with higher fidelity scores. As summarized in the 24M consultant/trainer's report on LF1: "It speaks some to the lack of sophistication that exists not only on their team but on so many of these case management teams around the state." While at LF3: "These are very young case managers and are maybe in their first position and really do not have an idea about what to expect."

Several sites reflected such challenges by staff to assimilate knowledge based on the following account for LF2: "There was minimal understanding of these areas in previous fidelity reports. She also said she wasn't sure that the team leader herself was

grasping motivational interviewing or stage wise interventions." Another site described this lack of clinical sophistication even further:

> This group, not only had no background in substance abuse, they had no background in anything, like 3 of their 5 case managers it was like their first job out of school, they had nothing so they needed as much mental health background and substance abuse. (LF1, 6M Trainer Interview)

The difference in the level of clinical sophistication across high fidelity and low sites is captured by the following illustration:

> Team members continue to display a range of sophistication and expertise with regard to these techniques, commensurate with their background and experience, although the level of understanding apparent in their description of interaction with clients has increased. (HF1, 12M Fidelity Report)

In summary, this finding clearly demonstrated differences existed across sites in their emphasis on learning to use the IDDT language model language. High fidelity sites invested in training that was necessary to enhance practitioners' mastery of IDDT. This ability to master the complex, new knowledge of the IDDT model contributed to the success or failure to implement IDDT with fidelity.

Finding 5: Site differences were characterized by the prioritization of supervision. For sites invested in training, it was important to enhance ongoing awareness of IDDT knowledge and skills. The majority of sites prioritized and supported this through regular and structured supervision. Feedback during supervision sought to

enhance mastery and foster competence in clinical staff. As indicated by HF3: “In the team meetings…..the opportunities to reinforce the language, the structure and what have you are happening ….so I think that’s just a huge piece of it and the clinicians rally by the model.” At HF1: “Supervision is focused on clinicians’ skills/professional development in the IDDT service delivery.” The following report further illustrates the priority given to individual and structure group supervision:

> All team members participate in daily 1-hour team meetings led by the team leader, receive individual supervision from either the team leader or the dual disorder program manager for 1 hour per week, meet as a team once per month for 2 hours for rotating client. The team leader receives regular structured individual supervision from the dual disorder program manager. Supervision is focused on clinicians' skills/professional development in IDDT service delivery (HF1, 12M Fidelity Report)

Two sites with low fidelity reported limited structured supervision. According to the 12M fidelity report for LF2: “The team’s case managers receive supervision on a more informal basis,” and indicated in the BL fidelity report for LF1: “No clinicians receive structured, weekly supervision from a practitioner experienced in IDDT that is client-centered and explicitly addresses the application of IDDT to specific client situations.” Attempts to enhance regular and structured supervision are described in the following example:

> Team supervision continues 1x week, with an array of supervisors in addition to the Program Leader/Team Leader in attendance. In

> addition, the Program Leader/Team Leader meets with the team weekly for 30-60 minutes to address administrative, clinical, and training issues. (LF1, 18M Fidelity Report).

It was therefore not surprising, that in the absence of a priority to transfer IDDT knowledge through formal supervision, clinical staff did not achieve mastery of skills nor enhance their level of clinical sophistication. The lack of priority for formal communication is framed in 24M fidelity report for LF3: "Supervision Rating=2. Staff is supervised regularly in both formal and informal settings, although the supervision is not IDDT informed." The following example also describes the lack of supervision to reinforce IDDT knowledge and competencies:

> Supervision score =2. According to the team staff, no formal supervision time is scheduled, although staff is free to seek out supervision as needed. The recommendation is that IDDT is a model that requires a great deal of clinical skills, so all IDDT team staff could benefit from structured weekly supervision. (LF2, 24M Fidelity Report)

At sites that acknowledged supervision as a priority, there was evidence of enhanced mastery of IDDT knowledge, skills, and competencies. Supervision was a means to enhance staff awareness of the IDDT model and to integrate the components into routine mental health services.

Chapter Summary

This chapter presented five findings relevant to the research focus of this study. Organized around the research questions, findings clustered around the two focal

concepts of organizational culture and the change process. Data from reports and interviews across five time points revealed perspectives on the organizational context of six sites that implemented IDDT. A detailed analysis of the content of the documents allowed the extraction of salient patterns and themes relevant to organizational culture and the change process. In addition, utilizing words, phrases, and quotations as cited in these documents, the aim was to identify the context of IDDT implementation as experienced across six sites. The goal was to understand how dimensions of organizational culture and the change process influenced fidelity to IDDT implementation across sites with high and low model fidelity scores at 24 months.

One major finding emerged relevant to organizational culture, while four findings clustered around the change process. Table 9 gives a summary of the global ratings of how these findings and their sub-themes influenced the level of fidelity to IDDT implementation. Delineation of the influence in the majority of findings was specific to high or low fidelity sites. However, for several sub-themes, there was overlap that neutralized the theme's influence on fidelity to IDDT implementation in that site.

Table 9 indicates that sites with high fidelity were oriented toward the philosophy of consumer-based mental health treatment. There were variations across sites in the congruence between their espoused agency philosophy and that of IDDT. Values, norms, and beliefs held by agency personnel reflected aspects of the agency's underlying organizational culture. High fidelity sites were more likely to foster client choice and self-determination, while a more paternalistic and authoritarian consumer approach was apparent at low fidelity sites. Team culture also varied across all six sites, with a strong presence in high fidelity sites and some influence noted in one low fidelity site.

Four findings clustered around the change process. The influence and role of leadership were critical for support of the IDDT model and successful implementation. Strong leadership characterized by action-oriented decision-making skills, collaboration and inclusion, insightful resource management, and commitment, were evident in high fidelity sites. Leaders, represented by the senior administration and middle management, set the tone for IDDT team members and other stakeholders. In low fidelity sites, leadership influence and roles promoted resistance to change and non-cooperation. Although in a supporting role, strong collaborative relationships with external stakeholders such as consumers, family members, board members, and external consultants and trainers, also influenced the level of fidelity to IDDT implementation.

The third finding indicated differences flexibility (adaptability) or need for control and stability (maintenance of the status quo) across these mental health agencies. This influenced consensus and buy-in, changes in agency practice, and practitioner behaviors. Agencies that are more adaptable facilitated structural and behavioral changes that influenced high fidelity to IDDT implementation. With the exception of LF1 where there was neutrality around consensus and buy-in, the low fidelity sites emphasized maintenance of the status quo. Competing organizational demands such as financial resources, time management, and productivity concerns, strongly influenced the need for these agencies to maintain stability and control. Practitioners in high fidelity sites experienced more flexibility in their roles and responsibilities. Influenced more by productivity concerns, tasks and responsibilities for practitioners were less flexible and more compartmentalized at low fidelity sites.

The fourth finding centered on agencies learning to use the IDDT model language. This allowed for mastery of skills, knowledge and competencies by the IDDT team. Training investment reduced the perceived of the IDDT model as something complex and 'foreign' by practitioners. While present in high fidelity sites, training investment varied in the low fidelity sites. The level of clinical sophistication related to mastery had a strong presence in high fidelity sites.

The fifth finding builds on the agency ability to learn the use of the IDDT model language. A priority for sites was structured and formal supervision to foster ongoing awareness of IDDT knowledge among the IDDT practitioners. This also facilitated the integration of the model's components into routine mental health services. Sites that lacked structured supervision for IDDT clinicians and demonstrated resistance to training investment experienced low fidelity scores.

It is important to point out in this study, based on global impressions (Table 9), and their influences on fidelity, there was a general presence of all findings for two high fidelity sites (HF2 and HF3), and a general absence of findings for the low fidelity site (LF3). Two sites (LF1 and HF1) presented as anomalies due to major changes made in Year 2 around their implementation activities. Major fiscal concerns, staff turnover, and initial leadership concerns presented as implementation issues for LF1 and HF1. The following chapter gives a detailed analysis and interpretation of all findings described in this chapter.

Chapter VI: Analysis and Interpretation of Findings

As an exploratory study, this secondary analysis focused on three organizational dimensions important to EBP implementation that require further study. The dimensions were: a) the change process (how change occurs), b) organizational culture that reflects deeply embedded beliefs, ideas, and practices integral to the organizational context of delivery, and, c) absorptive capacity, or how organizational members assimilate new and complex information relevant to a change initiative (such as the IDDT model). The study explored these dimensions to provide insight into their relationships and influences on fidelity to IDDT implementation in CBMH organizations.

Chapters Four and Five respectively, presented the findings for both quantitative and qualitative research questions. Findings from the quantitative analysis suggested no significant relationship between organizational culture type and fidelity at 24 months. Other findings relevant to organizational culture emerged from the quantitative analysis. Leadership collaboration and IDDT values were conceptualized as two dimensions of organizational culture and demonstrated a positive relationship to fidelity at the 24-month time-point. Familiarity with the IDDT intervention and degree of professionalism were conceptualized as two indicators of absorptive capacity, and supported a positive relationship to fidelity at 24 months.

Five findings emerged from the qualitative analysis: one significant to organizational culture, and four pertinent to the change process. The finding relevant to organizational culture was that sites were characterized by differing philosophical orientations toward consumer-based mental health treatment, evidenced by three underlying themes. These themes are: a) the level of congruence between the agency's

philosophical approach to mental health services and that of the IDDT model, b) norms, values, and beliefs, and, c) the concept of a team culture.

Centered on the process of change, the second finding indicated leadership was critical to sites that successfully implemented IDDT. The third finding focused on the level of adaptability (flexibility and openness) versus maintenance of the status quo (stability and control) in the CBMH agencies. This finding was evidenced by four sub-themes that included: (a) consensus and buy-in, (b) changes in agency practices and practitioner behaviors, (c) role delineation among staff personnel, and (d) management of existing competing organizational demands. The fourth finding relevant to the change process centered on the importance of learning to use the IDDT model language. This was demonstrated by: a) investment in training, b) mastery of skills, knowledge, and competencies in the IDDT model, and, c) a high level of clinical sophistication. The fifth finding focused on differences in supervision priority among sites.

Chapter Six provides an analysis, interpretation, and a synthesis of findings that emerged in both the qualitative and quantitative analyses of this study.
The chapter is organized in the following two analytic categories:

Analytic Category 1: The influence of organizational culture on fidelity to IDDT implementation (addresses qualitative themes related to Research Question 1 and quantitative findings related to Research Question 2).

Analytic Category 2: The influence of the change process on fidelity to IDDT implementation (addresses qualitative themes

related to Research Question 1 and quantitative findings of absorptive capacity related to Research Question 2).

This mixed-methods research design employed both inductive and deductive analyses, connecting patterns that emerged between the two data sets in the study. The discussion focuses on: a) the common themes and issues relevant to the three aforementioned organizational dimensions and their relationships and influences on fidelity to implementation; b) responses and interpretations by sites to IDDT implementation; c) overlapping themes and their interconnection across research questions; d) consistency, or lack of alignment with the literature; and, e) discovery of new knowledge.

In addition to literature on the implementation of evidence-based practices, various theoretical frameworks and empirical studies provided support for this analysis and interpretation. The analysis drew on several theoretical concepts of change and innovation that inform the change process: Quinn and Rohrbaugh's (1983) Competing Values Framework explores organizational culture and Cohen and Levinthal's (1990) conceptual model of absorptive capacity. Implications of this analysis seek to expand upon previous research on fidelity to IDDT implementation, particularly the organizational context in which EBP implementation occurs. The chapter concludes with a brief summary and attends to the initial assumptions made in Chapter 1 and potential limitations and bias in interpreting the findings.

Analytic Category 1: The Influence of Organizational Culture on Fidelity to IDDT Implementation

A major aim of this study was to understand the relationship of organizational culture and its influence on fidelity of the IDDT implementation. A central finding identified that for sites with high fidelity, a mental health service-delivery system centered on client values, self-determination, and a recovery-oriented vision was important. According to Meuser, Drake, and Bond (1997), the guiding philosophical tenet for any evidence-based practice is that mental health services should aim to enhance or return people with serious mental illness to high quality, functional lives. This tenet underscores the significance of recovery-oriented mental health services central to NIMH's mission (NIMH, 2006). For CBMH organizations, a core value centers on the provision of comprehensive psychosocial rehabilitation services, with the goal of engaging consumers in active adult roles. These may include: (a) the pursuit of personal goals of independent living, employment, and academic achievement, (b) engaging in community life, social, and family relationships (c) or enhancing communication skills (Bond et al., 2000).

Congruence between the agency's philosophical approach to mental health services and the IDDT model is critical to understanding the existing organizational culture. Boyle, Delos Reyes, and Kruszynski (2005) succinctly describe IDDT's guiding philosophical tenet:

> Programs that use this treatment model share the common value of shared decision-making, embracing the view that clients with dual disorders are capable of making decisions about their own goals

and the management of their illness in the recovery process. (p. 352)

Based on this description, the IDDT model upholds a strong ideological belief. It is a tenet that aligns closely with social work's value of client self-determination, and the ethical responsibility that "social workers respect and promote the right of clients to self-determination and assist clients in their efforts to identify and clarify their goals" (NASW, Code of Ethics, 1999, p. 5). The philosophy of the IDDT model lays a strong contextual foundation for a client-centered approach to mental health services, supported by Marty, Rapp, McHugo, and Whitley (2007) who stated that "implementing an EBP is to help clients achieve the highest rates of positive outcomes" (p. 204).

Fidelity to IDDT implementation takes into account treatment and organizational factors, the latter measured by the General Organization Index (GOI) (Boyle, Delos Reyes, & Kruszynski, 2005). The first characteristic of the GOI is a program philosophy that gauges the understanding and commitment to IDDT. According to the GOI Protocol (2002), program philosophy refers to a clearly articulated philosophy consistent with the specific evidence-based practice, in this case, the IDDT model. The rating is based on five sources that include program leader, senior staff, practitioners involved with implementing IDDT, clients and family members, and written materials that support the stated philosophy. Significant differences between the espoused agency philosophy and that of the IDDT model existed between sites with high fidelity and sites with low fidelity scores. This was evident across time points. The GOI findings for program philosophy give support to this study's assumption of the influence of organizational culture on fidelity to IDDT implementation.

EBP implementation research has focused mainly on understanding the transportability of efficacious interventions in service-as usual settings (Brekke et al., 2009; Drake at al., 2003; Schoenwald & Hoagwood, 2001). Facilitators and barriers to dissemination and implementation efforts have been primary in the literature. Few studies have focused attention on client outcomes. According to Bond, Drake, Rapp, McHugo, and Xie (2009), a client-centered approach entails individualization of services and refers to "services tailored to a specific client's needs, values, goals, and choices." (p. 350).

A recent pilot study to develop an Individualization Scale drew on five composite items from the GOI (Bond et al., 2009). These items included individualized eligibility determination, individualized assessment, individualized treatment plan, individualized treatments, and client choice. Findings from the pilot study provided a preliminary step toward assessing consumer-centered quality care, in concert with assessing program fidelity of an EBP. It reinforces the link between an agency's underlying organizational culture and the goal of implementing an EBP, to enhance consumer outcomes through the best evidence available (IOM, 2006).

This study found that not all sites embodied a consumer-based approach to integrated care nor focused on client outcomes. There existed disconnect between underlying *norms, values, and beliefs* and the IDDT philosophy, and as one low fidelity site indicated, "a few resistant team members, according to the program leader, were not comfortable with letting clients make their own choices." A paternalistic attitude that conflicts with the IDDT philosophy was apparent in sites that were unsuccessful in IDDT implementation.

CBMH organizations have a history steeped in a culture characterized by paternalism and an authoritarian approach toward mental health care. While significant strides in the latter part of the 20th century sought to remove the stigma of mental illness and substance abuse, challenges continue with efforts to change both public and professional perceptions. Essential to transformative mental health services is the vision for consumer recovery services: one that communicates hope, helps the consumers develop the skills and knowledge they need for personal responsibility, and provides supports for consumers to live beyond their illness (Torrey & Wyzik, 2000).

The integration of new practices such as the IDDT model in CBMH organizations challenges the ideological beliefs and values of practitioners. An IDDT treatment characteristic important to fidelity is a multidisciplinary approach to services. Ideological and professional differences that may emerge among medical, mental health, social work, substance abuse, nursing, and rehabilitation professionals present as potential barriers for acquisition of new knowledge and skills.

This was evident in sites with low fidelity where professional or ideological values and beliefs of practitioners influenced attitudes toward the IDDT model. Practitioners expressed their difficulty in accepting the use of motivational interviewing, a prescribed counseling approach with clinical elements (Bond et al., 2009). As described at one low fidelity site, the perception of this technique was "in opposition to that which they see as maintaining boundaries as good clinical skill, and motivational interviewing as being a bad clinical skill." Other examples were the model's endorsement of harm reduction over abstinence, stages of change, community outreach, and motivational interviewing.

The above mentioned are all critical treatment components of the IDDT model that influence the effectiveness of the intervention. Differences in attitudes were apparent in sites with high fidelity where practitioners demonstrated enthusiasm and openness. Success with the use of IDDT generated ongoing enthusiasm among practitioners. As a general observation in EBP research, success with the intervention (EBP) brings change to staff's attitude toward the EBP and belief in the client's ability to recover (Blakely & Dziadosz, 2007).

Other studies have found that the range of attitudes toward the IDDT model is consistent with variations in mental health providers' responses based on the intuitive appeal of the EBP, openness to the EBP, and perceived divergence of EBP from existing practices (Aarons, 2004). Farkas, Gagne, Anthony, and Chamberlin (2005) posit that staffing in mental health agencies can facilitate or hinder recovery-oriented services. The implication is CBMH agencies that foster a value-based culture can reinforce knowledge specific to client recovery outcomes. This has the potential to minimize practitioner disconnect with the philosophical tenets and guiding principles of the EBP.

The study's quantitative findings are also consistent with research studies that suggest values, perceptions, and attitudes of organizational members affect service delivery, and influence fidelity to established protocols (Glisson, 2007). As a dimension of organizational culture, IDDT values measured practitioner attitudes toward implementation of the IDDT model. The analysis found IDDT values demonstrated a positive linear relationship with fidelity, which reinforced the qualitative findings. Based on shared norms, values, and beliefs, practitioners in high fidelity sites valued and held more positive attitudes toward IDDT implementation than those in low fidelity sites.

Schein's (1990) concept of organizational culture is that group members learn culture that involves a behavioral, emotional, and cognitive process. Evident in at least four of the six study sites was a *team culture* that lends to an understanding of the agency's organizational culture. Cohesion, commitment, and collaboration among the IDDT team of practitioners characterized team culture. Drake and colleagues (2003) lend support that values, beliefs, and professional identities are significant to practitioners' attitudes toward learning. Neither a sense of team culture nor a strong belief in integrated treatment was apparent in sites with low fidelity. This was evidenced by their limited use of a multidisciplinary approach and an overall lack of team learning.

Most mental health services agencies strive to assist consumers achieve positive outcomes and support an ideology grounded in a client-centered approach to services. From the foregoing discussion, there appears to be fidelity to the IDDT model in CBMH organizations that upheld a strong philosophical orientation toward consumer-based mental health treatment. This was evident by the agency's affiliation with the philosophy of IDDT, and practitioners' value for the model. Team culture also reflected the agency's value for collaboration and cohesion toward IDDT implementation. In CBMH agencies, an organizational culture that supports consumer-focused mental health treatment anchors the agency's philosophy to the EBP model. It creates a foundational organizational context for implementing IDDT with fidelity geared toward client outcomes (Marty et al., 2007). This contributes to making a reality, the call for transformative mental health services with a vision for consumer recovery services.

Analytic Category 2: The Influence of the Change Process on Fidelity to IDDT Implementation

It was important to understand what aspects of the change process influenced model fidelity scores in the study sites. The change process refers to the actions, reactions, and interactions of all stakeholders involved with the change initiative of implementing IDDT (Pettigrew et al., 1992). Findings support four "drivers" of change. They are: (a) the influence and role of leadership in supporting the IDDT model, (b) the level of adaptability or maintenance of the status quo of the agency, (c) use of the IDDT model language, and (d) supervision priority among sites. The following is a discussion of these findings, interwoven with both qualitative and quantitative analyses.

Influence and role of leadership. From the perspective of Pettigrew and colleagues (1992), leaders of organizations are 'actors' critical to the change process, and can "mobilize the contexts around them to provide legitimacy for change" (p. 9). In this study, leaders were critical to the success or failure of sites to implement with fidelity. These CBMH organizations were characteristic of a multi-tiered leadership structure that involved senior administrators and mid-level management. Across sites, there were differences in the influence of leadership defined by traits, style, and action.

At high fidelity sites, a combined effort by the senior and mid-management leadership focused on collaboration and inclusion to create a strong foundation for IDDT implementation. According to a report from a high fidelity site, the "agency and the program leadership were the impetus for high fidelity." Sites that were successful made implementation with fidelity a priority. Leadership action, insightful decision-making skills, and strong managerial experience were essential to reduce or minimize barriers to

implementation. This required structural and programmatic changes to policies and procedures on issues related to reduced caseloads, the hiring of appropriate personnel, reassignment of inappropriate team members, negotiations with productivity levels for case managers, modifications to paperwork requirements, and creating opportunities for the required IDDT training.

At low fidelity sites, leadership appeared defined by a non-committal attitude to the IDDT model, with prioritization given to other organizational demands. Setbacks to implementation activities were in part due to a lack of foresight and planning by the senior leadership. As described in an implementation monitor's report, the senior administration at a low fidelity site "underestimated what the implementation would require from staff." A more authoritarian decision-making style of leadership was evident in reports that indicated a very "top-down" agency, and described one leader as "an autocratic leader." In combination, these factors influenced the attitudes and actions of IDDT team members.

Mid-management leadership was critical to the clinical aspects of IDDT fidelity. For successful implementation, it was necessary for middle management to assume an intermediary role. It is a role that fits the description of an 'organizational champion,' who, according to Brekke et al. (2009), "has direct links to the executive administrators and who can identify and leverage agency resources and provide advice on organizational issues….the role should be explicit in their job description and fully supported by the executive leadership" (p. 596). Kotter (1999) describes the importance of organizations to lean on second and third-tier leadership levels to inspire workers to attain strategic goals.

These are the front-line leaders who are able to establish direction, align people, motivate and inspire, and take on multiple tasks.

Pro-active changes made by leadership to IDDT managerial personnel acknowledged the multi-faceted functions required of the program manager. As supervisor, coach, and trainer, the IDDT program leader had influence over the general attitude toward 'buy-in' to the IDDT model and implementation activities. One report succinctly describes this influence at a low fidelity site, in that "they followed their supervisor's lead and kind of backed away from it. As the leadership backed away, they backed away."

Aarons' (2006) study on transformational and transactional leadership sheds light on the influence of leadership. Aarons identifies both types of leadership associated with attitudes toward adoption of EBP, in addition to the influence of the supervisor-supervisee relationship on affecting attitudes EBP implementation. It is a perspective from which "transformational leadership inspires and motivates followers, whereas transactional leadership is based more on reinforcement and exchanges" (p. 1162). As indicated by Corrigan and Garman (1999), transformational skills are essential for building a cohesive and motivated team while transactional leadership skills help the team maintain effective programs. The inference is that a blend of transformational and transactional leadership skills is necessary to support and reinforce implementation of the IDDT model.

This study's finding on leadership is consistent with other research studies. In a national study on EBP implementation (Bond et al., 2009), the analysis of fidelity among five different EBPs found the presence of strong leadership a common theme in all sites

that successfully implemented the EBPs. Sites with leadership committed to implementing IDDT achieved successful implementation, while sites that were non-committal or with partial embrace for the IDDT model, experienced a lack of success.

Also of significance was a major qualitative analysis on facilitators and barriers to IDDT implementation that identified administrative leadership as a significant factor in IDDT implementation (Brunette et al., 2008). In the study, leadership was designated apriori as one of five domains, and a coding scheme developed included dimensions of responsibility, leadership skills, plan enactment, engagement, plan sustaining, and change culture. From the qualitative analysis, attitude, priority, and action emerged as three components of leadership. This, in addition to commitment at mid-level leadership, supported moderate to high fidelity implementation.

The goal of the qualitative analysis was to describe the extent to which IDDT was integrated in 11 sites, and address facilitators and barriers to IDDT. The study found that the attitude of administrative leaders set the tone for the IDDT team, priority by the leadership was toward implementation activities, and leadership action influenced structural and programmatic changes.

Parallels can be drawn from this study's findings to findings from the study undertaken by Brunette and colleagues (2008). In this study, leadership traits, style, and action emerged as three dimensions critical to implementation. In high fidelity sites, a collaborative leadership style influenced buy-in and consensus with IDDT practitioners. Similarly, leaders that were action-oriented incorporated fidelity recommendations into agency structure and processes. At low fidelity sites, findings highlighted the inability of leadership to take action amidst other competing organizational demands. With a non-

committal attitude, leaders were unwilling or unable to implement IDDT or act on the recommended changes and suggestions.

An alternative perspective to understand the influence and role of leadership is what Pettigrew and Whipp (1991) refer to as "leading change" rather than "leadership" (p. 279). From this viewpoint, the term 'leadership' connotes a sense of one-dimensionality, or a sense of individualism, with too much authority and status vested into few individuals. However, the term 'leading change' embodies a more collective and multi-faceted aspect of leading change in an organization. The responsibilities and tasks of leading change include the many rather than the few, with a more "bottom-up" than "top-down" approach, as organizational members collectively address the interwoven issues relevant to the change initiative.

Included in this perspective of 'leading change' is the *influence and role of the external stakeholders*. They included members of the Steering Committee such as program staff, consumers, families, board members, and members of the local mental health agency (MHA), and the consultant-trainers. Although in a secondary role, their support for the IDDT model was important. Collaboration between the leadership team and the committee around implementation activities and fidelity recommendations emphasized shared feedback and open communication. There was an impression that the leadership structure, in addition to political, financial, and social factors influenced the role of the Steering Committee and the ensuing relationship across sites.

There was limited collaboration between Steering Committee members and IDDT team members at sites with low fidelity. As aptly described in a 24-month report, "it was not evident that team members had direct input into the formulation of the work plan or

that their reactions to the fidelity report results and recommendations were used as feedback to the work group." With leadership demonstrating a "top-down" approach, solving problems that arose with IDDT implementation was relegated to those in senior leadership roles. This reinforced the perspective of one dimensionality 'leadership' versus 'leading change' (Pettigrew & Whipp, 1991). In contrast, engagement appeared more pronounced in sites with high fidelity where leadership was "truly thinking about this steering committee as a way to involve others in the community through the implementation project."

This finding addressed one of the study's assumptions that organizational culture can hinder or facilitate change efforts. The collaborative relationship among leadership and other stakeholders involved in the implementation process highlighted that organizational culture is interwoven with the change process. Identified as a dimension of organizational culture, leadership collaboration referred to the degree to which the administrators and stakeholders prepared the workforce for IDDT implementation. The quantitative analysis supported a positive linear relationship between leadership collaboration and fidelity. This reinforced that an organization's success with implementing a change initiative is more likely when leadership supports a more collaborative "bottom-up" approach with its workforce.

Although confirmed by research studies that leadership is significant to implementation (Aarons, 2006; Bond et al., 2009; Brunette et al., 2008; Corrigan et al., 2001), attention was given to the geographic and demographic makeup of these six sites. High fidelity sites were smaller in scope and geography, with fewer consumers, staff, and clinical sites. This may have equated with more manageability and control with

competing organizational needs and demands as compared to the low fidelity sites that were at least twice to three times the size in the number of consumers served annually, number of staff, and clinical sites. High fidelity sites were also rural or sub-urban/rural, while low fidelity sites were urban/sub-urban or small city. A comparison between high and low fidelity sites along demographics and organizational characteristics lended a deeper insight to the role and influence of leadership. It is more than likely that geographic location was a contributing factor to the hiring of skilled and experienced leadership personnel, in addition to shaping their overall attitudes and values toward integrated treatment.

The study by Brunette et al. (2008) confirmed this study's findings based on demographics and geography. In that study, findings indicated rural and sub-urban/rural sites attained high fidelity, with successful IDDT implementation facilitated by the domains of leadership and workforce. Low fidelity sites were characteristic in the more urban and medium-large agencies with multiple sites. The barriers to implementation centered on the domains of leadership, workforce, and the prioritization of other organizational demands (fiscal).

In summary, the study's findings indicate leadership assumes a critical role in the success or failure of implementing IDDT with fidelity. Defined by leadership traits, styles, and actions, senior leaders and middle managers were drivers of the change process. In sites with high fidelity, there was evidence that leadership was committed to IDDT implementation and fostered a sense of collaboration and inclusion with IDDT practitioners. At sites with low fidelity scores, where there was a more non-committal attitude toward IDDT implementation, leadership centered on a more authoritarian style,

and a level of inaction or unwillingness to implement recommended changes. In part, this was due to other pressing organizational demands. The findings also reinforced the initial assumption that organizational culture influences change efforts, and ultimately fidelity outcomes.

Adaptability versus maintenance of the status quo. The third finding centered on the reactions of CBMH organizations to IDDT implementation activities and recommendations to enhance fidelity. Modifications in organizational structure and institutionalized change required *a level of adaptability*. The alternative was to *maintain the status quo*, incorporating components of the model in a "piecemeal" manner, or "tinkering" with selected components.

Consensus and buy-in to the IDDT model were critical to the incorporation of recommendations and suggestions. Acceptance of the value of the IDDT model and its significant clinical benefits for integrated treatment contributed to buy-in. According to Proctor (2004), the advantages of the EBP, relevance to a given practice situation, congruence with salient values, and overall simplicity to understand are important buy-in attributes. High fidelity sites recognized the importance of practitioner buy-in, in that "without them buying into the project, it's impossible for it (IDDT) to go forward." In contrast, a 12-month report for a low fidelity site indicated: "Reports from the team leader and staff members suggested that some team members are not yet comfortable with the philosophy behind the IDDT team model."

Rogers' (1995) perspective that decision-making may be individual, collective, or authority-based sheds light on the differences between sites that bought into the model, and those that did not. According to Rogers (2003), the innovation-decision process is "a

series of choices and actions over time through which an individual or system evaluates a new idea and decides whether or not to incorporate the innovation into ongoing practices" (p. 168).

At two sites with low fidelity, several factors appeared to influence a lack of buy-in. These were: a) negative attitudes toward the value of the IDDT model, b) the belief that IDDT did not offer any new advantage to the agency, c) leadership's lack of buy-in, and, d) the absence of a supportive organizational culture to shape positive attitudes and beliefs toward the value of IDDT. The lack of consensus and buy-in at the senior leadership likely influenced that at the practitioner level.

This finding was consistent with the research that indicated consensus and buy-in are influenced by leadership's support for the innovation (EBP) and organizational readiness for change (Simpson, 2002). Likewise, a qualitative study on agency director perspectives of EBP implementation highlighted the influence of senior leadership on practitioners. Proctor et al. (2007) found that agency directors were cognizant of their roles as key change agents in the implementation of new practices, and that "top-down" directives were inadequate for successful EBP implementation. The findings reinforced the importance of the supervisor-supervisee relationship, as agency directors recognized that provision of interpersonal support, supervision, and persuasion to clinical staff had a positive influence on practitioner buy-in and involvement with IDDT implementation.

Implementing IDDT with fidelity required structural and programmatic *changes in agency practices*. Examples of required changes included: a) the development and utilization of new techniques in treatment planning that reflects IDDT principles and stage-wise treatment; b) screening assessments; c) overhaul of agency documentation to

incorporate IDDT language and concepts; and, d) the development of quality improvement programs that incorporates outcomes data. Global impressions from the findings indicate successful (high fidelity) sites seemed more adaptable to fidelity recommendations, while sites that were more inclined toward maintenance of the status quo experienced low fidelity.

The literature on organizational change and innovation draws attention to the way change is implemented in organizations (Poole & Van de Ven, 2004), and helps in understanding site differences in the level of adaptability versus maintenance of the status quo. Seo, Putnam, and Bartunek (2004) describe four dualities of the change process: negative versus positive, continuous versus episodic, proactive versus reactive, and open versus closed. Pertinent to this discussion is the first duality. A negative focus versus a positive focus highlights "where to center attention on driving and mobilizing organizational energy to evoke change" (p. 78). Global impressions suggested a degree of openness and flexibility existed at the three high fidelity sites. These sites viewed changes to agency practices as broad in scope, with an organizational vision to enhance quality of mental health treatment for persons with a co-occurring disorder. Their philosophical orientation toward consumer-based mental health treatment also gave credence to this broad, organizational vision for recovery.

The positive focus on a broader goal may have contributed to mobilizing the organizational energy for buy-in and consensus across all levels of the agency. High fidelity sites sought to frame the scope of IDDT implementation on developing a positive vision and future direction of the agency. This was evident in agencies that wanted to

"develop a solid treatment approach and then spread the team's learning to other parts of the agency and community system(s)," or "move in an evidence-based direction."

At low fidelity sites, attention centered on the fiscal instability of the agency driven by the need for high productivity and additional financial resources. The emphasis on a negative focus for change most likely accounted for the agency's reinforcement of stability and control of practices and procedures. As expressed by one low fidelity site, "the agency's overall priority was controlling administrative costs."

Changes in practitioner behaviors paralleled changes in agency practices. According to Torrey et al. (2002), the heart of implementation lies with practitioners and their day-to-day interactions with consumers. They are the front-line staff responsible for implementing critical components of the IDDT model, and must perceive a connection between the value of the EBP and the organizational goals (Rosenheck, 2001). This enhances the level of motivation for practitioners to change practices and behaviors, particularly when the benefits affect the consumer's recovery.

Critical to the change process is motivation. According to Berwick (2003), practitioners' perception of enacting positive change with consumers reinforces a sense of accomplishment, and reduces the sense of uncertainty of doing something new and different. It fosters change in agency practice through changes in practitioner behaviors. The following example illustrates this point:

> Once case managers see consumers improve with the new programming, once they feel like they have some tools to be able to use with dual diagnosis consumers that are effective, there is a

contagious effect and I think that's been real positive. (HF2, 24M Trainer Interview)

Low fidelity sites experienced limited changes in agency practices and practitioner behavior. In part, this was due to the general perceptions of the lack of value and relevance of the IDDT model by practitioners. As a program leader indicated in one report, “I'm not seeing anything that is like Wow, I’ve never thought of that.”

The reciprocal influences between changes in practitioner behaviors and changes in the agency practices reflect an inter-actionist perspective. According to Woodman and Dewett (2004), the key to changes in organizational behaviors (such as the incorporation of fidelity recommendations) is change in individual knowledge (cognitive), attitudes (affective), behavior (behavioral), and motivation (conative). The organization’s socialization process, characterized as a change process, is one venue through which the agency fosters such individual changes. This in turn, reciprocates changes in agency practices (Fisher, 1986).

Woodman and Dewett (2004) identified several aspects of socialization that influence changes in practitioner behavior. One key aspect is the indoctrination of new employees to new skill sets (cognitive change), significant to mental health agencies due to high staff turnovers. Another aspect includes the interactions with supervisors, managers, and peers that relate to attitudes (affective) toward their jobs; while a third aspect of socialization lies with rewards that foster a sense of extrinsic motivation (conative).

It is important to underscore the socialization process in CBMH organizations. These are environments where there is a strong interdependence on the supervisor-

supervisee relationship. The intensity of clinical issues, complex consumer needs, internal administrative demands, productivity issues, and time constraints contribute to this interdependence. While stability and control are important organizational characteristics, rigidity to rules, policies, and procedures can stifle creativity and openness to change necessary for organizational growth. It can also emphasize *role delineation among staff personnel*, and restrict professional growth and development.

The following example clearly illustrates how the agency may influence practitioner changes (cognitive, affective, behavior, and conative):

> I think these practitioners are stifled by their administration and their way of doing business at the agency. I think some of them would like to change how they work with consumers with dual disorders, and they would like better strategies to work with those consumers and be more successful with them. But I think they are so stifled by their productivity concerns and the punitive nature of the agency……they haven't played an important role, and I don't know that they could within this agency. (LF3, 12M Implementation Monitor Summary)

The above example illustrates not only the mechanisms of control around productivity concerns, but also clearly demonstrates a demarcation of practitioners' roles. At sites with a higher level of adaptability, there was the appearance of a more fluid and flexible practitioner role. The Competing Values Framework (CVF) (Quinn & Rohrbaugh, 1983) provides insight into the demarcation of roles based in control and coercion versus flexibility and creativity. Originally developed to analyze organizational

effectiveness, the CVF defines organizational structure as an organizational dimension identified along one of two axes.

According to Zammuto, Gifford, and Goodman (2002), this axis reflects preferences for flexibility versus control where:

> The control end of the dimension is associated with coercive mechanisms of coordination and control such as rules, policies, procedures, and direct supervision, while the flexible end is associated with internalized, commitment-based mechanisms of coordination and control, such as training and socialization. (p. 266)

It is probable that the control and need for fiscal stability demonstrated in low fidelity sites also shaped the roles and functions of the IDDT practitioners, with minimal opportunities to foster growth and creativity. Alternatively, the reality of CBMH organizations managing multiple external and internal organizational demands cannot be negated. Efforts by practitioners to address consumers' complex needs are mired in the day-to-day organizational operations. Role creativity and flexibility regress when internal organizational priorities such as lack of resources, fiscal concerns, high rates of turnover, leadership attitudes, and personnel challenges take precedence (Compton, Stein, Robertson, et al, 2005; Glisson & James, 2002; Rosenheck, 2001; Simpson, 2002).

The influence of the external environment on CBMH organizations is also important to the reality of "on the ground" situations. According to Scott (2003), organizations do not exist in isolation, but within a specific physical, technological, cultural, and social environment. There is interdependence between the organization and

the external environment. The interdependence between these sites and external stakeholders such as the state and local mental health agencies, and with their local advisory boards were specific to funding and regulatory requirements.

For two of the largest sites, global impressions of related findings slanted toward maintenance of the status quo. Their preference to maintain stability and control was in response to limited funding and external demands. In contrast, high fidelity sites that had the support of local and state agencies were more likely to adapt their organizational structure to reinforce IDDT implementation activities.

Competing organizational needs and demands that stymied implementation efforts help explain the maintenance of the status quo in low fidelity sites. A common thread throughout these low fidelity sites was the overriding internal demand for fiscal stability competing with the external demands to implement IDDT. These competing demands compounded the apparent struggle to make adaptations necessary to enhance fidelity. This was apparent in low fidelity sites where "administrators may have been too concerned with restructuring and fiscal problems to give much, if any, thought to IDDT." While financial concerns existed in high fidelity sites, they did not appear to limit flexibility and openness to change. In contrast, financial concerns at low fidelity sites seemed to be the overriding influence to maintain a stable, controlled environment.

It is most likely the differences in agency size, budgets, number of sites and consumers served accounted for contrasts in level of adaptability. As noted previously, the low fidelity sites were almost twice, if not three times, the size of the high fidelity sites, with larger budgets, number of consumers served, and number of clinical sites. The emphasis on organizational structure from the perspective of the CVF (Quinn &

Rohrbaugh, 1983) helps explain the differences in adaptability and the status quo across study sites. It reinforces this study's findings relevant to changes in agency practice and practitioner behavior, and role delineation.

In summary, the foregoing discussion highlights reactions of organizational members in response to the change process that involves implementing the IDDT model. Reactions by CBMH agencies ranged from adaptability to maintenance of the status quo. The finding reinforced an initial study assumption that the change process influenced fidelity outcomes. Consensus and buy-in, changes in agency practices and practitioner behavior, role differentiation, and management of competing organizational demands highlight influential aspects of the change process. Consistency with research studies specific to organizational change and innovation, its interrelatedness with organizational culture, and facilitators and barriers to EBP implementation also lent credibility to this finding.

The following section continues with the second analytic category to address the influence of the change process on fidelity to IDDT implementation. Findings 4 and 5 discuss qualitative themes related to Research Question 1 and quantitative findings of absorptive capacity related to Research Question 2.

Use of the IDDT model language. Critical to implementing IDDT with high fidelity was the language of the IDDT model. Findings indicated strong linkages between: a) training investment, b) mastery of skills, knowledge, and competencies, and, c) clinical sophistication. The overall global impression of these findings indicated the presence of these three linkages in high fidelity sites, while mixed in the low fidelity sites. It was important that the agency afford opportunities for knowledge transfer

through staff development, internal and external refresher IDDT training, and inclusion of IDDT as part of new hires' agency orientation.

Woodman and Dewett (2004) identified orientation an important part of socialization as it indoctrinates new employees to new skill sets, and helps to form a mental understanding of their new roles and their new organization (cognitive change). Torrey et al. (2002) lent support to the necessity of routine IDDT training, given the high rates of staff turnover in mental health agencies. From this perspective, with the involvement of experienced clinicians and supervisors, IDDT training can become a routine component of orientation that sustains new skills. Clinicians and supervisors, with their experience, competence, and socially accepted roles in the organizations, can become effective agents for knowledge transfer (Rogers, 1995). This point was reinforced in the earlier discussion that focused on the interactionist perspective between the agency and the practitioner, and the supervisor-supervisee interdependence.

The implementation of evidence-based practices such as the IDDT model requires practitioners to have the abilities to evaluate technical and complex knowledge of co-occurring disorders of mental illness and substance abuse (Corrigan et al., 2001). Practitioner mastery of knowledge, skills, and competencies paralleled training investment in sites with high fidelity, and differed along three characteristics: a) prior experience with integrated treatment, b) level of education, and, c) workforce professionalism. Mastery was generally absent across sites with low fidelity, as challenges existed with practitioners' ability to absorb and assimilate the new knowledge.

In low fidelity sites, IDDT practitioners appeared "to have a limited understanding of recovery and the interventions appropriate for each stage." The IDDT

teams at these sites were comprised mainly of young, case managers, with little to no experience in the mental health fields. Despite training opportunities, mastery continued to elude practitioners. At one site, it was noted that "staff continues to struggle with using this approach evaluating their clients and in noting stages in the progress note."

Cohen and Levinthal's (1990) concept of absorptive capacity brings attention to the ability of practitioner (s) to value, assimilate, and apply new knowledge from their environment. The ability to recognize and value this new IDDT knowledge is dependent on the practitioner's existing knowledge base that shapes how new knowledge is evaluated. There appeared to be a mixed professional workforce across sites, characterized by varying educational backgrounds, and prior experience with integrated treatment. Without a prior knowledge base to help understand the new, complex knowledge of integrated treatment, case managers demonstrated an inability to grasp the value of IDDT knowledge.

Formal training through workshops and follow-up with supervisors can be viewed as one component of the agency's knowledge processing system. Goldstein's definition of training (as cited in Woodman & Dewitt, 2004) identified the training process as the systematic acquisition of attitudes, concepts, knowledge, rules, or skills that result in improved performance. Based on this definition, training becomes an important conduit for knowledge assimilation and transfer. At low fidelity sites where opportunities to participate in training were limited, or where there was ineffective training, case managers were unable to understand or replicate this new IDDT knowledge.

Likewise, case managers who demonstrated an inability to assimilate the new knowledge may imply an individual lack of absorptive capacity, a barrier to knowledge

transfer (Szulanski, 1996). Research question 2 addressed the relationship between absorptive capacity and fidelity at 24 months. Measured by indicators of practitioners' familiarity with the IDDT model and professional experience, the quantitative analysis indicated a moderate correlation between familiarity and fidelity, and a strong correlation between professionalism and fidelity at 24 months. This suggested that CBMH agencies that have organizational members who are familiar with the IDDT model, and have a more professional workforce, will more likely experience higher fidelity scores at 24 months.

Qualitative findings relevant to mastery and skill acquisition reinforced support for the quantitative research question specific to the relationship of absorptive capacity and fidelity to IDDT implementation at 24 months. Other research studies also provided credibility that a professional workforce enhances absorptive capacity (Cohen & Levinthal, 1990; Knudsen & Roman, 2004).

At the supervisory level, it was also important for supervisors and managers to have mastery of IDDT knowledge and skills. A lack of individual absorptive capacity at this level can impede implementation efforts as identified in a low fidelity site where "even the team leader appeared to lack the expertise needed to reinforce the learning consistently and over time."

Findings from this study of the linkages between training and mastery were consistent with the study of Brunette et al. (2008). That study found the facilitation of training, either by the external trainer/consultant or by the program leaders and clinical supervisors, was consistent with successful sites (high fidelity). The study also found the interaction between the trainer/consultant and the IDDT team members more positive

than the use of the Implementation Resource Toolkit. Sites with low fidelity did not allow for training opportunities nor did they receive high quality training. This was consistent with findings from this study that indicated sites with low fidelity and limited training opportunities failed to facilitate knowledge transfer.

In the study by Brunette and colleagues, the dimensions of mastery, training, and supervision were subsumed under the workforce domain, and facilitated implementation success. Dimensions of the workforce domain mirrored similar dimensions that emerged from this study. It lent credibility to this study's finding that there is a relationship between the training and mastery to fidelity of implementation.

Closely linked to individual levels of absorptive capacity is the *level of clinical sophistication*. At sites with low fidelity, the inability of case managers to articulate specific IDDT component reflected a lack of clinical sophistication required to master the IDDT model language. In contrast, at high fidelity sites "team members continued to display a range of expertise levels," which indicated a higher level of clinical sophistication.

Global impressions indicated a general absence of clinical sophistication among the case managers in sites that experienced low fidelity. This finding appears incongruent with the expectations for two of these sites. One was a large, urban psychiatric center described as the largest in the state; the other had the most EBP experience of all sites. Neither of these two sites assigned practitioners with higher levels of clinical sophistication to the IDDT team. A probable explanation may lie with their fiscal instability and staff turnover that imposed limitations in the makeup of the IDDT teams.

Supervision priority. The fifth finding brought to the forefront the necessity for ongoing interaction between clinical supervisors, the team leaders, and front-line practitioners. Clinical supervisors and managers were influential to the process of knowledge transfer. Technical knowledge and mastery of IDDT were reinforced in high fidelity sites where supervision was given priority. In supervision, the relationship between supervisor and supervisee held the potential to influence individual behavior change, as feedback and support/encouragement are two supervisory behaviors that may spur change (Woodman & Dewett, 2004). Supervisors needed to be knowledgeable and skilled in the use of the IDDT model language, and accessible and visible to clinicians. This reinforced mastery and helps to integrate IDDT into routine mental health services.

The literature also supported this study's findings of the importance of supervision to reinforce the use of the IDDT model language, and facilitate support and encouragement. Brunette et al. (2008) found supervisor mastery of skills and knowledge essential in order to provide ongoing training and supervision to the IDDT team. The lack of high-quality clinical supervision was a barrier to implementation in sites that achieved low to moderate fidelity. Torrey et al. (2002) indicated individual change is more likely when working in a team structure as it provides the opportunity for clinicians to discuss their cases and receive input from peers and other colleagues. As stated:

> To enact the implementation, clinicians can work together to gain competency in the integrated treatment approach. Clinicians learn best through a longitudinal process of acquiring skills, practicing, skills, getting feedback, and refining skills. Working in a team

> structure promotes the natural exchange of knowledge and skills. (Torrey et al., 2002, p. 514)

Important to team structure, team learning emphasizes the importance of supervision, and plays a critical role in understanding and implementing the IDDT model. Senge (1990) described team learning as one of the five disciplines of a learning organization. For CBMH organizations, a structured group-learning format such as case staffing and team meetings facilitates open dialogue, builds critical thinking skills, and acknowledges the insights of team members. This format serves as a conduit for change in practitioner behavior and fosters ongoing mastery. Individual supervision promotes encouragement, support, and feedback, and bolsters integration of the IDDT model into routine mental health services.

The concept of team structure and its relationship to the transfer of knowledge reinforced its relevance to organizational culture. As discussed in Analytic Category 1, practitioners that held positive attitudes, beliefs, and values toward the IDDT model experienced a stronger sense of team culture. It followed that in high fidelity sites, underlying a team structure was a strong team culture. This in turn helped to facilitate the knowledge transfer necessary to implement IDDT with fidelity.

In summary, why some sites attained higher model fidelity scores to IDDT implementation at the 24-month time period was likely the result of several change mechanisms put into place. Analytic Category 2 framed findings relevant to the influence of the change process on fidelity of IDDT implementation (Research Question 1), in addition to the relationship of absorptive capacity to fidelity of IDDT implementation (Research Question 2) in CBMH organizations.

The four findings relevant to the change process and their influence on fidelity to IDDT implementation reflect the actions, reactions, and interactions of all stakeholders involved in the change process. Leadership action focused on IDDT implementation enabled sites to achieve high fidelity in contrast to sites with low fidelity where other organizational demands were the priority. Sites' reactions to recommended structural and procedural changes were based in adaptability or maintenance of the status quo. Significant interactions among stakeholders involved in the change process were reinforced through use of the IDDT model language, training, and supervision. This bolstered knowledge transfer, and mastery of skills, knowledge and competencies.

Revisiting Initial Assumptions from Chapter 1

Based on the analysis and interpretation of the findings, it is useful to revisit the assumptions made in Chapter 1. Four assumptions formed the basis of this study. The first assumption underlying this study was that organizational culture influenced the level of fidelity to IDDT implementation. The assumption was that organizational culture could hinder or facilitate change efforts. This assumption held true according to Finding 1 described in Chapter 5. Salient to the agency's organizational culture was its philosophical orientation toward mental health treatment. Themes that reflected organizational culture were present in all three high fidelity sites. These included: a) congruence between the agency's espoused philosophical approach to mental health services and the philosophy of the IDDT model; b) practitioners' norms and values aligned with the philosophy of the IDDT model; and, c) a team culture reinforced by shared beliefs and ways of practice that supported IDDT implementation.

The second assumption specific to organizational culture was that CBMH organizations characterized by a developmental/open systems model typology would experience higher fidelity outcomes. This assumption did not hold true based on findings from the quantitative analysis. There was no relationship between organizational cultural typology and fidelity. Despite the assessment of the cultural model typology for each organization utilizing the Competing Values Framework (Quinn & Kimberly, 1984) in the original study, no clear demarcation of model typology evidenced influence on fidelity outcomes.

The third assumption proposed a relationship between absorptive capacity and fidelity of the implementation of IDDT. This assumption held true based on the findings from both quantitative and qualitative findings. Absorptive capacity was measured quantitatively by three indicators: familiarity with the IDDT model, amount of experience with the IDDT model, and workforce professionalism. Familiarity and workforce professionalism demonstrated a relationship with higher fidelity outcomes. Qualitative findings (Finding 4) supported this assumption, in that educational levels and knowledge of the IDDT model bolstered mastery, competencies, and clinical sophistication with use of the IDDT model. The fourth assumption was that the change process influenced fidelity outcomes. This assumption held true, given that the qualitative analysis (Findings 2 through 5) identified four leverage points salient to the change process.

Summary of Interpretation of Findings

In summary, this chapter depicted the relationships and influences of organizational culture, absorptive capacity, and the change process on fidelity to implementation of the IDDT model in CBMH organizations. The preceding discussion

revealed the influence of organizational culture on fidelity outcomes, anchored to the philosophy of the IDDT. It reinforced the ideological fit between philosophy of the intended EBP and the agency is critical. Organizational culture takes into account the underlying norms, values, belief systems, and ingrained ways of all stakeholders involved in the implementation process. Study findings indicated the influences of organizational culture on fidelity were interwoven with 'drivers' of the change process. Examples of this included stakeholder buy-in and consensus, the influence of leadership, agency adaptability, processes that facilitate use of the IDDT model language, and the necessity for supervision. Taken together, this analysis and interpretation articulated why some agencies failed to implement with high fidelity, while others achieved success.

Analysis of these findings portrayed a multi-tiered and comprehensive synthesis. Qualitative and quantitative data collection methods and multiple sources of information drawn from multiple informants served as the foundation of this analysis. It was important to integrate these findings into a framework that succinctly captured relevance to the research questions and overall study purpose. A case study research analysis allowed for extensive cross case and individual case analyses. Demographic factors such as agency size and geographic location appeared relevant to the influence and role of leadership, maintenance of the status quo, and clinical sophistication of practitioners.

Limitations and biases. This study warranted identification of limitations and potential biases in interpreting the findings. First, the study was very small. It consisted of 11 sites in the quantitative analysis, with six of these 11 sites in the qualitative analysis. The aim of this study was to contextualize organizational culture, absorptive capacity, and the change process in relationship to the fidelity of implementing IDDT.

While a larger sample may have garnered additional information, variations in demographics existed across sites. This lent credibility to qualitative findings. While the small sample size (n=11) may limit generalizability to the larger population, findings from the qualitative analysis supports those from the quantitative analysis. This allows for transferability to other CBMH organizations.

Second, the study was a secondary analysis dependent on data collected by other sources. This enhanced the probability of reactivity by the original researchers of this study, and reduced the filter for researchers and respondents' biases. A third limitation critical to the reliability of inferences made in this study was the lack of member checks. Lincoln & Guba (1985) described member checks as the most important credibility check. The process involved the use of colleagues to check the analytic categories, coding schema, conclusions, and interpretations. Due to limitations in time and resources, the study did not employ the technique of member checks that enhances credibility.

In addition to these limitations, the interpretation and synthesis of these findings are not without subjective bias. With a history in social work administration, there was a personal interest in organizational issues specific to implementing an evidence-based practice. Immersion in the qualitative data analysis revealed a sense of relatedness and connection to the organizational challenges encountered by these CBMH organizations. While bias is likely in the absence of another coder to validate the study's coding schema and interpretations, knowing the source of bias is unlikely. As a secondary analysis, this synthesis and interpretation was specific to this individual's understanding and interpretation. The final chapter provides a summary of this study, highlights its contribution to the field of social work, and puts forth future recommendations.

Chapter VII: Summary

Community-based mental health (CBMH) organizations and other human services agencies are at the forefront of NIMH's (2006) goal to reduce symptoms among persons with mental illness, promote recovery, and improve their quality of life. The diversity of these settings epitomize the organizational dilemmas and realities encountered by practitioners and other key stakeholders committed to promoting the well-being and welfare of persons with mental illness, substance abuse, and other complex psychosocial needs. As a result, the last decade has been marked by an urgency to understand the transportability of efficacious interventions to the usual-care settings of community-based clinical settings and to document the effectiveness of implementation (Schoenwald & Hoagwood, 2001).

The literature highlighted evidence-based practice (EBP) implementation as a complex undertaking with multi-faceted components (Fixsen et al., 2005). Recent studies indicated some agencies implemented with success (adherence to fidelity), while others did not. For CBMH agencies, the transition from a services-as-usual approach to implementing evidence-based practices involves a *change process* at multi-tiered leverage points (Ganju, 2006; Rosenheck, 2001). Agencies are required to make significant adaptations at the practitioner and agency levels as successful EBP implementation involves adherence to a more structured service model relative to usual care (Aarons, Sommerfield, Hecht, Silovsky, & Chaffin, 2009).

Overlooked in the research is the influence of organizational culture in the change efforts of EBP implementation. The underlying norms, values, ingrained beliefs, and ways of practices drive the behaviors of practitioners and other stakeholders in agencies.

Organizational culture determines how things are done within the organization (Glisson, 2000). As a dimension of the organizational context, organizational culture also influences the effectiveness of service delivery (Denison & Mishra, 1995), driven in part by the interactions of the practitioners, and the agency's underlying philosophy of mental health treatment. Another significant factor that does not receive full consideration in the literature is the absorptive capacity of the agency and its practitioners. If CBMH agencies are to adhere to protocols and fidelity requirements, the ability to absorb, value, and assimilate the complex knowledge characteristic of a structured service model (IDDT) is critical.

Purpose

The purpose of this secondary analysis was two-fold. The primary purpose sought to understand how organizational culture and the change process influence fidelity of implementation of the Integrated Dual Disorder Treatment (IDDT) model. The secondary focus sought to understand the relationship of organizational culture and absorptive capacity to fidelity of IDDT implementation. The study explored these organizational dimensions to provide insight into their relationships and influences on fidelity to IDDT implementation in community-based mental health (CBMH) organizations. The research study used a mixed methods (QUAL-quant) design (Tashakkori & Teddlie, 1998) that allowed the integration of different perspectives significant to understanding these three organizational dimensions.

Methods and Study Assumptions

As an exploratory multi-state study, this secondary analysis focused on three organizational dimensions important to EBP implementation that require further study.

They are: a) the change process (how change occurs); b) organizational culture that reflects deeply embedded beliefs, ideas, and practices integral to the organizational context of delivery; and, c) absorptive capacity that describes how organizational members assimilate new and complex information relevant to a change initiative (such as the IDDT model).

This study employed a collective case study research analysis that allowed for the utilization of multiple sources of information from informants across sites. This research analysis allowed for a detailed examination of these multiple data sources that defined the qualities and characteristics specific to organizational culture and the change process. The qualitative analysis supported the two assumptions made based on the qualitative research question.

The first assumption was that organizational culture could hinder or facilitate change efforts. The influences of organizational culture on fidelity of IDDT implementation were apparent in the values-innovation fit. This suggests an integrated treatment approach was highly congruent with the philosophy of practitioners and other stakeholders in CBMH agencies that achieved high fidelity outcomes. The analysis identified other dimensions of organizational culture such as leadership collaboration and team culture, influential to the change effort of IDDT implementation. Sites with high fidelity achieved success implementing the IDDT model (change efforts). The analysis indicated dimensions of organizational culture were critical in facilitating such change.

The second assumption was that the change process influenced fidelity. Organizational change theories indicated that individual change in knowledge, behavior, attitudes, and motivation are fundamental to the change process. In-depth qualitative

analysis highlighted essential drivers of change such as leadership, adaptability, processes that facilitate education and training and supervision. These drivers were critical in their influence on fidelity of IDDT implementation.

The third assumption was based on the hypothesis that CBMH organizations with an organizational culture characterized by a developmental/open systems model typology would experience higher fidelity outcomes. Theoretical concepts of organizational culture and innovation formed the basis of this assumption. A correlational analysis was employed to address the assumptions based on the quantitative research question. There was no relationship between model typology and fidelity. The small number of sites (n=11) in the quantitative analysis limited the sensitivity of this measure to capture organizational culture. As confirmed in original study, there was a mix of cultural typologies across agencies. Findings from this study's qualitative analysis indicate apparent sub-cultures existed at the team and leadership levels. A quantitative analysis of organizational culture at the team level may have been more influential on fidelity at 24 months.

The fourth assumption, also posited by the hypothesis was that agencies with higher levels of absorptive capacity would experience higher fidelity outcomes. Correlational analysis between two indicators of absorptive capacity (measured by familiarity of the IDDT intervention and degree of professionalism) and fidelity outcomes supported this assumption. Operationalizing of the concept absorptive capacity may be perceived as a limitation to this analysis. However, moderate to strong correlations of the two indicators to fidelity, in addition to support from the qualitative

analysis highlighted by the relationship of practitioners' mastery of use of the IDDT model language, lend credibility to this assumption.

Findings

Five findings emerged from this study: one major finding relevant to organizational culture and four findings pertinent to the change process. *A philosophical orientation toward consumer-based mental health treatment underscored the major finding applicable to organizational culture.* Sites that emphasized a strong recovery vision central to consumer-based mental health treatment implemented IDDT with success (high fidelity). This suggested the importance of a strong values-innovation fit for the implementation of an evidence-based practice (Klein & Sorra, 1996). Sites with less success (low fidelity) embraced a more traditional service delivery structure that emphasized a more paternalistic treatment vision. Congruence between the agency philosophy and the IDDT program philosophy, underlying norms and values that supported the consumer-centered philosophy of the IDDT model, and a pervasive sense of team culture among the IDDT practitioners, reinforced the influence of organizational culture on fidelity of implementation.

Relevant to the change process, findings indicated four significant drivers of change: (a) leadership, (b) agency adaptability, (c) processes that facilitate education and training regarding use of the IDDT model language, and (d) supervision as an agency priority. *Leadership* was critical to the change process in that, senior and mid-level leaders were instrumental in preparing the agency for IDDT implementation. Through their actions, senior leadership prioritized the required structural adaptations, and institutionalized change to facilitate fidelity recommendations. This demonstrated a

commitment and investment in undertaking the change initiative, and support for the sustainability of IDDT.

Leadership traits, style, and actions were influential to practitioner buy-in of the IDDT model, and consensus building and collaboration with external stakeholders. At sites with low fidelity, a top down bureaucratic style of leadership was dominant, with minimal interest or ability to act on fidelity recommendations. This created a negative organizational culture that was not conducive to effective IDDT implementation. Practitioner lack of buy-in and negative attitudes toward the IDDT model and implementation efforts reflected the influence of leadership on fidelity outcomes.

For several of the CBMH agencies in the study, *maintenance of the status quo* was likely more of a necessity rather than resistance to change. The need for control and stability was influenced by other competing organizational demands that centered on fiscal concerns. Higher productivity, lack of time for training and staff development around the IDDT model, staff turnover, and high caseloads were competing organizational issues that took precedence over IDDT activities. *Adaptability* to fidelity recommendations reflected the ability of CBMH agencies to balance agency goals with fidelity outcomes. For agencies that achieved success, IDDT implementation and sustainability were critical to their organizational vision. Demographic factors (size, caseloads, budgets, number of clinical sites) and geography were also influential factors in CBMH agencies' flexibility for change or maintenance of the status quo.

Significant to the change process was the ensuing interactions among stakeholders (leaders, trainer/consultants, and practitioners) involved in implementation efforts and the dissemination and transfer of knowledge. This was predicated on the establishment of

agency processes to communicate and facilitate the transfer of technical, complex knowledge characteristic of the IDDT model. Investment in training and structured supervision was essential for the transfer of knowledge and the integration of IDDT into routine mental health services.

Interwoven with the dissemination and transfer of knowledge through training and supervision is the *capacity of practitioners to acquire and absorb relevant knowledge, and enhance mastery of skills and competencies*. The IDDT model is a structured service model that involves technical and clinical knowledge relevant to mental illness and substance abuse. Practitioners' capacity to absorb, value, and assimilate this knowledge is dependent on IDDT familiarity and professional experience. Intensive training and regular, structured supervision, either individual or group, reinforces mastery of knowledge and competencies.

Limitations

One limitation to this study was the small sample size. Generalizability of findings was limited based on a quantitative analysis of 11 sites. Six of these 11 sites were the focus of the qualitative analysis. The aim of this study was to understand the influence and relationship of these organizational dimensions on fidelity in the context in which implementation occurs. Six sites in a multi-site case study design provided heterogeneity across cases (sites).This, in addition to multiple sources of data and triangulation of methods allowed for *credibility* to the findings. In addition, a thick description of the data lent to the *transferability* (Lincoln & Guba, 1985) of the study's inferences and conclusions to other CBMH organizations and implementation issues.

A second limitation was missing documents from the original study. Of the 126 documents identified for analysis, only 97 were available. Missing site reports presented a gap in findings across various time points across sites. This limited interpretations of findings in sites with missing documents. A third limitation, critical to the inferences made in this study is the absence of another coder to validate the study's findings and interpretations. Eisner (1991) (as cited in Creswell, 2007), refers to the importance of the opinion of others as consensual validation, which enhances *credibility*. Due to limitations in time and resources, the study did not employ this recommended technique.

Application to social work knowledge and practice. This study was aimed at understanding the context of how organizational culture, absorptive capacity, and the change process influenced fidelity of the implementation of an EBP practice (IDDT model) in CBMH organizations. Based on the findings, several key points are worth considering in their application to social work knowledge and practice and implications for future research:

1) Social work's core values and principles align with the underlying philosophical tenets and guiding principles of evidence-based practices (EBPs). The contextual foundation for empirically-based psychosocial mental health interventions focus on the best possible treatment option for the client, with the ultimate goal to enhance optimal functioning through recovery and rehabilitation (Meuser, Drake, & Bond, 1997). Mental health practitioners are prominent in social work settings of child welfare, education, and criminal justice, and drug treatment, to name a few. As EBP

implementation research traverses these diverse settings, it is important for administrators and other stakeholders in human services agencies to reinforce the value-base of the EBP.

As defined by the Institute of Medicine (2001), evidence-based practice integrates best research evidence and clinical expertise with patient values. Few studies have focused on the integration of the client-centered and recovery-oriented components of evidence-based practice (Bond et al., 2009; Farkas et al., 2005). An important area for social work research is to determine whether evidence-based practice can wholly incorporate recovery-oriented mental health treatment. Future studies can explore the translation of underlying recovery values and client-centered outcomes of evidence-based practice into specific dimensions of assessment.

2) Critical to the success of EBP implementation is the role and influence of human agency, that is the role of persons involved in the change process. There are multiple actors (internal and external) involved in EBP implementation. Within CBMH agencies and other social services agencies, leaders and practitioners are the drivers of any change initiative. Through their style and actions, leaders are influential to the process as they prepare the agency for change. Selection of an organization champion can play a critical role in successful EBP implementation. Practitioners are responsible for implementing the EBP and have direct contact with consumers. Collectively, the values, beliefs, ideologies, and engrained ways of these actors shape work behaviors, and determine the underlying organizational culture. This can influence the effectiveness of implementing a structured service model such as IDDT.

It is imperative that as human service agencies consider an EBP implementation initiative significant investment is given to staff identification and selection for participation. Across all agency levels, staff are overwhelmed with internal and external demands as evidenced by the high turnover rates in the mental health profession. Practitioner capacity to absorb complex and technical information and processes characteristic to EBPs is critical.

The interdisciplinary approach to services is common in human services agencies. The implication is that varying ideological and professional beliefs, in addition to education and experience, may influence individual level absorptive capacity. Supervisors and managers have a responsibility to assess practitioner mastery of knowledge, skills, and competencies. A combination of knowledge capacity and an ideological fit for the practitioner is essential. More attention is needed in staff selection and relevance to evidence-based practice (Fixsen et al., 2005).

3) As a complex undertaking, EBP implementation requires significant investment of financial, human, and technical/administrative resources. It becomes crucial that agencies assess their capacity to implement an EBP with effectiveness (fidelity) and to ensure its sustainability. This study demonstrated the challenges CBMH agencies encounter with implementation success due to competing organizational demands. Without adequate resources to invest in the selection and/or hiring of qualified personnel, training, and quality improvement efforts, CBMH agencies negate their opportunity to enhance mental health services. In the evidence-based implementation literature, more attention should be given to organizational quality improvement efforts and the effects on implementation effectiveness and client outcomes (Bond et al., 2009).

Further studies in this area can shed light on organizational change efforts instrumental to achieving desired results and outcomes.

4) A growing number of social work professionals are found within the mental health service delivery system (Occupational Outlook Handbook 2006-2007 (2007). This factor is significant with respect to the recent call for social work practitioners to enhance representation at the mental health research level. Social work is positioned to contribute to NIMH's (2006) translational science research agenda by closing the gap between research and practice in mental health (Brekke, 2007). Their involvement at the multi-tiered levels significant to implementation research in mental health services enables active participation in community-based research collaborations and partnerships.

Conclusions

Implementation with success (adherence to fidelity) has shown to be challenging in usual-care settings of community-based mental health organizations. This study sought to shed light on how organizational context is relevant to evidence-based practice implementation. Organizational culture, absorptive capacity, and the change process are organizational dimensions not easily quantified in research studies pertinent to social services. Yet, findings from this study allowed an opportunity to explore more deeply the context of these three dimensions and their relevance to implementation fidelity of an EBP. This knowledge will benefit CBMH organizations services agencies that seek to enhance service delivery through empirically based psychosocial mental health interventions. Ultimately, knowledge from this study can enhance client outcomes based in recovery and rehabilitation.

Appendix A

Integrated Dual Disorder Treatment (IDDT) Fidelity Scale (11/27/02)

1a. Multidisciplinary team

Ratings: 1= < 20% of clients receive care; 2= 21-40% of clients receive care; 3= 41-60% receive care; 4= 61-70% receive care; 5= ≥80% receive care

1b. Integrated Substance Abuse Specialist (SSA)

Ratings: 1= no SSA; 2= IDDT clients are referred to a separate substance abuse department within agency; 3= SSA serves as a consultant to treatment team; 4= SAS is assigned to treatment team; 5= SAS is a fully integrated member of the treatment team

2. Stage-wise interventions

Ratings: 1= ≤20% consistent; 2= 21-40% consistent; 3= 41-60% consistent; 4= 61-79% consistent; 5= ≥consistent

3. Access for IDDT clients to comprehensive dual diagnosis (DD) services

Ratings: 1- <2 services provided; 2= 2 services provided; 3= 2 services are provided; 4= 4 services are provided; 5= all 5 services are provided

4. Time-unlimited services

Ratings: 1= ≤20% of available services provided; 2= 21-40% of available services provided; 3= 41-60% of available services provided; 4= 61-79% of available services provided; 5= ≥of available services provided

5. Program outreach to community

Ratings: 1= almost never uses outreach mechanisms; 2= makes initial attempts to engage; 3= attempts outreach mechanisms as convenient; 4= usually has a plan for engagement; 5= demonstrates consistently well-thought out strategies for outreach

6. Motivational interventions

Ratings: 1= ≤20% of interactions with clients are based on motivational approaches; 2= 21-40% of interactions are based on motivational approaches; 3= 41-60% of interactions are based on motivational approaches; 4= 61-79% of interactions are based on motivational approaches; 5= ≥80% of interactions are based on motivational approaches

7. Substance abuse counseling (SAC) for clients in action stage or relapse prevention

Ratings: 1= ≤20% of clients receive SAC; 2= 21-40% receive SAC; 3= 41-60% receive SAC; 4= 61-79% receive SAC; 5= ≥80% receive SAC

8. Group DD treatment

Ratings: 1= <20% of clients regularly attend; 2= 20-34% regularly attend; 3= 35-49% regularly attend; 4= 50-65% regularly attend; 5= >65% regularly attend

9. Family psycho education (FPE) on DD

Ratings: 1= <20% of families receive FPE; 2= 20-34% of families receive FPE; 3= 35-49% of families receive FPE; 4= 50-65% of families receive FPE; 5= >65% of families receive FPE

10. Participation in alcohol & drug self-help groups (ADSH) in the community

Ratings: 1= <20%; 2= 20-34% attend; 3= 35-49% attend; 4= 50-65% attend; 5= >65% attend

11. Pharmacological treatment to include 5 prescriber strategies for IDDT clients

Ratings: 1= no contact OR prescribers require abstinence; 2= 2 of 5 strategies used; 3= 3 of 5 strategies used; 4= 4 of 5 strategies used; 5= all 5 strategies are used

12. Interventions to promote health

Ratings: 1= staff offer no services; 2= no structured program, concepts rarely used; 3= < ½ of all DD clients receive services; 4= 50-79% of clients receive services; 5= ≥80% receive services

13. Secondary interventions for substance abuse treatment non-responders

Ratings: 1= ≤20% are evaluated or no recognition; 2= 21-40% are evaluated and referred OR secondary interventions are not systematically offered; 3= 41-60% are evaluated and referred OR no formal method for identification; 4= protocol for identification AND 61-79% are evaluated and referred; 5= protocol of identification and >80% are evaluated and referred.

(Adapted from the NH-Dartmouth Psychiatric Research Center)

Appendix B

Organizational Culture

Rating is based on the assignment of points out of 100 to each Organization (A-D), where Organization A represents Group Culture/Human Relations model; Organization B represents Developmental Culture/Open Systems Model; Organization C represents Hierarchical Culture/Internal Process model; and Organization D represents Rational Culture/Rational Goal model.

1. Character

Organization A is a very personal place (Group culture)

Organization B is a very dynamic and entrepreneurial place (Developmental culture)

Organization C is a very formalized and structured place (Hierarchical culture)

Organization D is very production oriented (Rational culture)

2. Managers

Organization A- managers are warm and caring (Group culture)

Organization B- Managers are risk-takers (Developmental culture)

Organization C- managers are rule enforcers (Hierarchical culture)

Organization D- managers are coordinators and coaches (Rational culture)

3. Cohesion

Organization A- glue is loyalty and tradition (Group culture)

Organization B- glue is commitment to innovation and development (Developmental culture)

Organization C- glue is formal rules and policies (Hierarchical culture)

Organization D- glue is emphasis on tasks and goal accomplishment (Rational culture)

4. Organizational Emphases

Organization A- emphasis is human resources (Group culture)

Organization B- emphasis is growth and acquiring new resources (Developmental culture)

Organization C- emphasis on permanence and stability (Hierarchical culture)

Organization D- emphasis on competitive actions and achievement (Rational culture)

5. Rewards

Organization A distributes fairly (Group culture)

Organization B distributes based on individual initiative (Developmental culture)

Organization C distributes based on rank (Hierarchical culture)

Organization D distributes based on achievement of objectives (Rational culture)

(Adapted from Quinn & Rohrbaugh's (1983) Competing Values Framework)

Appendix C

Absorptive Capacity Measures

1. Familiarity with Integrated Dual Disorder Treatment (IDDT)

Rating range from: not at all, slightly, moderately, very, and extremely

2. Amount of experience working with Integrated Dual Disorder Treatment (IDDT)

Rating range from: 3 months or less; 4-12 months; 13 months -3 years; 4-5 years; 6-10 years; 11-15 years; 16-20 years; > 20 years

3. Highest school level (Degree of workforce professionalism)

Rating range from: technical school, some college, college degree, some graduate or professional school, master's degree, doctoral or MD degree

(Adapted from the Integrated Dual Disorder Treatment (IDDT) Baseline Questionnaire)

Appendix D

Coding Categories and Dimensions for Organizational Culture and Change Process

Categories	Dimensions
Adaptability and openness	Change in agency practices; change in professional behaviors; fidelity openness; harmonic convergence; innovation openness; minimal adaptation; minimal program adherence; structural changes
Change agents	Senior leaders; external stakeholders; consultant/trainer
Competing realities	Agency priorities; lack of fidelity; organizational structural challenges
Concept of team	Collaborative staff relationships; multidisciplinary team; strong team culture; team cohesion; team commitment; team investment; team leadership; 'the IDDT team rocks'
Consensus and buy-in	consumer buy-in; fidelity openness; fidelity resistance; lack of buy-in; lack of full staff participation; lack of leadership buy-in; 'perception of being a traitor'; staff's resistance to change; staff's buy-in; staff's conflict; training resistance
Leadership Influences and limitations	Bureaucratic leadership; 'determined to make IDDT an intervention'; leadership's negative influence; commitment; determination; empowerment; insight; non-cooperation; resistance; poor decision-making; limited structured supervision; passive leadership investment; limited collaboration;

Maintaining the status quo	'Archaic' approach; 'consensus building does not apply to this agency'; fidelity resistance; resistance to change; 'staff ride the horse in the direction of the agency'; status quo; traditional approach; 'way things are done'
Norms, values, and beliefs	EBP philosophy conflict; negative client perception; organizational culture; paternalistic attitude; positive organizational climate; 'way things are done'
Philosophical congruence	Agency' self-identity; agency/EBP philosophy congruence; 'client-centered approach'; 'unified philosophy'; worker-client commitment
Professional silos	'silo-ing of professionals'; 'agency's history of professional jealousy and political conflict'; role differentiation
Skills and knowledge competencies	Enhanced awareness; failure to master EBP principles; 'if it something foreign to the agency'; knowledge assimilation challenges; lack clinical sophistication; lack of familiarity with program components; lack understanding of program components; learning commitment; limited structured supervision; mastery of skills; skills reinforcement; supervision priority; team engagement; 'time to learn and practice skill'; training investment; training resistance
Splintering	Role differentiation; splintering; 'who's driving the bus'

Appendix E

Final Coding Schema

Themes clustered around organizational culture:

1. Philosophical orientation toward consumer-based mental health treatment

- Agency/EBP philosophical congruence
- Norms, values, and beliefs
- Concept of team culture

Themes clustered around the change process

2. Role of leadership

- Influence of stakeholders

3. Differing preferences for adaptability (flexibility) versus maintaining the status quo (stability)

- Consensus and buy-in
- Changes in agency practices and practitioner behaviors
- Role delineation
- Management of existing organizational demands

4. Learning to use the IDDT model language

- Training investment
- Mastery of knowledge, skills, competencies
- High level of clinical sophistication

5. Prioritization of supervision

- Enhanced awareness and integration of model

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