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Implementing Dialectical Behavior Therapy for Adolescents

in an Acute Inpatient Psychiatric Setting

Thomas A. Field

A dissertation submitted to the Graduate Faculty of

JAMES MADISON UNIVERSITY

In

Partial Fulfillment of the Requirements

for the degree of

Doctor of Philosophy

Department of Graduate Psychology

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Dedication

I dedicate this dissertation to the current and former staff working at the inpatient psychiatric unit for children and adolescents where I conducted this case study. This project would not have reached completion without your openness to participate in research, and trust in my intentions as the primary implementer and researcher. During the five years that I have worked alongside you, I have been awed at your commitment to providing the highest quality care possible to our patients in a challenging healthcare environment. For confidentiality purposes, I will not mention individual names here. But rest assured, I am grateful for all I have learned from working alongside you all.

Acknowledgments

I would like to acknowledge members of my dissertation committee at James Madison University, and thank them for their guidance and expertise throughout this project. My dissertation chair was Dr. Lennie Echterling, my methodologist was Dr. Cara Meixner, and my other committee member was Dr. Debbie Sturm. I have also been truly fortunate for the help of several fellow doctoral students at James Madison University who were members of my coding consensus team for this project. I would like to thank Greg Czyszczon and Seng Wong for providing coding consensus of firstround in-depth summative interviews. Finally, I would not have been able to complete this dissertation without the support of my beloved wife and partner in crime, Selina. I have been truly grateful for her sacrifices throughout the last several years, including her willingness to edit this manuscript!

I received financial support for this project from the American Mental Health Counselors Association (AMHCA) Foundation. I received the first annual AMHCA Foundation Dissertation Research Award in 2013, which bestowed this project with \$1,000.00 in funding. Further information about the AMHCA Foundation can be found at http://www.amhca.com/ Preface

The counseling field has started to take the notion of accountability and datadriven practice seriously. Many of us recognize that it is not enough to claim that our services are beneficial to the public; we must be able to provide evidence for these claims. In this context, I became interested in the evidence-based practice movement in all professions, including counseling. As I read the literature, I realized that while interventions have been identified as empirically supported, little attention has been given to how best to transport these into practice settings. Data-driven practice is needed in all of our work, extending beyond the content of the services we provide to the process itself. To use a metaphor, the meal we provide is as important as the manner in which it is prepared. It is my hope that action research such as this case study will continue to be conducted, and this case study will inspire readers to consider how they can best evaluate their own practices and services.

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Abstract

Although evidence-based practices (EBPs) have been identified in the literature, insufficient information exists about how to successfully implement them. As a result, implementation efforts have been met with failures. Little is currently known about what affects the success of implementation efforts for best practices such as Dialectical Behavior Therapy for adolescents (DBT-A) in an acute inpatient psychiatric setting (AIPS). A longitudinal multiphase mixed methods case study examined an implementation effort to provide DBT-A in an AIPS over a 24-month period. The process of implementation was investigated through in-depth interviews, a focus group, and field observations. Six categories were identified that affected the DBT-A implementation in an AIPS: appeal of DBT as a treatment modality, impact on patients, implementer characteristics, the implementation process, organizational dynamics and structure, and staff support. Implications for implementing EBPs within organizational environments are discussed. This study represents the first attempt to use qualitative and mixed methodology to examine the process of DBT implementation in an AIPS.

Chapter I: Introduction

Statement of the Problem

Although evidence-based practices (EBPs) in counseling and psychotherapy have been identified, insufficient information exists about how to successfully implement them. As a result, efforts to apply them to naturalistic settings have often been met with failures (e.g., Gioia & Dziadosz, 2008). No studies currently exist that examine how to successfully implement Dialectical Behavior Therapy for Adolescents (DBT-A) in an acute inpatient psychiatric setting (AIPS). Indeed, little focus has been given to the process of transporting any EBPs into an AIPS. The short length of stay and acute nature of patients' psychopathology often requires that programs be adapted and reconfigured for this unique environment. Although many insurance and governmental agencies are now insisting on the use of EBPs to secure reimbursement for services, organizations often lack the resources and institutional support to adequately train staff and sustain these programs. DBT is an innovative treatment technique with much to offer, but counselors and other staff members may be unfamiliar with its potential, require education on its effectiveness, and need both initial training and ongoing supervision to implement the program.

In addition, the literature is completely lacking in qualitative and mixed methods studies that examine the implementation of DBT-A within naturalistic settings. Most implementation studies have been conducted within the quantitative paradigm. No relevant qualitative or mixed methods studies could be found in the literature. Therefore, a need existed for qualitative and mixed methods studies that examine the process of implementing DBT-A in settings such as an AIPS.

Purpose

The intent of this multiphase mixed methods case study was to examine the implementation of DBT-A in a single, bounded case, specifically an AIPS for children and adolescents in the southeastern United States. The purpose of this study was to understand what helped and hindered the implementation of DBT-A in an AIPS by integrating qualitative and quantitative data derived from different phases. Embedded quantitative data from DBT skills training group (DBT-STG) patient feedback forms were collected, analyzed, and presented to staff members during summative in-depth interviews to examine the effect of positive patient response on staff adjustment and organizational acceptance. During first round summative interviews, participants identified what that they believed had helped or hindered the implementation effort. During second round summative interviews, they ranked identified categories in order of importance. A mixed methods study was selected to enhance the overall richness of the data.

In this multiphase design, three phases were conducted over 24 months. The first phase lasted between 0 and 12 months. During the first phase, qualitative data were collected from field observations and a focus group with the milieu staff. A midpoint analysis was conducted using the data collected during this first phase that informed the subsequent 12 months of implementation. Quantitative aggregate data was concurrently collected from a patient feedback form distributed at the conclusion of each DBT-STG. During the second phase, which lasted from 12 to 18 months, qualitative data was collected via field observations. Concurrently, collection of quantitative aggregate data from a patient feedback form continued. Data collection from patient feedback forms

concluded at 18 months, and data analysis was completed for the patient feedback data immediately following data collection. In the third phase, which lasted from 18 to 24 months, summative in-depth interviews were conducted with members of the multidisciplinary team. Staff members described their reactions to the quantitative patient feedback data and identified what may have affected staff adjustment and organizational acceptance. Interviewees from the multidisciplinary treatment team included managers, milieu counselors, primary therapists, psychiatrists, psychologists, registered nurses, and secretaries.

Qualitative data collection and analysis were performed on the following data sources, organized by weighted priority: in-depth interviews, a focus group, and field observations. An emergent approach to data coding and analysis was used, though several *a priori* constructs were also identified in the literature and examined for their importance in affecting the implementation process. These additional constructs included: the primary implementer, organizational climate, managerial support, positive patient response, and financial backing. When coding, the constant comparative method (Glaser & Strauss, 1967) was followed, using a consensus coding team to ensure credibility, dependability, and trustworthiness. Data collection continued until data approached saturation (Lincoln & Guba, 1985). According to Creswell (2012), the case must be promising in its ability to adequately include an array of different subcases in order for data to reach an acceptable degree of saturation. In this study, access was provided to approximately 50 staff members with differing levels of experience, involvement, roles, and tenure in the setting. This number allowed for purposeful theoretical sampling, critical for ensuring adequate representation of different voices within the setting.

An embedded quantitative component was included in the study. Data were collected concurrently on patient response via patient self-report of group helpfulness and learned coping skills over the 24-month period. Quantitative findings were presented to interviewees during summative in-depth interviews. Staff members were asked to respond to the data, specifically whether these findings were surprising or expected, and whether their personal experiences of positive patient responsiveness affected their adjustment and/or acceptance of DBT-A.

During the course of the study, changes were made to the implementation and schedule of the DBT groups based upon organizational and employee feedback. In addition, changes to the curriculum were also made based on patient feedback. The process of navigating the unique challenges of providing a therapeutic intervention to a lower-functioning population with a greater severity of psychopathology was explored. The feasibility of implementing DBT without substantial financial backing was examined; few internal funds and no external funding (e.g., grants) were used to support the implementation of the program under study. Practical consideration was given to staff training and availability to lead groups.

Adhering to mixed-methods procedures recommended by Creswell (2012), a central research question was formulated for the study, along with several related subquestions. Formative and summative evaluations were conducted for each of the following research questions.

Research Questions

Central research question:

What helped or hindered the process of implementing DBT-A in an AIPS?

Subquestions:

- a. What is the relative importance of each category?
- b. To what extent do the qualitative and quantitative data converge *within* different phases of the study?
- c. To what extent do the qualitative and quantitative data converge *among* different phases of the study?

Theoretical Propositions

According to Yin (2009), researchers can benefit from assuming a theoretical perspective when conducting case study research. The following theoretical propositions guided this case study:

- The relationship of the primary implementer with the staff working at the setting is crucial to the successful implementation effort of an adopted practice within an organization. There are certain characteristics that the primary implementer can possess (e.g., high pre-existing level of support within an organization) for a best practice such as DBT-A to be more easily implemented.
- 2. The current attitude and climate of the organization toward change and innovation are important to the successful implementation of an adopted practice. Consistent with the theory outlined by Fixsen, Naoom, Blase, Friedman, & Wallace (2005), an innovative practice such as DBT-A is more likely to be successfully implemented in an organizational climate where multiple program changes are being concurrently implemented.

- 3. Program sustainability requires ongoing buy-in from both staff and management.
- 4. While a positive patient response to the intervention is required, it is not sufficient for the successful implementation of a new practice without staff and managerial buy-in.
- Contrary to previous theoretical approaches to implementation (e.g., Fixsen et al., 2005), formal financial backing by the organization is not necessary for successful implementation efforts in a small organizational environment.

To enhance the validity of my findings by minimizing attribution bias, alternative rival explanations to these theoretical propositions were intentionally and purposefully sought out. Stake (1995) proposed a supplementary framework called *issues*. Issue questions can be helpful in providing an organizational framework for the case study, since investigators are guided in their approach to asking questions of the data. Stake's approach is similar to that suggested by Yin (2009), who recommended that case study research should incorporate a protocol which contains questions asked of the researcher. The issue questions identified in this case study were as follows:

- 1. What strategies, behaviors, organizational role, and level of support within an organization are required to successfully implement an EBP such as DBT-A?
- 2. How important is the current organizational climate, including attitudes toward change and innovative practices within an AIPS, when implementing an EBP such as DBT-A?
- 3. Is staff buy-in necessary for DBT-A to be implemented when support from management has already been established?

- 4. How influential is a positive patient response to organizational acceptance of a newly implemented EBP such as DBT-A in an AIPS?
- 5. Can an EBP such as DBT-A be implemented in an AIPS without any formal financial backing?

These issue questions were summarized by the following titles:

- 1. Primary Implementer
- 2. Organizational Climate
- 3. Managerial Support
- 4. Positive Patient Response
- 5. Financial Backing

Relevance to the Counseling Profession

Counselors and supervisors who seek to implement EBPs in their work settings may benefit from knowing what helps or hinders successful implementation efforts. This knowledge base could inform didactic instruction and clinical supervision practices, meeting the CACREP 2009 Standards for Addiction Counseling (I.3., p. 22), Clinical Mental Health Counseling (I.3., p. 34), and Marriage, Couple, and Family Counseling (I.3., p. 39), which require that the counseling student "knows evidence-based treatments."

Objectives and Expected Outcomes

Formative evaluation of qualitative data was conducted via collection and analysis from field observations and a focus group to improve staff adjustment and organizational acceptance of DBT-A. Formative evaluation was also conducted for program improvement purposes via collection and analysis of patient-reported quantitative and qualitative data. Adjustments to the group content and structure were made throughout the course of the program, based upon this feedback.

Summative evaluation assessed whether the following objectives were met. Objective 1: Successfully implement DBT-A in an AIPS.

Objective 2: Identify what helped or hindered the DBT-A implementation process in an AIPS.

Objective 3: Provide an opportunity for staff members to share their voice regarding what helped and hindered the DBT-A implementation process.

This study was conducted after receiving approval by institutional research boards of both James Madison University and the hospital system under study. Staff participants signed informed consent documents approved by both IRBs prior to participation in the study. All staff participants in the study were voluntary and at least 18 years old.

Summary of Main Findings

Six categories, presented in alphabetical order, were identified that helped or hindered the implementation process: appeal of DBT as a treatment modality, impact on patients, implementer characteristics, the implementation process, organizational dynamics and structure, and staff support. Intriguingly, these six categories had the same names (i.e., grandparent codes) for both helping and hindering, though subcategories and descriptors for each category were different. Qualitative and quantitative data seemed to converge within and among the different phases of the study (research subquestions b and c), with some important distinctions.

Operational Definitions

Due to the unique language used in acute inpatient psychiatric settings, the following terms are operationally defined for constructs with which the reader may be unfamiliar.

"Acute inpatient psychiatric setting" (AIPS) was defined as the inpatient psychiatric unit under study that provided 24-hour services to patients who were hospitalized. Typical admission criteria included active suicidal or homicidal ideation, out-of-control behavior, psychosis, or decline in level of functioning. Patients were hospitalized because of the acute nature of symptoms, meaning that they were discharged once they no longer met these serious criteria. The setting under study was a locked facility, and patients could not leave the hospital until discharged by a physician, released from a legal detainment order, or discharged against medical advice. Patients slept overnight in the setting. In the setting under study, families of hospitalized children and adolescents were allowed daily visitation but not allowed to sleep with the patients. Hospital staff members provided 24-hour direct care to these patients.

"Adaptation" was defined as the process of tailoring a manualized practice such as DBT to a naturalistic setting, typically by eliminating non-essential elements of the program and adding elements to the program that best addressed the needs of the population and the setting. Although treatment manuals are meant to be followed in a strict manner and with fidelity, a number of DBT studies have adapted the approach for the specific setting or population under study.

"Admissions" were patients arriving on the unit for the first time. This process involved searching through the patients belongings for contraband, taking vital signs, completing admission paperwork with the parent or guardian, and being oriented to the unit program. This process typically took between 60 minutes to several hours, depending on the complexities of the admission and the familiarity of the staff with admission procedures.

"Adoption" was defined as the decision by an organization to implement a new practice, such as DBT.

"Called off" is a term used in the AIPS to describe when a milieu staff members are informed that they are not needed at work that day. Call-offs usually occur because too many staff are scheduled to work a shift, inflating staff-to-patient ratios.

"Charting" is a term used in the AIPS to describe the documentation of patient information conducted by staff members in the electronic medical record. This information is confidential and complies to HIPAA regulations. "Charting" in this context is a noun, and to "chart" is a verb.

"Coping skills" were defined as life skills that help an individual adapt to life stressors. Examples of coping skills include deep breathing, talking to someone, listening to music, and journaling.

"DBT group leader" was defined as the individual charged with facilitating the DBT Skills Training groups. This individual was usually a trained primary therapist, master's-level counseling intern, or on occasion, a milieu counselor.

"DBT skills training group" (DBT-STG) was defined in this study as a psychoeducational group for adolescent participants aged 12 to 18 years old, lasting between 60 and 90 minutes from 3:30 to 4:30 or 5:00 p.m. The group format was more educational than process-based, and group members were taught new skills for coping with stressful life situations. An important component of the group was the generalization of those skills to external settings, with daily practice of these skills reinforced via a diary card.

"Diary card" was defined in this study as a one-page worksheet that patients complete on a daily basis. The diary card encouraged two behaviors: self-monitoring and practicing. Patients who completed the diary card rated their current suicidal ideation, self-injurious impulses, aggression, emotional state, and compliance with medication. Patients also recorded what skills they had practiced outside of DBT skills training groups using a checklist.

"Effectiveness" was defined as the outcome of naturalistic and field studies. In other words, the degree to which an intervention "works" in a real-life practice setting. This term was distinguished from efficacy.

"Efficacy" was defined as the outcome of laboratory and controlled studies. In other words, the degree to which an intervention "works" in research trials rather than naturalistic settings.

"Evidence-based practice" (EBP) was defined as the incorporation of research findings into practice behavior, by selecting "what seems to work" with certain populations and clinical problems in the provision of counseling services. A similar term is "best practices." The Institute of Medicine's (2001) definition of EBP includes research evidence, clinical judgment, and consideration for client preferences, context, and culture. "Psychological treatments" were one dimension of EBP. In this manuscript, "EBPs" refers to best practices such as psychological treatments.

"Implementation" was defined as the *process* of adopting a new practice such as DBT into an organizational setting.

"Interpersonal psychotherapy group" was a 60-minute group for adolescents aged 13 and older that was offered at the AIPS daily between 1:30 to 2:30 p.m. Interpersonal psychotherapy group followed an outline from Yalom's chapter on inpatient group therapies in *Theory and Practice of Group Psychotherapy* (Yalom & Leszcz, 2005). The group focuses on exploring relationships rather than skill building. Patients begin the group by setting a relationship topic, such as "relationship with my Dad." Patients are then encouraged to support one another through giving feedback and advice.

"Issuework" was a unique term used in the setting of this case study. Issuework was defined as the assignment and completion of therapeutic worksheets, journaling, bibliotherapy, and other creative activities that address the patient's treatment goals. Worksheets were often photocopied from therapeutic workbooks on topics such as depression, anger management, substance abuse, and trauma. Issuework was meant to be individualized to meet the patient's needs.

"Length of stay" refers to the amount of time that a patient is hospitalized. In the AIPS under study, the average length of stay was approximately five days.

"Level system" in this case study was a behavioral point system using token economy principles to reinforce desired behavior by patients. For completing a task or activity appropriately, patients were given two points. For minor or fleeting behavior problems such as side conversations or needing multiple prompts to complete a task, patients were assigned one point. For sustained problems such as patients deliberately disrupting a group, being sent out of an activity, or threatening or harming self or others, patients did not earn a point. Points were tallied at the end of each day. Patients attained "green level" (most privileges), "yellow level" (minor privileges), or "red level" (no privileges) based on points. For patients needing to work more intensively on issues in their rooms between groups, an alternative program ("blue level") was indicated. The goal of the level system was for all patients to attain green level.

"Life skills groups" are 60-minute psychoeducation groups provided in the AIPS by the milieu staff during the morning program. These groups encompass topics such as self-concept, goal setting, long-term objectives, identifying coping skills, and identifying healthy and unhealthy behaviors. Patients of all ages (5-18 years) attend these groups. The group is fairly task-oriented, and usually involves some kind of arts-and-crafts activity similarly to expressive therapy. It does not follow a treatment manual.

"Manualized" refers to the existence of a treatment manual for a particular counseling intervention. A treatment manual was required for a counseling intervention to be considered a psychological treatment, according to the specifications of APA's Task Force for Promotion and Dissemination of Psychological Procedures (1995).

"Master's-level intern" was defined as a student in a master's-level counseling program who had reached the internship stage of professional training. In this study, master's-level interns were trained and supervised to provide family and group therapy, including DBT-A.

"Milieu" is a term used within the psychiatric literature to refer to the therapeutic value of patient interaction with peers, staff, and family within the setting. The milieu is a structured environment, containing rules, limits, expectations, and guidelines for appropriate behavior. In this case study, a token economy incorporating a behavior-based point system was used to provide structure in daily programming and reinforcement for meeting behavioral expectations. One of these expectations is to be engaged in one's treatment through attending individual, family, and group therapy.

"Milieu counselor" in this study was defined as a milieu staff member providing direct care to patients. This position carried more responsibility than traditional psychiatric technicians, since counselors led groups, assigned "issuework," conducted daily assessments of mental status, performed intake interviews, and completed admission paperwork. Milieu counselors were required to attain bachelors degrees. A few milieu counselors in the setting were also receiving additional training in master'slevel counseling programs, though this was not required for the position.

"Milieu staff" was defined as nurses and milieu counselors who provided direct care to patients in the AIPS. The charge nurse was the staff member responsible for managing the milieu. The other nurses and milieu counselors assisted the charge nurse to run the milieu by leading groups and activities, and were assigned to providing direct care for specific patients.

"Multidisciplinary treatment team" was defined as the collective staff members who were employed and worked in the setting. Members of the treatment team included case managers, managers, milieu counselors, primary therapists, psychiatrists, psychologists, psychometricians, registered nurses, and secretaries.

"Parasuicidal" referred to behaviors that were consistent with attempts at selfinjury or suicide. Examples of parasuicidal acts include cutting oneself, burning oneself, and taking an overdose. Note that parasuicidal behavior can be both with and without suicidal intent. "Patient feedback form" was defined in this study as a brief instrument that was administered at the close of DBT-STGs. A copy of the form is featured in Appendix B.

"Positive Action" (PA) is a cognitive-behavioral group curriculum identified by the Substance Abuse and Mental Health Services Administration (SAMSHA) as evidence-based. The groups were provided daily in the AIPS under study for 60 minutes, between 1:30 to 2:30 p.m., as an alternative for patients who were inappropriate for interpersonal psychotherapy group. PA contains modules on topics such as self-respect and treating others how you would like to be treated. In this study, patients attended PA if they were at least 11 years old (some high functioning 10-year-olds attended), nonpsychotic, and able to participate in structured group therapy without intentionally disrupting it. PA was conducted infrequently during the first 12 months and on a daily basis during the remainder of this study.

"Primary therapist" was defined as a professional counselor, social worker, or psychologist who conducted individual, family, and group therapy. Patients were assigned to primary therapists during their hospital stay. The primary therapists' responsibilities also included crisis management, issuework assignment, and transition management to inform and arrange therapeutic services for the patient to continue postdischarge. According to Swenson, Witterholt, and Bohus (2007), inpatient DBT primary therapists have the following roles: orientation and assessment of the patient, getting patients to commit to treatment, creating a prioritized target list and diary card, reviewing the diary card daily, performing behavioral chain analysis with the patient, giving homework assignments, monitoring progress, attending DBT consultation team meetings, and consulting with the patient in the discharge planning process. "Psychological treatment" refers to the list of interventions identified by the clinical psychology division of the American Psychological Association (APA) as the use of a single intervention (e.g., cognitive-behavior therapy) that has demonstrated effectiveness when used to treat a specific disorder (e.g., generalized anxiety disorder) and is *manualized* (i.e., has a treatment manual; Task Force on Promotion and Dissemination of Psychological Procedures, 1995). In order to make this list, a psychological treatment needed two or more randomized controlled trials (RCTs) that supported its efficacy. At the time of writing, this list can be found at: http://www.div12.org/PsychologicalTreatments/

"Screening" referred to the procedures for including and excluding inpatients from therapeutic groups. DBT-STG leaders in this case study usually tended to be more inclusive than exclusive regarding difficult screening decisions.

"Self-injury" referred to deliberate acts of self-harm, with or without suicidal intent. There are two forms of self-injury: suicidal and non-suicidal. Examples of suicidal self-injury included cutting one's skin with intent to die (e.g., cutting veins, or slitting wrists). Examples of non-suicidal self-injury include cutting one's skin, burning skin, and rubbing salt into one's skin after exposing skin to ice without intent to die.

"Shift" was defined within the case under study as an eight-hour workday. The milieu staff members worked three shifts: day shift, evening shift, and night shift. References to "evening shift staff" are thus references to milieu staff members who collectively worked during an eight hour period in the evenings.

"Spirituality group" is a series of two groups provided to younger children (5-11 years) and adolescents (12-18 years) in the AIPS. Each group lasts for approximately 30

minutes, and is led by a hospital chaplain. This tends to be an unstructured and open sharing type of group, and does not follow a manualized format.

"Staffing" is a term used in the AIPS to describe daily 60-minute morning meetings between the case managers, charge nurse, managers, psychiatrist, and primary therapists regarding patient progress. An equivalent term is "treatment team meetings."

Summary and Overview

The purpose of this study was to identify what helped or hindered the DBT-A implementation process in an AIPS. A multiphase mixed method case study was conducted over a 24-month period. Categories were identified for staff responses regarding what helped and hindered implementation during first-round summative interviews with members of the multidisciplinary treatment team at the setting during the third phase of the study (18-24 months), along with merged data from the first 18 months of qualitative data collection via field observations and a focus group. These categories were rank ordered by relative importance during second-round summative interviews. Quantitative data were embedded into qualitative interviews to provide deeper insight into the effect of patient response to DBT-A on staff adjustment and organizational acceptance. This study represents the first attempt to use qualitative and mixed methodology to examine the process of DBT implementation in an AIPS.

In the chapters that follow, an overview of the related literature is provided (Chapter II), followed by a description of methodology (Chapter III), results from the research (Chapter IV), and a discussion of these findings, their limitations, and future directions for research (Chapter V). For purposes of transparency, replication, and

dependability, the interview protocols, patient feedback form, interview questions, and informed consent are included in the appendices.

Chapter II: Review of the Related Literature

In this literature review, an overview is provided of DBT as a treatment modality. This includes the evidence base for DBT, the subsequent adaptation of DBT with inpatient populations and adolescents, and finally the existing studies that examine the process of DBT implementation for adolescents within an inpatient setting. Since the primary objective of this study was to examine the process of implementing DBT for adolescents within an inpatient setting, selected studies were also reviewed that considered the process of implementing an EBP. An objective of this literature review was to narrow the focus of the study, from larger macro themes (the EBP movement) to micro themes within the literature (the process of implementing DBT for adolescents within an AIPS).

Introduction to Literature Review

Purpose. The purpose of this literature review is to provide a convincing rationale for the need to examine what helped and hindered the DBT-A implementation process in an AIPS, using a mixed methods design that incorporates both qualitative and quantitative data. A secondary purpose of this literature review is to formulate research questions, based on the extant literature (Yin, 2009). Studies will be reviewed that provide the reader with an overview of the contextual background for DBT, stemming from the EBP movement in counseling and psychotherapy.

Conceptual framework. This literature review was grounded by a pragmatic philosophical perspective (James, 1907). The objective of this literature review was to examine practical implications within the counseling literature to identify what seems to work in the implementation of EBPs in naturalistic settings. Pluralistic concepts and

findings were valued, since conflicting evidence can be useful. All research findings were understood to be fallible, and thus any supposed empirical "truths" were considered tentative and temporally based. Thus, any identification of findings regarding what seems to work was not considered final or universal. Consequently, the goal of this literature review was not to determine the last and final word regarding the implementation of DBT, but merely to find evidence that may guide implementation. Theoretical publications regarding implementation of EBPs in naturalistic settings and organizational change were considered to have less practical use than empirical research studies. Thus, the literature review's focus was narrowed to target research studies such as quantitative experiments, qualitative inquiry, or mixed methods studies.

Criteria for literature selection. Studies were chosen for review based upon *relevance*. Although many studies exist that provide important information and insights into organizational change, this literature review limited its focus and coverage to studies that directly addressed the implementation of EBPs, specifically DBT, in naturalistic settings (and inpatient settings in particular), and were reported in peer-reviewed scientific and professional journals mostly within the past twenty years. Implementation studies were included if their methodology was either mixed method or qualitative, since strictly quantitative studies tend to be limited to the study of outcomes rather than processes. Due to taking a pragmatic philosophical approach, non-experimental studies were considered for inclusion if they met the above criteria. Studies were therefore excluded if they solely examined the efficacy or effectiveness of non-DBT psychological treatments, the process of EBP implementation solely within a quantitative paradigm, and

organizational change outside of the EBP paradigm in counseling and psychotherapy, such as organizational change within the business literature.

The following process guided the literature search. Inquiries were made in EBSCO databases such as PsychINFO and Academic Search Complete to find relevant literature on the topic. The online search for literature continued until data were saturated, meaning that the majority of references in newly found articles had already been explored. Once the literature pertinent to the topic had been adequately explored and the process considered fully saturated, the literature review was considered complete.

The relative importance of quantitative research findings was evaluated via a research hierarchy, identified by the American Psychological Association's (APA) original Task Force (1995) on EBP. For quantitative data, priority was given to research in the following order: meta-analyses and systematic reviews, multi-site replications of randomized controlled trials (RCTs), randomized experiments, quasi-experiments, single case experiments, and correlational studies. For qualitative data, priority was given to research that followed a rigorous coding methodology (e.g., grounded theory's constant comparative method). Isolated findings were given comparatively less weight than findings that had been established in separate studies conducted by distinct researchers.

Two articles deserve special mention for providing an overview of selected studies, which were then examined further in the literature review. Groves, Backer, van den Bosch, and Miller (2012) examined the current evidence base for DBT with adolescents. The authors concluded that DBT seemed to be a helpful technique for treating adolescents, though further research was needed. Dimeff, Koerner, and Linehan (2006) summarized the overall evidence base for DBT. This tabular document provided a coherent display of DBT efficacy with diverse populations and disorders.

Organization of literature review. The literature review is organized into two overarching sections with two main sub-sections. The progression of the literature review through the two sections was based on thematic content rather than chronology. In the first section, the literature on the historical and contextual background of DBT is reviewed, namely the EBP movement and the transportation of EBPs from laboratory to naturalistic settings. Understanding the history and relevance of EBPs is foundational to understanding the need for implementing these practices within organizational settings; thus, prior to examining the literature on DBT, the historical and contextual background of the EBP movement must be examined first.

In the second section, the literature on DBT is reviewed. A description of DBT as a treatment modality and as an empirically supported intervention is provided. In addition, studies are examined that investigated the process of implementing DBT in naturalistic settings, particularly for adolescents in inpatient settings.

The sections of this literature review address the following topics sequentially: the EBP movement, mixed method studies examining EBP implementation in naturalistic settings, DBT's status as an EBP, and studies examining the process of implementing DBT in naturalistic settings.

The EBP Movement

The EBP movement is a relatively recent development within the counseling and psychotherapy field. Although the movement's roots extend back to the 1950s, the concept of EBP only began to receive major attention from the mid 1990s onward. In

this section, the chronology of the EBP movement, the role of psychological treatments, the EBP movement's relevance to counselors, and attempts to implement psychological treatments in naturalistic practice settings are examined.

Roots. In the field of counseling and psychotherapy, the roots of the EBP movement developed from studies that questioned the overall efficacy of counseling and psychotherapy (LaRoche & Christopher, 2009). Over half a century ago, Eysenck (1952) concluded that clients receiving psychotherapy did not demonstrate significant improvements when compared to spontaneous remission. Subsequent research has since validated the effectiveness of psychotherapy (e.g., Luborsky, Singer, & Luborsky, 1976; Smith & Glass, 1977). The best practices movement therefore developed out of a need for accountability, to ensure that optimal client outcomes were being achieved. According to the Institute of Medicine (2001), the need for EBPs developed out of longstanding criticisms of ineffective, variable, and sometimes harmful practices within the human services field. In addition, the growing research demonstrating the efficacy of psychiatric medication created the need to justify counseling and psychotherapy as a first line treatment for client problems (LaRoche & Christopher, 2009).

History of psychological treatments. In the mid 1990s, a misperception existed within healthcare that psychiatric medications were a superior intervention to counseling and psychotherapy, and thus, a first line treatment (LaRoche & Christopher, 2009). In 1995, the APA commissioned a Task Force for the Promotion and Dissemination of Psychological Procedures that sought to address this concern by calling for research that directly compared the outcomes of psychiatric medication to psychotherapy. In addition, the Task Force (1995) created a list of interventions, termed *psychological treatments*,

which they claimed had demonstrated superior outcomes for treating certain disorders through at least two RCTs.

In the United States, the Federal Drug Administration considered RCTs to be the gold standard approach to evaluating the effectiveness of a new drug, and thus the use of RCTs in counseling and psychotherapy research was presumed to give psychological treatments respectability in the marketplace (LaRoche & Christopher, 2009). These RCTs either compared bona-fide psychological treatments with each other, or compared psychological treatments with control groups that consisted of placebos (i.e., no treatment) or treatment-as-usual interventions (e.g., by master's-level therapists in the community). The resulting interventions were referred to in the literature as empirically validated treatments or empirically supported treatments (Levant, 2004). During the mid 1990s, best practices in psychotherapy were therefore initially reduced to matching manualized treatments to certain disorders (Wampold & Bhati, 2004). It was not until 2006 that the APA broadened the definition to include "the integration of best available research with clinical expertise in the context of patient characteristics, value, culture, and preferences" (APA, 2006, p. 276). The APA's broadened definition was strongly influenced by an EBP definition proposed by the Institute of Medicine (2001). Today, psychological treatments are considered one dimension of EBP.

Relevance of EBP to counselors. For nearly a decade, the counseling profession has made concerted efforts to delineate best practices for the field. In 2005, the American Counseling Association's (ACA) Code of Ethics included a recommendation to use therapies that "have an empirical or scientific foundation" (ACA Code of Ethics, 2005, C.6.e). The Journal of Counseling and Development introduced a new journal feature in 2007, entitled "Best Practices." The Council for the Accreditation of Counseling and Related Educational Programs (CACREP) modified their 2009 Standards for Addiction Counseling (I.3., p. 22), Clinical Mental Health Counseling (I.3., p. 34), and Marriage, Couple, and Family Counseling (I.3., p. 39) to require that the student "knows evidence-based treatments."

While most of the studies in EBP utilization have been conducted within the professional discipline of psychology, many of the findings are relevant to counseling. For some managed care organizations and government healthcare agencies, reimbursement is already dependent upon utilization of psychological treatments (Tanenbaum, 2005). This expectation of EBP implementation is similar for all practitioners who operate within the healthcare system. In a recent Institute of Medicine report (2013) that evaluated the appropriateness of the mental health counseling profession to receive reimbursement from TRICARE, it was recommended that all mental health professionals, including counselors, should utilize EBPs.

Barriers to EBP implementation. At the turn of the century, concerns abounded regarding the lack of implementation of EBPs within clinical settings. Institutions that reported these concerns included the Surgeon General (United States Department of Health and Human Services, 1999), the Institute of Medicine (2001), and the President's New Freedom Commission on Mental Health (2003). The Institute of Medicine (2001) asserted that the divide between research and practice behaviors was "not just a gap, but a chasm" (p. 1). It has been estimated that the length of time between identifying EBPs and transferring them into a clinical setting is between 15 to 20 years (New Freedom Commission on Mental Health, 2003). In 2003, the U.S. President's New Freedom

Commission on Mental Health identified a need to financially support the implementation of EBPs, which resulted in numerous grants being awarded for EBP research, particularly implementation research (Stirman, Crits-Cristoph, & DeRubeis, 2004). Decisions made at the federal level have trickled down to the state level, with additional funding allocated by several states (Ganju, 2003; Washington Department of Health and Human Services, 2005). As of 2010, over \$2 billion in public funds have been allocated to EBP implementation efforts (McHugh & Barlow, 2010). Yet despite all of these efforts, practitioner utilization of psychological treatments in the years following the dissemination of the psychological treatment list has been disappointing (Becker, Stice, Shaw, & Woda, 2009).

Part of the reason for the resistance to EBP adoption and implementation comes from the difficulty inherent in organizational change. In hospitals, even the seemingly simple procedure of hand washing has not been sustainably implemented (Gawande, 2007). Potential barriers to implementing a new practice within an organization can include difficulties in training staff, resistance to the new interventions, major structural changes required of the organization in order for the intervention to be implemented, and the likelihood of recidivism over time (McHugh & Barlow, 2010). Fox and Gershman (2000), writing about the World Bank's attempts to implement new policies for the poor, pointed out that potential investors often face "a high degree of uncertainty regarding commitment, capacity, and intentions of the potential partner" (p. 188). Translated to mental health systems, organizations may feel uncertain about their organization's *capacity* for change. Linehan (2007) acknowledged that, "institutional readiness for change, resources, and climate can also be critical to the successful implementation of
new treatments. Interventions aimed at addressing institutional norms and readiness is sorely needed" (p. 3).

Fixsen, Blase, Naoom, and Wallace (2004) asked workshop participants at a children's mental healthcare conference to identify their top five reasons for implementing an EBP. The top reasons were: enhancing intervention effectiveness, improving organizational services, having the available funding for EBP implementation, ability to adapt EBPs, and having relevant information available. The ability to adapt EBPs seems crucial, since clinical settings are rarely the same as the research settings in which EBPs were developed. During their workshop held the year prior, the same authors had asked participants about their top reasons for not adopting an EBP (Fixsen et al., 2004). These reasons were, in the following order: the research base is unconvincing, EBPs are difficult to implement, EBPs require too much change, EBPs do not comprehensively address clinical problems, and the infrastructure for implementing EBPs either does not exist or is unsupported by research. This last reason is crucial to our understanding of why EBPs are difficult to transfer into clinical settings; potential adopters are not provided with guidelines for how to implement them. To use a metaphor, it would be the equivalent of knowing that energy-efficient appliances save money for a business, without having a handbook that provides instruction in how to install the appliance! The authors wrote, "although we have a lot of evidence about 'programs that work,' we have much less knowledge about the implementation and dissemination of evidence-based practices and programs in real world settings" (p. 4). Clearly, a need exists for studies that examine what helps and hinders the process of implementing an EBP.

The difficulty of training practitioners in the use of EBPs is a particularly daunting barrier to implementation. Other practice behaviors in healthcare (e.g., hand washing, prescribing practices) do not require a skill set as complex and nuanced as providing a psychological treatment (McHugh & Barlow, 2010). Unfortunately, trainings for practitioners have been limited to one or two day workshops (Linehan, 2007). This strategy is ineffective, because brief didactic methods do not meet the need of practitioners, who require both didactic training and supervision to administer a psychological treatment correctly and with integrity (McHugh & Barlow, 2010). Oxman, Thomson, Davis, and Haynes (1995) conducted a systematic review of implementation studies, and found that didactic training without a supervisory component did not result in sustained practitioner utilization of a new intervention.

Weissman et al. (2006) found that training programs in other disciplines have been somewhat resistant to including both didactic instruction and clinical supervision in preparing students to provide psychological treatments. Only 28.1% of psychiatry preparation programs and 9.8% of social work preparation programs required both didactic instruction and clinical supervision in EBP use. In clinical psychology preparation programs, 16.5% of Ph.D programs and 11.5% of Psy.D. programs required both didactic instruction and clinical supervision in psychological treatments. This rate is especially low, considering that the inclusion of training in psychological treatments is required for APA doctoral program accreditation (Chambless, 1999). No data are currently available on the percentage of counselor education programs that require both didactic instruction and clinical supervision in the use of psychological treatments, despite CACREP's (2009, 1.3) mandate that counseling students have knowledge of "evidence-based treatments." Therefore, counselors who wish to become proficient in using an EBP must either complete intensive training in the method at an institute, with substantial associated costs such as airfares, or be trained in the method in-vivo at a site that provides an EBP. Organizational implementation of EBPs can therefore also be considered vital to increasing practitioner knowledge of the method within the field. The need to implement EBPs within organizational settings (as opposed to academic or research settings) is thus helpful to both clients *and* practitioners.

Strategies that facilitate implementation. According to Berwick (2003), organizational change can be facilitated by a number of factors, including: perceived benefit of the intervention, compatibility of the intervention with the organization's goals, simplicity of intervention, and ability to observe an intervention. With regards to *perceived benefit*, implementers must help staff to understand how the intervention meets the needs of the organization. Staff within the organization must be provided with concrete data about how the intervention is helping clients, and the degree to which clients are accepting the new intervention. This procedure decreases staff uncertainty about the intervention's acceptance by their clientele. Compatibility is defined as the consistency between an intervention and the values and structure of the organization during the implementation effort. For *simplicity*, implementers must provide information about specific steps that are helpful in the intervention's implementation. The exposure of staff to an intervention facilitates the acceptance of the intervention, due to potential supporters having the opportunity to watch others try the new intervention first; this increases curiosity and buy-in. Open houses are useful for exposing staff to the new

modality. Posters are also helpful to spread exposure of a new intervention to the organizational setting.

The literature has consistently underscored the importance of *buy-in* during in the process of implementation, which can be facilitated by including staff in the process of adoption and implementation (Fixsen et al., 2005). Rogers (2002) reported that in human service fields, organizational change is strongly supported by clear communication among staff members, a cogent theory regarding the need for change, and the identification of champions who can consistently cheerlead and encourage other staff members. In addition, Denton, Vaughn, and Fletcher (2003) reported that the sustainability of an introduced program is determined by factors that include practitioner acceptance of and commitment to the intervention, buy-in throughout the organization, practitioner feelings of professionalism and self-determination, the program being seen as practical and beneficial to clients, and administrative support and leadership. Disorganized or unhealthy organizational climates are more likely to produce and include practitioners who are resistant to using new methods, such as EBPs (Aarons & Sawitzky, 2006). It therefore appears that staff inclusion and buy-in are crucial variables in successful implementation efforts.

Potential supporters of the new intervention must be recruited early during the process of implementation. Their positivity as well as encouragement of other staff members can facilitate widespread acceptance of the modality. Berwick (2003) suggested that organizational change is commonly facilitated by personal relationships between the implementers, champions, and staff. Many early adopters therefore "learn

mainly from people they know well, and they rely on personal familiarity, more than on science and theory, before they decide to test a change" (p. 1972).

The stages of implementation. Fixsen et al. (2005) wrote, "implementation is a process, not an event" (p. 15). The authors outlined a six-stage model for the EBP implementation process. These stages were: exploration and adoption, program installation, initial implementation, full operation, innovation, and sustainability. During *exploration and adoption*, adopters consider the feasibility of the EBP and whether it meets the needs of their clientele. The adopters then inform the staff about the organization's intention to adopt the EBP. During *program installation*, funding is needed for start-up costs, training staff members, and policy development including outcome expectations. During *initial implementation*, the organization begins to adapt and change to the implementation of the EBP. This stage is marked by a struggle between individuals wishing to maintain the status quo and individuals who want to be part of the change. Many implementation attempts end during this crucial period in the process, as doubts about the legitimacy of the need for change often stymy implementation. As Fisher (1983) stated, "the real world of applied psychology is an environment full of personnel rules, social stressors, union stewards, anxious administrators, political pressures, interprofessional rivalry, staff turnover, and diamondhard inertia" (p. 249).

Programs that reach the fourth stage (*full operation*) become fully operational. The organization has adapted to the EBP, and it has become an accepted practice within the setting. In the fifth stage (*innovation*), changes can be made to the EBP to better fit the organizational setting. Fixsen et al. (2005) warned that there is a fine line between innovation and infidelity. Of those organizations that have implemented an EBP, many programs lack fidelity to the EBP model being provided, meaning that not all of the independent variables associated with the program are being implemented. Fidelity rates as low as 24% have been reported (Dane & Schneider, 1998). Clearly, innovation must not occur at the expense of eliminating the independent variables of the intervention. The *sustainability* stage is reached after two to four years after the program's initial implementation. Challenges still arise; trained staff members leave the organization and are replaced with new staff members who require training. In addition, political alliances may shift, and champions of the EBP may support other causes.

Fixsen et al. (2005) reported that the majority of studies regarding implementation outcomes are conducted during the initial implementation stage (4-6 months), not during the full operation stage (1-2 years). This approach can complicate results and findings, since outcomes are assessed before the program is fully implemented. The authors added that unfortunately, "research on the stages of implementation is rare, especially research that evaluates the relative contributions of implementation factors across stages" (p. 18). They recommended that implementation studies must last, at a minimum, for one to two years. This length of time is needed for the accurate assessment and evaluation of how the project moves through the stages of implementation, which tends to be a slow and steady process.

Mixed Method Studies Examining EBP Implementation in Naturalistic Settings

Research studies have found that EBP implementation was likely to be unsuccessful in both clinical settings (e.g., Stewart & Chambless, 2007) and training programs (Weissman et al., 2006). In this section, three longitudinal mixed method and qualitative studies into the process of EBP implementation that were conducted within the past decade are examined. These studies provide a helpful overview of how mixed methods can be used to investigate the process of implementation. Two of the studies (Gioia & Dziadosz, 2008; Steinfeld, Coffman, & Keyes, 2009) were specifically selected because they include counselors as part of the sample. Studies were excluded if they did not examine the process of implementation longitudinally over the course of at least two years, and if they examined outcomes rather than the *process* of implementation (i.e., efficacy and effectiveness studies).

Pazano-led research team. A research team led by Pazano conducted a large longitudinal multiphase mixed-methods study on the process of EBP implementation within the Ohio mental health system (Pazano, Seffrin, Bunt, Roth, Massatti, Sweeney, & Carstens, 2006; Pazano, Seffrin, Chaney-Jones, Roth, Crane-Ross, Massati et al., 2006). Using an exploratory design, they first collected qualitative data from 207 staff members in 71 behavioral health systems in Ohio during three rounds of interviews, and later followed up on qualitative survey data by collecting quantitative survey data from the same informants. Data collection lasted from December 2001 to November 2005, and results were published in two separate manuscripts. In the methods section of the first manuscript, the authors reported that qualitative and quantitative data would be merged at the conclusion of the data collection phase, before analysis. Qualitative data were counted, transformed, and quantified to enable merging with the quantitative data. The authors acknowledged that few qualitative studies have been conducted into the process of EBP implementation thus far, since "the process of coding qualitative information

from interview transcripts is much more labor intensive than the process of entering survey responses into a database" (Pazano, Seffrin, Bunt et al., 2006, pp. 2-3).

The objective of this multiphase study was to investigate factors that led to sustainable implementation of EBPs. The two broad research questions of the project were: What factors and processes influence the adoption of EBPs by mental healthcare organizations? What factors and processes contribute to the longer-term sustainability of EBP implementation? Participants had differing levels of authority within their respective organization, with 40% top executives, 44% first line supervisors, and 16% line staff represented. Most participants had master's degrees (62%), with 12% medical doctors and 10% having bachelor's degrees. Their role within the organization was described as "implementer" (35%), "decision maker" (33%), "champion" (16%), or "other" (16%).

In their initial qualitative phase of the study, Pazano, Seffrin, Bunt et al. (2006) gathered data from interviews in three rounds. A lead interviewer and scribe conducted interviews, following a protocol that included structured, semi-structured, and unstructured questions. Between the first and second phase of the study, some of the participants' EBP programs had been dropped from the organization's programming; however, the authors continued to include participants from these organizations, as their failed efforts to sustain EBP implementation provided important insights into the process.

During data analysis, the research team categorized codes into five modules. To enhance validity, the coding team was provided with coding dictionaries; they then participated in inter-coder consistency checks, producing high kappa co-efficients. The research team employed an unusual method of data analysis, importing modules into SPSS in order for their frequency to be computed and *t*-tests performed for the differences in category reference frequency (i.e., how often a particular category was mentioned) between the three rounds of interviews. The authors controlled for Type I error rate inflation that is found when conducting multiple *t*-tests by only comparing merged data from rounds one and two.

This unusual method of data analysis produced confusing results. For example, the authors reported that the mean reference to implementation barriers remained stable between the first two rounds of interviews ($t_{39} = 0.89$, p = ns). The authors did not adequately describe what their findings meant; it was unclear what inferences could be drawn from a non-significant *t*-test for mean references to barriers between first and second rounds, and one could argue that qualitative data do not lend themselves to this kind of statistical analysis. For example, although a participant may not mention specific barriers during an interview, it does not mean that differences in perceived barriers were actually present between first and second rounds. Pazano, Seffrin, Bunt et al.'s (2006) choice to perform inferential statistics on qualitative data is intriguing, considering that the authors mentioned earlier that most studies avoid qualitative data because of the time spent in conducting analyses.

The Pazano et al. studies were noble efforts to understand what factors seem to be associated with the successful adoption and implementation of an EBP within an organization. Their mixed methods approach enabled the authors to explore data with depth and breadth, providing a comprehensive overview of the process. Their interview protocols, coding, and analysis procedures were well defined, and their data analyses sought to address their research questions. In addition the research team conducted follow up on unsuccessful implementation efforts, to understand why these attempts failed.

However, these studies also had several significant limitations. First, several statistical tests used during analysis were inappropriate or incomplete. Conducting *t*-tests on qualitative data seems inappropriate, and the authors did not provide effect sizes or pvalues for some of their correlational statistics. Second, the data were not mixed or connected in a coherent manner, meaning that findings from the qualitative portion of the study did not seem to inform or describe findings from the quantitative portion of the study. This lack of mixing was a missed opportunity to increase the validity of the data via triangulation, which the authors even alluded to during the methodology section of their first study (Pazano, Seffrin, Bunt et al., 2006). Third, no mention was given to weighting, despite the obvious prizing of quantitative data as evidenced by the quantifying of the qualitative data. Fourth, no mention of member checks was made, and it is unclear if participants were given the opportunity to verify the accuracy of their transcripts. Fifth, interpretation was not fully developed at times; the reader had to interpret the meaning of certain findings. For example, it was unclear why a reduction in the frequency of references to certain categories was important between two rounds of interviews. It could be inferred that this reduction suggested that these issues were being addressed during the process of implementation but no clear interpretation was provided.

Gioia and Dziadosz, 2008. Gioia and Dziadosz (2008) conducted a longitudinal qualitative study into the personal experiences of bachelor's- and master's-level practitioners (n = 14) who were trained in the adoption of EBPs within a community mental health agency. The authors collected qualitative data through longitudinal

interviews over the course of 24 months at six-month increments. They used a standardized instrument (Evidence-Based Practice Attitudes Scale, or EBPAS; Aarons, 2004) for quantitative data collection, administered concurrently with the longitudinal interviews. Similarly to the Pazano-led research, the study's main finding was that inadequate financial support for EBP training resulted in staff dissatisfaction and unsuccessful implementation.

Statewide policy changes regarding the provision of EBPs affected the outcome of the study and provided meaningful insight into the challenges faced by community agencies that attempt to train their practitioners in the adoption of EBPs. Toward the end of the study, bachelor's-level professionals were no longer able to offer EBP services per state regulations. One participant resigned, and several others contemplated resigning at the conclusion of the study. The organization seemed to withdraw support for the EBP training. Participants were not trained in all four EBPs by the conclusion of the study, despite the study persisting six months longer than initially planned. These "failures" may have prevented the findings from being published and disseminated in traditional quantitative environments. Despite having a negative training outcome, the benefits of understanding the participant experience of EBP adoption was more important than whether the training was successful. This information may have been lost if the study was conducted from a quantitative paradigm, where the criteria for "success" were based upon the actual adoption of EBPs (outcome) rather than practitioner experiences during implementation (process).

The central research question was to further understand the "complex process of EBP adoption" (p. 348). For the qualitative section of the study, field observations and

semi-structured focus group interviews were conducted. The authors did not specifically address the use of anecdotal field observations in their analysis in addition to focus groups. This lack of acknowledgement implies that methodological decisions were made without reflection and awareness. Whenever an emergent process is used, the researchers must identify and clarify methodological decisions that are made along the way.

Grounded theory analysis (Charmaz, 2006) was supposedly used for data analysis, specifically the constant comparative method, but the authors provided inadequate explanation regarding how themes were organized. The results section merely showed comparisons between facilitative and impeding conditions related to EBP adoption without the provision of a specific coding scheme. Instead, quotes from focus groups were liberally inserted into the text, usually prefaced by: "typical participant comments included the following..." This overuse of direct quotation gave the report an anecdotal flavor. While the discussion section contained "three grounded theory notions" that "emerged as most salient to the study" (p. 356), no mention was made regarding what coding practices were used to derive these three "notions." On a positive note, the use of member checking via feedback meetings to clarify participant responses and check emerging themes increased the rigor and validity of the data.

Quantitative data were collected using the EPBAS. Participant scores were tracked longitudinally, and compared with mean scores from Aarons' (2004) original sample. The quantitative and qualitative strands of data collection and analysis were conducted independently of each other, and the quantitative data collected via the EBPAS instrument were not connected with the qualitative data in a meaningful manner. This was apparent in the discussion section, where the authors did not adequately compare and contrast findings between the qualitative and quantitative data, only briefly commenting that the EBPAS scores validated the enthusiasm of participants found in the qualitative data.

A major flaw of the study was the lack of attention given to mixing and weighting decisions. The authors did not clearly address why they had chosen to focus primarily on qualitative methodology, and the quantitative data that they had collected and analyzed in their study did not answer their research questions. Quantitative data could have been better used to validate or support the qualitative findings regarding the primary research question. While the instrument selection seemed appropriate, the authors did not provide any additional depth to the primary research question regarding individual practitioner experiences with adopting EBPs within a community agency. In short, the research design was predominantly qualitative and the qualitative findings. Thus, the research design was a poor example of how mixed methods research can provide deeper meaning and insight into a research question, since the quantitative strand was irrelevant to the research question.

In addition, the authors did not specify which mixed methods design they were using. They merely identified the qualitative methodology for their data analysis (grounded theory). This resulted in a lack of focus at the design level, creating a subsequent lack of clarity regarding the choice of instrumentation. For example, the rationale for using quantitative data was not fully explained, and qualitative data were not integrated in a meaningful manner with the qualitative data. The longitudinal nature of data collection seems to indicate that the study could have been a multiphase design. The study by Gioia and Dziadosz (2008) is a good example of when mixed methods research is not the most appropriate form of research design. In the study, quantitative data via scores on the EBPAS instrument were not adequately connected or merged with the qualitative data. Indeed, the quantitative data were merely used to illuminate a construct (enthusiasm) that was tangentially related to the research question under study. As it was conducted, the study may have been better suited to a solely qualitative research design. The small sample size (n = 14) provided evidence for this; statistical analyses would have been biased due to the size of the sample. A mixed methods design would only have been appropriate if the research question required data from both quantitative and qualitative methods in order to be answered fully.

This study served as a guiding example for my methodological design; the research design must seek to address how the research question can be most fully answered. Mixed methods designs are complex and require forethought during the planning stage. Consideration must be given to how strands are mixed, timed, and weighted. Using instruments that are related to the construct under study but do not provide information about the research question are indicative of inadequate planning. Once the study is initiated, the researcher must reflect upon decisions made during the process and document this awareness in the formal manuscript.

Researchers must be careful when explaining methodological decisions in the methods section. Gioia and Dziadosz (2008) did not comment on why they made decisions to include data from field observations. The authors did not adequately describe the coding of qualitative data. Merely including participant comments without disclosing why these were selected or how frequently these responses occurred suggested

the presence of researcher bias. It is entirely possible that this lack of explanation may be caused by the research team's inadequate consideration of methodological factors, resulting in poor methodological decisions that may have introduced bias into the data. Care must be taken when preparing, implementing, and describing the research process.

Steinfeld, Coffman, and Keyes, 2009. Steinfeld, Coffman, and Keyes (2009) conducted another naturalistic study of EBP implementation within a community mental health setting. The authors investigated the process of implementing cognitive behavior therapy (CBT) in a large non-profit community mental health center in Washington State and Idaho. The authors primarily collected and analyzed quantitative data, and thus their design had more similarities to Pazano, Seffrin, Bunt et al. (2006) compared to Gioia and Dziadosz (2008). A large portion of the published article consisted of field observations regarding practitioner willingness to engage in the implementation process, and subsequent observations regarding staff adjustment. The authors unfortunately did not address their use of mixed methods within their methods section, nor addressed their positioning or observer role during observations.

Steinfeld et al.'s (2009) study had important implications. First, the degree of organizational support seems crucial to successful implementation efforts. Staff members were not expected to pay for trainings, and were given a reduced client caseload in order to allow time for training. The organization was willing to cover the substantial costs of implementing the CBT training program. The other mixed method studies reviewed (i.e., Pazano, Seffrin, Bunt et al., 2006; Gioia & Dziadosz, 2008) have found that the organization's willingness to consistently provide financial backing is a significant facilitative factor for successful implementation. The study also underscored

the need to assess practitioner level of motivation in learning EBP interventions.

Counselors who are resistant to being trained in an intervention may not obtain the most favorable client outcomes. Thus, counselor participation in EBP trainings must proceed only after careful consideration to the counselor's own level of motivation and openness to being trained in implementing the intervention.

The study had several limitations. The quantitative analysis relied on descriptive statistics and no attempts were made at performing inferential statistics. Thus, findings cannot be reliably generalized to other settings. Because statistical analysis was limited to descriptive statistics, qualitative follow-up interviews could have been conducted to provide an explanation of the nomothetic data. Furthermore, the field observations were not adequately analyzed, and the authors' decisions about which data to include in the report were not described in the methods section. Finally, this study, while valuable, only provided a cursory exploration of the implementation process due to its focus on outcomes. This could be expected, due to its orientation toward valuing the quantitative data.

These three studies are helpful in understanding how a longitudinal mixed methods or qualitative design can be used to provide a rich description of the implementation process. The first study reviewed (Pazano, Seffrin, Bunt et al., 2006) provided the most cohesive and thorough methodology of the three. The interview protocols, coding process, data collection and analysis, and interpretation processes were all described in a transparent fashion. The second study reviewed (Gioia & Dziadosz, 2008) was unfocused and did not fully address why a mixed methods approach was selected; this resulted in the quantitative data being irrelevant to the research question, and not mixed with the main qualitative data. The third study reviewed (Steinfeld et al., 2009) focused primarily on quantitative methodology, and while more focused, did not fully address the process of implementation.

It appears that mixed methods are not fully understood in the EBP implementation literature. Two of these three studies did not indicate that their design was more commensurate with a mixed methods approach, rather than a purely grounded theory approach (Gioia & Dziadosz, 2008) or quantitative approach (Steinfeld et al., 2009). A need clearly exists for transparent, cohesive, and robust mixed method studies, since currently both qualitative and quantitative data are being collected and analyzed in studies that examine the process of EBP implementation.

DBT as an **EBP**

McHugh and Barlow (2010) identified two psychological treatments that have been effectively implemented within naturalistic settings: multisystemic therapy and DBT. In regards to the latter, DBT has evidence for both its efficacy and effectiveness. The authors noted that the developers of DBT focused on the dissemination of DBT from its inception. In Linehan's (1993a) training manual, *Cognitive Behavior Therapy of Borderline Personality Disorder*, she reported that several changes were made to the manual, based upon community response to DBT implementation efforts.

Since its inception, DBT has become one of the most commonly used psychological treatments. Behavioral Tech, LLC, a non-profit organization, was founded to promote and coordinate efforts to disseminate and train practitioners in the use of DBT. From 2003 to 2007, nearly 2,500 practitioners have received training from Behavioral Tech, LLC. This is double the number of total practitioners trained in the use of any psychological treatment within the largest healthcare system in the U.S., the Veterans Health Affairs system (McHugh & Barlow, 2010). DBT has been implemented in 31 states and 12 countries (Linehan, Manning, & Ward-Ciesielski, 2008). Training is available both at the state level and for individual organizations that wish to develop competence in the use of DBT. DBT training has two levels: basic training, and advanced intensive training. The latter features two series of five-day workshops, separated by several months when practitioners implement DBT in their practice, and evaluate their current implementation efforts. In addition, ongoing consultation is offered to organizations that wish to continue monitoring DBT treatment fidelity.

DBT emerged in the early 1990s as a treatment of choice for borderline personality disorder (BPD). It has subsequently been adapted and found to be effective with high-risk populations experiencing difficult-to-treat disorders with symptomology similar to BPD, such as antisocial personality disorder, substance abuse, bulimia, and binge eating (Lynch & Cheavens, 2008). In addition, DBT has been found to be effective with clients representing a range of demographics, spanning suicidal adolescents, depressed older adults, and different ethnic groups. A major strength of the therapeutic approach is its empirical backing. Nine randomized controlled trials have supported the effectiveness of DBT in reducing target behavior within specific populations. Marsha Linehan placed firm emphasis on following empirical research and EBP. She instructed practitioners "to keep your allegiance not to DBT, but to what is most effective based on the empirical literature" (Linehan, 2007, p. xiii).

In this next section of the literature review, the development of DBT as a treatment method is examined, by exploring its underlying philosophical assumptions,

presenting a detailed exposition of the theory, and considering techniques and interventions employed. The empirical evidence for DBT effectiveness is then considered, along with its subsequent adaptation to inpatient settings and to adolescent populations.

Development of DBT as treatment method. Marsha Linehan first developed DBT in the late 1980s and early 1990s at the University of Washington. During the 1970s, Linehan encountered several recurrent challenges while applying cognitivebehavior therapy to chronically suicidal individuals (Koerner & Dimeff, 2007). Clients withdrew from therapy, attacked their therapists, and were able to adversely control the course of treatment. Linehan found that teaching new skills was nearly impossible within the context of an individual therapy session; the focus remained on treating the client's motivation to die and suicidal behaviors from the past week (Dimeff & Linehan, 2001). Treatment modifications were necessary to provide additional therapist support.

Linehan's original treatment manuals were first circulated in 1984. The theorist mixed conventional cognitive-behavioral strategies with techniques aimed to specifically treat emotional dysregulation. Influenced by Eastern meditative practice, Linehan incorporated mindfulness and a dialectical philosophy into her revised treatment method. The two central DBT treatment manuals, *Cognitive-Behavioral Treatment of Borderline Personality Disorder* and the *Skills Training Manual for Treating Borderline Personality Disorder*, were eventually published in 1993.

Underlying philosophical assumptions. DBT is based upon the foundational philosophies of behavioral science and dialectics. In regards to behavioral science, DBT targets measurable outcomes for increase or reduction of specific behaviors. The therapy

aims to identify specific, attainable goals related to behaviors such as suicide attempts, cutting, abstinence from substance abuse, and dropout rates in therapy. The theory utilizes the traditional change orientation of behavior therapy in which all behavior is considered learned, and learning is controlled by environmental factors. In DBT, ineffective coping is replaced by more skillful coping mechanisms.

Dialectical philosophy is based upon reconciliation and accepting of differences. Opposites can coexist; all viewpoints and choices must first be accepted in a nonjudgmental and non-evaluative way before change can occur. This acceptance of reality is distinct from approval of reality. With regards to dialectical philosophy, individuals with BPD often combine rigid, dichotomous thinking with extreme emotional and behavioral response. The fundamental dialectic for therapists in DBT is accepting clients as they are, while simultaneously helping them to change (Dimeff & Linehan, 2001).

Detailed exposition of the theory. DBT is a comprehensive, cognitive-behavioral treatment for complex and difficult-to-treat mental disorders (Linehan, 1993a). The theory incorporates elements from psychodynamic, client-centered, gestalt, paradoxical, and strategic therapeutic approaches (Heard & Linehan, 1994). DBT is based on the premise that biosocial factors block the individual's adaptive behavior skills, reinforcing dysfunctional behaviors (Dimeff & Linehan, 2001). Linehan (1993a) asserted that the primary biological problem of BPD is emotional dysregulation: aversive states are more intense, frequent, and longer-lasting. Evidence exists for the presence of central nervous system differences in BPD as reason for this emotional dysregulation (Stiglmayr, Grathwol, Linehan, Ihorst, Fahrenburg & Bohus, 2005). Invalidating environments

communicate to individuals that their extreme emotional responses to events are pathological, inappropriate, or not to be taken seriously. Problem solving is oversimplified, and unrealistic goals or expectations for the individual are communicated. Others in the environment only respond to escalated negative emotional displays, reinforcing problem behavior. This circumstance teaches the individual to oscillate between emotional inhibition and extreme emotional communication, further impairing the circuitry of the prefrontal cortex and hippocampus.

To reduce the chaos associated with helping clients suffering from this emotional dysregulation, DBT is a highly structured and organized treatment modality. The therapy structures organized strategies into protocols. A prioritized treatment hierarchy guides the therapist to address the most pressing concerns. DBT serves the following five functions: it enhances behavioral skills, improves motivation to change, assures that new skills generalize to natural environment, ensures that effective behaviors are reinforced, and maintains therapist motivation (Dimeff & Linehan, 2001).

DBT treatment targets are prioritized in four stages, with the first stage representing the most pressing targets. Stage 1 involves stabilizing the client and gaining behavioral control. The four targets of Stage 1 are: decreasing life threatening behaviors such as parasuicidal, self-injurious, and suicidal acts; decreasing therapy interfering behaviors; decreasing quality-of-life interfering behaviors; and increasing basic behavioral skills needed to make life changes. Clients are only ready to progress to Stage 2 when they have eliminated severely dysfunctional behavior, can maintain a strong therapeutic relationship, and have demonstrated the ability to cope with situations that previously triggered problem behavior. After the client's behavior is under control, treatment follows the following stages: Stage 2, help the client feel better; Stage 3, resolve lingering life concerns or disorders; Stage 4, assist the client in finding joy (and for some, transcendence). For many individuals, Stage 4 goals fall outside of traditional therapy, and are best addressed within a spiritual practice that provides fulfillment (Koerner & Dimeff, 2007). DBT is best known for its efficacy in treating individuals with Stage 1 concerns. Most of the research data target behavioral outcomes for individuals with severe or multiple disorders. Although the ultimate goal of DBT is to aid the client in creating a life worth living (Linehan, 1993a), DBT is most known for addressing more acute behavioral problems than existential dilemmas.

Comprehensive DBT treatment consists of four modes, lasting for at least 28 weeks (Linehan, 1993a). The first mode is individual therapy. This occurs during a weekly hour-long session. A primary therapist meets individually with clients, and is assigned the role of treatment planner. This therapist makes sure that progress is being made on all DBT targets. Diary cards are used for the client to record problematic thoughts, feelings or behaviors during the past week. The therapist teaches clients to manage their emotions, rather than attempting to reduce emotional response.

The second mode is group skills training, which occurs for two and a half hours during a weekly group session. All of the core skills are taught in this group. An additional therapist is assigned to be skills trainer. The skills trainer refers individual problems and phone calls back to the primary therapist. Unlike traditional group therapy, observations about others are discouraged. A didactic approach is utilized, with lessons taken from the *Skills Training Manual for Treating Borderline Personality Disorder* (Linehan, 1993b). Each week, clients are responsible for practicing skills they have learned in the group. This facilitates the generalization of newly learned skills to the home environment.

The third mode involves phone consultations between the individual therapist and the client. These phone consultations aid with generalizing newly acquired skills. The primary therapist is on-call 24 hours a day, as needed. Calls must only address potential crises that might lead to harming self or others. These consultations are intended to be brief, lasting for no more than ten minutes.

The fourth mode consists of a weekly consultation team meeting. All professionals involved in the client's care are included. Consulting with other professionals on a weekly basis maintains therapist motivation. During the meeting, client cases are discussed by treatment hierarchy. Each professional shares his or her own experience of the client. These contributions piece together a more rounded, holistic picture of the client.

Techniques and interventions employed. The therapy uses standard cognitivebehavioral techniques to help clients find more adaptive solutions to life stressors. These interventions include self-monitoring, behavioral solution analysis, contingency management, cognitive restructuring and exposure procedures. Suicidal behavior is considered a maladaptive attempt at problem solving, and clients are assisted to find more healthy solutions to life problems. At the onset of therapy, the therapist must assess the client's suicide risk and triggers that led to past attempts. Whenever a targeted problem behavior occurs, the therapist and client conduct a chain analysis of what occurred before, during, and after the episode. This helps the client to anticipate and alter patterns of behavior (Koerner & Dimeff, 2007). As in CBT, troubleshooting occurs immediately after a solution is generated.

The techniques taught during group skills training address the four modules of DBT: mindfulness, interpersonal effectiveness, emotional regulation, and distress tolerance. Mindfulness teaches the client to gain awareness of, and be attentive to, the present moment. This skill assimilates the dialectical philosophy of assuming a non-judgmental stance to the client's current situation. Interpersonal effectiveness aids the client with conflict resolution and appropriate assertive communication. The goal of this skill is to reduce interpersonal chaos and fears of abandonment. Emotion regulation helps clients to cope with mood lability and excessive anger while increasing positive emotion. Techniques for regulating emotions include identifying current emotions and being aware of obstacles to emotional change. Distress tolerance enables clients to tolerate dysregulated affective states and reduce highly impulsive behavior. This skill targets the reduction of suicidal and self-injurious behavior.

Summary. DBT has been touted as a valuable therapeutic method for treating individuals who struggle with severe and chronic emotional and behavioral crises. A highly structured and regimented treatment, DBT is a comprehensive modality requiring multiple professionals who comprise a treatment team dedicated to providing DBT with fidelity to the model. A major strength of the theory and approach is their grounding in research trials and empiricism. A limitation of the approach is that DBT is intended for the most out-of-control and high-risk clients; by design, the therapy is less applicable to clients who experience less severe problems. Non-behavioral issues such as existential,

relational and adjustment concerns are likely better addressed by other therapeutic interventions.

Empirical evidence for DBT effectiveness in outpatient settings with adults. The Society of Clinical Psychology (Division 12 of the American Psychological Association) indicated that DBT has strong research support for the treatment of BPD, meaning that it is a well-established treatment (Society of Clinical Psychology, 2012). In other words, DBT is considered an EBP for treating individuals with BPD, and self-injurious or suicidal behavior. One of the treatment manuals featured on the Society for Clinical Psychology website is Rathus, Miller and Linehan's (2007) *Dialectical Behavior Therapy for Suicidal Adolescents*, suggesting that DBT is an accepted EBP for borderline personality disorder *and* for suicidal adolescents.

Each of the major DBT RCTs is described, along with subsequent adaptations to inpatient settings and adolescent populations. A large number of RCTs have been conducted into the use of comprehensive DBT in outpatient settings. This is impressive, since DBT studies typically last for 12 months, with an additional 12-month follow-up period. These studies are fairly expensive and cumbersome in regards to time and resources needed to complete each study. The large number of controlled studies have been conducted into the effectiveness of this treatment modality is therefore remarkable.

Linehan, Armstrong, Suarez, Allmon, and Heard (1991) conducted the first DBT RCT. The study compared a comprehensive outpatient DBT program to an outpatient treatment-as-usual control condition (TAU). The participants were 47 chronically parasuicidal women between the ages of 18 to 45 who met criteria for BPD. The treatment was 12 months in duration. Participants were randomly assigned to either DBT (n = 24) or TAU (n = 23). The treatment modality included all elements of the method, including individual therapy, 150-minute DBT-STGs, and weekly consultation meetings. Compared to TAU, DBT participants reported reduced parasuicidal acts, less medically severe parasuicides, greater rates of treatment completion (83% vs. 42%), fewer hospitalizations, and fewer inpatient days. Participants were tracked at post-treatment, over the course of an additional 12 months. DBT participants largely had more effective outcomes compared to participants in the TAU. In particular, parasuicide repeat rate was significantly lower (26% vs. 60%). One of the major limitations of the study was the small size of the sample, and the use of TAU for comparison. TAU is rarely considered an adequate comparison condition (Wampold, 2001), since therapists are either told not to discuss issues that are comparable with topics discussed in DBT, or do not demonstrate allegiance to the treatment they are providing. The argument against TAU has primarily resulted from concerns about the lack of practitioner commitment to the intervention provided.

The next RCT obtained less favorable outcomes. Linehan, Heard and Armstrong (1993) attempted to enhance TAU in a community setting by randomly assigning an additional DBT-STG to chronically suicidal women with BPD who were currently receiving individual therapy. No difference was found in outcomes for women between conditions. This study suggested that merely adding DBT-STG in outpatient settings did not result in improved outcomes, contrary to the authors' hypothesis. This finding was striking, when considering that the study seemed to control for allegiance bias (i.e., the authors expected positive outcomes). This study provided evidence for the lack of efficacy of DBT-STG when not paired with the other modes of DBT such as individual

therapy, client telephone consultation, and consultation meetings. Later studies have suggested that for individuals with less severe psychopathology, stand-alone DBT-STG may be sufficient (Wisniewski, Safer, & Chen, 2007).

Subsequent RCTs were conducted with a number of varying clinical diagnoses and settings. Outpatient studies were conducted with women who had both BPD and substance dependence (Linehan, Schmidt, Dimeff, Craft, Kanter, & Comtois, 1999), women with BPD recruited from a Veteran's Affairs clinic (Koons, Robins, Tweed, Lynch, Gonzalez, Morse, et al., 2001), women with bulimia nervosa aged 18 to 65 (Safer, Telch, & Agras, 2001), women aged 18 to 65 with binge eating (Telch, Agras, & Linehan, 2001), women with BPD and comorbid opioid addiction (Linehan, Dimeff, Reynolds, Comtois, Shaw Welch, Heagerty et al., 2002), depressed geriatric individuals (both male and female) who received antidepressant medication (Lynch, Morse, Mendelson, & Robins, 2003), women with BDP and co-morbid addictions and/or mental disorders aged 18 to 70 (Verheul, van den Bosch, Koeter, van den Bink, & Stijnen, 2003), and two repeat studies of the Verheul et al. (2003) research study with women who had BPD and co-morbid addictions and/or mental disorders (van den Bosch, Verheul, Schippers, & van den Brink, 2002; van den Bosch, Koeter, Verheul, & ven den Brink, 2005).

With the exception of the Lynch et al. (2003) study, all cases found DBT to have equal or superior outcomes compared to TAU on a number of measures, including reduced suicidal ideation, reduced self-injury, and drug abstinence. However, a major limitation of all of the above studies was the absence of a genuine comparison condition. Participants were either assigned to wait-list controls or TAU. In the former condition, the efficacy of DBT is questionable since most psychological treatments and counseling interventions can be expected to obtain better outcomes than no treatment at all.

It was not until a more recent study by Linehan, Comtois, Murray, Brown, Gallop, Heard, et al. (2006) that improvements were made to the research design of a DBT RCT. This study could be considered a replication of the original RCT (Linehan et al., 1991), with one important distinction: in the 2006 study, DBT was compared to a control condition entitled community based treatment provided by experts (CBTE). This community treatment consisted of psychotherapy provided by experts, 56% of whom had doctoral degrees and over 10 years of clinical experience. Furthermore, these experts were selected by prominent members of their community (e.g., clinical directors, managers of inpatient psychiatric units) for having competence in treating difficult clients. Experts in the comparison condition were allowed to use whatever intervention they wished. Since therapists were randomly matched with clients for age and sex, differences only existed between DBT therapist and CBTE therapists in regards to years of experience, with CBTE experts more experienced as would be expected, due to their expert status. The use of a valid comparison condition gave greater weight to the findings of the study.

The study featured a sample size of 101 women with BPD aged 18 to 45 who met the inclusion criteria of having at least two suicide attempts or self-injurious episodes within the past two years, and one recent episode of suicidal and self-injurious behavior within the past eight weeks. Participants were excluded for having intellectual disability, psychosis, bipolar disorder, seizure disorders requiring medication, or being mandated to attend treatment. Participants who met these inclusion criteria were treated for 12 months with either DBT or CBTE. In addition, measurements were taken at 12 months posttreatment. Identical findings were found in comparison to the 1991 study. Participants treated with DBT compared to CBTE demonstrated statistically significant reductions in attempted suicide, parasuicidal acts, medically severe parasuicides and suicide attempts, fewer hospitalizations and emergency room visits, and fewer inpatient days. Participants treated with DBT also had statistically significant improvements in treatment completion. The greater degree of rigor in the comparison condition provided greater credibility to Linehan et al.'s (1991) initial research findings. It can therefore be concluded that DBT appears genuinely beneficial in reducing suicidal ideation, suicide attempts, self-injury, and hospitalization for adults in an outpatient setting.

The research evidence for DBT appears to be strong. However, some degree of allegiance bias may be present in these studies. Of the twelve empirical studies conducted into DBT, six (50%) included Linehan as part of the research team. Of those six studies, Linehan was primary author of five. Furthermore, many of the studies have small samples. No RCTs seem to exist with a sample greater than 101. Thus, this empirical evidence, while promising, must be interpreted cautiously. Our attention now turns to the adaptation of DBT to inpatient settings and with adolescent populations.

Subsequent adaptation of DBT to inpatient settings. While DBT originally sought to reduce inpatient hospitalization of chronically hospitalized populations, it has since been adapted to inpatient settings. This transition occurred because DBT had obvious benefit for not only preventing hospitalization, but also preventing re-admission. DBT in inpatient settings has several benefits that are not obtainable in outpatient settings (Swenson, Witterholt, & Bohus, 2007), including the opportunity for a detailed behavior

chain analysis of the events culminating in hospitalization, intensive training and review of select DBT skills, a safe place while processing emerging memories of past traumatic events (which can lead to dissociative and self-injurious episodes), and repair of stressed relationships with outpatient therapists.

However, two substantial challenges exist to using DBT within inpatient settings. Many of these challenges are relevant to the majority of interventions that can be offered within an inpatient setting. First, it is difficult to measure whether skills taught in an AIPS can be generalized to the home setting. Second, providing a high-quality inpatient experience, while desirable, is also dialectically unhealthy for the patient. If patients learn new skills within a hospital setting that they were not able to learn outside of the hospital, then inpatient treatment becomes reinforcing. This is problematic, since DBT was originally developed, in part, to help prevent the costs associated with hospitalization. Swenson et al. (2007) addressed this challenge by recommending that, "the most caring thing the staff can do is to help the patients change in ways that make a life without hospitalizations a possibility" (p. 83).

DBT has been found to be commensurate with nursing philosophy in its orientation to pragmatic and concrete problem-solving solutions, as well as the current nursing climate of outcome-oriented practice (Swenson et al., 2007). However, the philosophical underpinnings of DBT are also in conflict with the common philosophical approach to inpatient treatment. For example, DBT values a collaborative and nonjudgmental stance between counselor and client. However, in an AIPS, the hierarchical one-up, one-down relational stance between counselor and client is more common (Swenson et al., 2007). Swenson et al. (2007) wrote, "the inpatient environment is powerful and hierarchical, often rigid and invalidating, and may contribute to patients' emotional dysregulation" (p. 82).

Swenson et al. (2007) suggested that "skills training [is] ideal as a curriculum for an inpatient setting" (p. 85). That DBT-STGs are ideal for inpatient settings can be explained by the highly structured nature of the groups, and an educational orientation that does not unsettle patients (compared to less structured insight-oriented psychotherapeutic modalities). However, Swenson et al. (2007) recommended against merely incorporating DBT-STG into an inpatient program as an "add-on strategy" (p. 85), without also intending to include the other modes of comprehensive DBT since only one published study (Schuppert, Giesen-Bloo, van Gemert, Wiersema, Mideraa, Emmelkamp, & Nauta, 2009) has found significant benefits for solely treating patients with DBT-STGs.

In terms of adapting DBT-STGs to an inpatient setting, Swenson et al. (2007) recommended that implementers should be mindful of the average length of stay within their setting. DBT-STGs are typically held on a daily basis in inpatient settings, rather than weekly, due to the shorter treatment length. An average length of stay of 14 days would require a seven-day skills curriculum, so that each patient is exposed twice to each skill. For a two-day length of stay, patients would be better served by merely learning one skill, and being exposed twice to the same skill. DBT-STGs can also be held during weekends, with either new skills taught or the group time being used as an opportunity for patients to practice skills learned in prior groups.

If reducing curriculum due to length of stay, Swenson et al. (2007) recommended that priority should be given to mindfulness skills first, such as observing, describing, and participating non-judgmentally. The next priority should be given to distress tolerance skills, given the acuteness of patient distress and problematic behavior. The authors recommended that mindfulness and distress tolerance skills should comprise 75% of the curriculum. Table 1 displays DBT skills that are recommended for AIPS.

Table 1

Recommended Skills Taught in Inpatient DBT-STGs

DBT Modules	Skills Taught in an Inpatient DBT-STGs
Core mindfulness	Wise mind
	Observe
	Describe
	Don't judge
	Do what works
Distress Tolerance	Radical acceptance
	Distraction
	Self-soothing
	Improve the moment
	Pros and cons
Emotion Regulation	Observe and describe emotions
	Reduce emotional vulnerability
	Act opposite
Interpersonal Effectiveness	Getting what you want
	Improving the relationship
	Keeping your self-respect

Note. First published by Swenson, Witterholt, and Bohus (2007). Some words and phrasing were altered for the sake of clarity.

Importantly, all staff members within the inpatient setting must become familiar with the skills taught in DBT groups, and be able to coach patients in using these skills in the milieu. This consistency is important to improve patients' retention and generalization of new skills. Swenson et al. (2007) suggested that when the milieu staff are given a valuable role in helping patients learn new skills, they become engaged and empowered. Inclusion has been identified as crucial to the acceptance of new interventions within an organization (Fixsen et al., 2005). If staff members have an opportunity to use these skills in their own lives, their commitment to DBT and skills training increases.

Empirical studies into the use of DBT within inpatient settings. To date, no DBT RCTs have been conducted in an inpatient setting. All of the studies described below are quasi-experimental designs in naturalistic settings, using either control group comparisons (between group) or pre- and post- comparisons (within group). The lack of randomization is understandable, since it is ethically problematic to randomly assign inpatients to different units in naturalistic settings. Instead, the patient's need for safety and stabilization must inform placement on particular units. Furthermore, it could be argued that increasing external validity is more desirable than increasing internal validity when implementation studies are needed to examine the feasibility of transporting the findings of highly controlled studies into naturalistic settings.

Initial attempts to adapt the comprehensive 24-week model of DBT to an inpatient setting were met with mixed results. The first study did not report significant gains for DBT use versus treatment as usual (Barley, Buie, Peterson, Hollingsworth, Griva, Hickerson, et al., 1993), though some positive effects for DBT were found. Springer, Lohr, Buchtel, and Silk (1996) found evidence that openly discussing self-injury with inpatient groups may actually increase parasuicidal or self-injurious behavior through social contagion. Concerns about adapting DBT to an inpatient setting included the generalizability of behavior changes to the patient's home setting, and feasibility concerns with translating a comprehensive and potentially year-long treatment modality into the traditionally brief (i.e., less than a week) length of hospitalization.

Barley et al.'s (1993) naturalistic study examined DBT use in an inpatient personality disorders unit, primarily with female adults. The sample was fairly large for a DBT study (n = 130), and used pre- and post- measures to analyze differences in outcome between three conditions: no DBT, DBT introduction, and full DBT program. Mean age was 30 years (range = 16-57), and length of stay was significantly longer than most AIPS (M = 106 days, range = 3-629 days). A comparison condition was included, whereby changes in self-injury episodes during each of the three DBT conditions were concurrently compared to another psychiatric unit during the hospital. The unit had been using psychodynamic therapy, and DBT was introduced within this framework. Individuals receiving DBT showed progressively declining rates of self-injury with each increase in DBT program intensity, compared to no change in rates of self-injury on the comparison unit. The main criticism of the study was the lack of randomization of subjects (Dimeff, Koerner, & Linehan, 2006), a common criticism of naturalistic DBT studies.

Springer et al.'s (1996) naturalistic study again examined DBT use in an inpatient setting with adults, though this time with a shorter length of stay (M = 13 days). A comparison condition was included, defined as treatment via lifestyle or wellness groups. Participants were only exposed to coping skills from three of the four modules, eliminating mindfulness (which was later described in the literature as a core module). Participants in both conditions attended an average of six group sessions. Individuals receiving DBT were more likely to believe that the skills taught to them would benefit them post-discharge. Of concern, participants receiving DBT also attended open groups where self-injury was discussed more freely. This group exposure was actually

detrimental, and associated with increased acting-out behaviors during hospitalization, compared with controls. Furthermore, 33% of the individuals who engaged in self-injury following participation in the open groups had not attempted self-injury before. This study provided important evidence for social contagion when self-injury and parasuicidal behavior are discussed openly during groups. Linehan had previously cautioned against discussing self-injury in groups of chronically parasuicidal clients, due to contagion effects (Linehan, 1993b, p. 24).

Subsequent studies have provided evidence for the efficacy of DBT in inpatient settings. Bohus, Haaf, Stiglmayr, Pohl, Bohme, and Linehan (2000) studied the use of DBT with inpatient adult females (n = 24) who had been diagnosed with BPD and had at least two self-injurious or parasuicidal episodes in the past two years. A pre-post design was utilized to compare outcomes for patients at admission and at one-month postdischarge follow-up. Participants received individual therapy, DBT-STG, and milieu skills coaching to reinforce skills learned in DBT-STG. DBT was associated with a significant decrease in parasuicidal behaviors post-treatment, and significant decreases in self-reported ratings of depression, dissociation, anxiety, and global stress. A limitation of the study was its lack of relevance to an AIPS; participants in the study were hospitalized for three months, significantly longer than the typical length of stay within an AIPS.

A similar study by Bohus, Haaf, Simms, Limberger, Schmahl, Uncker et al. (2004) was conducted, again with inpatient adult females (n = 50) with a diagnosis of BPD who were assigned to either DBT (n = 31) or wait-list control (n = 19). This control comparison was described as TAU within a community setting, i.e., not inpatient treatment. Participants in the DBT group had reductions in the vast majority of psychopathological conditions, such as depression and anxiety (10 out of 11 conditions), and reduced self-injurious behavior between pre- and post-treatment. Furthermore, the DBT condition achieved significantly better outcomes compared to the wait-list condition on frequency of self-injury, depression, anxiety, interpersonal functioning, social adjustment, and global ratings of psychopathology. One of the major limitations of the study was the comparison of inpatient treatment with an outpatient treatment; DBT was developed to *prevent* inpatient hospitalization. Therefore, comparing inpatient and outpatient outcomes is inherently problematic when the study seeks to find better outcomes for the inpatient condition. Additionally, confounding variables may account for these differences in outcome.

Other studies (e.g., Swenson, Sanderson, Dulit, & Linehan, 2001; Kroger, Schweiger, Sipos, Arnold, Kahl, Schunert et al., 2006) have provided additional evidence for the feasibility of DBT in inpatient settings. The length of stay for both of these studies was three months, just as in both of the Bothus et al. studies. Thus, no experimental or quasi-experimental studies for the use of DBT with inpatient adults seem to have been conducted within an AIPS.

Subsequent adaptation of DBT with adolescents. A need exists for counseling approaches that target suicide attempts during adolescence. In the U.S., suicide is currently the third leading cause of death in adolescence, with nearly 2,000 successful suicides completed every year (Centers for Disease Control and Prevention, 2009). For every completed suicide, an estimated 100 to 200 suicide attempts occur (McIntosh & Drapeau, 2012). Considering that adolescence is a period when suicidal ideation and
self-injury are more common than other developmental stages, DBT was subsequently adapted for suicidal adolescents (Miller, Rathus, & Linehan, 2007). Because adolescent inpatient populations are comprised primarily of individuals admitted for suicidal ideations, suicide attempts, and parasuicidal behaviors, it followed that DBT could be a viable treatment method specifically for adolescents in an AIPS (Katz & Cox, 2002; Katz, Gunasekara, Cox, & Miller, 2004).

Miller, Rathus, Linehan, Weltzer, and Leigh (1997) were the first to adapt DBT for utilization with adolescents (DBT-A). The core tenets of DBT were retained, with some modifications of the modality to meet the needs of the adolescent population. Changes included simplifying language on handouts to be more age appropriate, and welcoming family members into weekly DBT-STGs. Parent participation was expected for both DBT-STG and family therapy sessions (Rathus & Miller, 2002). Parent engagement was hypothesized to assist adolescents in generalizing skills into their home environment, increase commitment to the therapy, and provide family with methods of de-escalating emotionally dysregulated adolescents and keeping them safe when the potential for self-harming behavior or suicide attempts was present (Miller, Rathus, DuBose, Dexter-Mazza, & Goldklang, 2007). A fifth module was added to the existing four modules, entitled walking the middle path (Miller et al., 1997). This module encouraged adolescents and families to think about the middle path between two polarized alternatives. For example, a polarity of being too permissive vs. being too strict requires a balance between the two parenting styles (Miller, Rathus, & Linehan, 2007).

Treatment length was reduced to between 12 and 16 weeks. The rationale for this change was later described by Rathus and Miller (2002): "our more brief application of

DBT to an adolescent population was based in part on the notion that these patients are not as chronic and severe as an adult population with BPD" (p. 154). In other words, adolescents typically demonstrate less severe and chronic psychopathology compared to adults, and therefore, the required length for successful treatment was hypothesized to be shorter. In Miller et al.'s (1997) reformulation of DBT for adolescents, the length of DBT-STGs was also reduced, from 150 minutes to 90 minutes. This change was made to accommodate the shorter attention span of adolescents compared to adults. Koerner, Dimeff, and Swenson (2007) recommended that if DBT-STGs have to be shortened in length or decreased in frequency, fewer skills should be taught while also providing more practice opportunities for each skill, to enhance the acquisition and competence of clients in those certain skills. Thus, depth is preferable over breadth. This was taken into consideration when adapting DBT-STG in the AIPS in this study.

When conducting DBT-STGs, Miller, Rathus, DuBose et al. (2007) recommended that experiential exercises should be prioritized above traditional didactic lecture methods. Experiential learning is "more stimulating for teens" and "can help with the problem of limited attention when impulsive adolescents are required to sit still" (p. 259). The authors also recommended using the term practice instead of homework to refer to work that was assigned to patients at the conclusion of the group for them to complete prior to the next group. Miller, Rathus, DuBose et al. (2007) conjectured that homework might have the negative association of schoolwork, which may reduce patient motivation to complete the assignment. Ten years after Miller et al. (1997) performed the first adaptation of DBT-A, a treatment manual was created by Miller, Rathus, and Linehan (2007) entitled *Dialectical Behavior Therapy for Suicidal Adolescents*. Miller, Wyman, Huppert, Glassman, and Rathus (2000) conducted a study into the perceived helpfulness of skills that were taught during DBT-STG for adolescents. Participants (n = 33) were adolescents receiving outpatient DBT-A treatment. Of these 33 participants, six were excluded from analysis due to missing data. The remaining participants (n = 27) were mostly female (85%, n = 23). The range of the sample was 14 to 19 years (M = 16.7 years). Regarding race/ethnicity, 59% were Hispanic, 33% African-American, 3% White/Caucasian, and 5% identified as "other." Thus, the sample was over-represented by females and adolescents from minority backgrounds, particularly Latino/as.

Table 2

DBT Module	Skills Taught in Adolescent DBT-STG
Mindfulness	Wise mind
	Observe
	Describe
	Participate
	Don't judge
	Stay focused
	Do what works
Distress tolerance	Distraction
	Self-soothing
	Pros and cons
	Radical acceptance
Emotional regulation	Reduce emotional vulnerability
	Build mastery
	Positive activity scheduling
	Act opposite
Interpersonal Effectiveness	Cheerleading statements
	Improving the relationship
	Getting what you want
	Keeping your self-respect

Recommended Skills Taught in Adolescent DBT-STGs

Note. First published by Miller and Rathus (2002). Some words and phrasing were altered for clarity.

Their 12-week DBT-STG program taught the coping skills outlined in Table 2. Mean ratings of helpfulness were measured on a 5-point Likert scale, from "not at all helpful" to "extremely helpful."

The authors found that ratings ranged from 3.0 to 4.27, indicating that adolescents did not dislike a single DBT-STG. The lowest rated group was still "somewhat helpful." However, the range in ratings did suggest that particular groups were more preferred than others. The most popular skills taught in DBT-STG were: do what works (M = 4.27, SD = 0.87), self-soothe (M = 4.17, SD = 1.02), observe (M = 4.10, SD = 0.96), and stay focused (M = 4.03, SD = .89). All other skills were below a 4.0 rating. The least popular skills taught in DBT-STGs were pros/cons (M = 3.30, SD = 1.29), radical acceptance (M = 3.17, SD = 1.44), and cheerleading statements (M = 3.00, SD = 1.23). The greater standard deviations in the lower ranked groups suggested that a greater degree of variability existed for the least popular groups compared to the most popular groups. In other words, the most popular groups were more consistently popular, whereas the least popular groups were less consistently unpopular.

Three of the four most popular skills were classified as mindfulness skills. The authors noted in the study that adolescents seemed to benefit more from skills that help them develop tolerance to uncomfortable emotions and situations, compared to skills that help them change emotions or situations. Due to the over-representation of minority groups (especially Latino/as), it is also possible that mindfulness skills were more highly preferred by adolescents from certain minority groups.

Empirical studies into the use of DBT with adolescents. As of 2012, more than ten outcome studies exist for the efficacy of DBT-A (Groves, Backer, van der Bosch, &

Miller, 2012). No RCTs currently exist for the comprehensive use of DBT-A, although two are in progress at time of writing (Groves et al., 2012). One RCT pilot study exists on the use of emotion regulation groups with adolescents, though this is not a comprehensive form of DBT-A. Due to the current lack of RCTs that study the comprehensive use of DBT-A, Miller, Rathus, DuBose et al. (2007) suggested that there is currently no prescribed model to follow. They recommended that any organization implementing DBT-A needed to evaluate DBT-A's utility and effectiveness for their own setting via the systematic collection and analysis of localized data. In this section, I review the sole RCT study currently published on the use of emotion regulation training for adolescents, and also the major quasi-experimental studies that have been published on the comprehensive use of DBT-A.

Schuppert, Giesen-Bloo, van Gemert, Wiersema, Minderaa, Emmelkamp et al. (2009) conducted the sole published DBT-A RCT. This pilot study examined the sole use of emotional regulation DBT-STGs for adolescents. Adolescents (n = 43) aged 14 to 19 from five outpatient mental health centers in the Netherlands randomly assigned to emotion regulation groups plus TAU (n = 23), or TAU alone (n = 20). The researchers did not specify what the TAU condition could involve, allowing for heterogeneity. Inclusion criteria were the presence of emotional dysregulation, and the additional presence of one BPD symptom. A strength of the study was its attempt to capture a naturalistic sample; the exclusion criteria were intentionally reduced, so that the sample would more appropriately represent the adolescent population served within actual practice. None of the group leaders were individual therapists in either condition. The emotion regulation groups met for 17 weeks, lasting 105 minutes each. The group topics

were commensurate with DBT-STG topics for emotion regulation groups, such as psychoeducation on emotional dysregulation and reducing emotional vulnerability. Note that elements of DBT-A individual therapy were used in the emotion regulation groups, such as reviewing diary cards that participants used to self-monitor their daily moods.

Measurements of BPD symptoms and internalizing and externalizing behavior were recorded pre- and post-treatment. While equal reductions of BPD symptoms were found for both conditions, participants in the emotion regulation condition reported a significantly greater sense of control over their mood swings. The authors concluded that, "the results of our pilot study are less powerful than we hoped" (p. 476).

Similarly to Linehan et al. (1993), Schuppert et al.'s (2009) study failed to provide strong evidence that DBT-STGs could enhance client outcomes when added to TAU. A limitation of the study was the high rate of participant attrition in the study. Only 70% (n = 16) of the 23 adolescents assigned to emotion regulation training completed the study, despite being reimbursed for their travel costs and out-of-pocket expenses. Furthermore, only 48% (n = 11) of the 23 adolescents assigned to emotion regulation training completed follow-up measurements. This suggested that DBT is less tolerated by adolescents compared to adults, possibly because treatment completion rates for adolescents are traditionally lower than those found for adults (Miller et al., 2007a).

Several quasi-experimental DBT-A studies have been conducted. Rathus and Miller (2002) conducted the first quasi-experimental study on a sample of 111 adolescents who were assigned to 12 weeks of either outpatient DBT-A (n = 29) or psychodynamic therapy, defined as TAU (n = 82). Adolescents were assigned to DBT-A if they met Linehan and colleagues' (1991) criteria for inclusion: a suicide attempt within

the past 16 weeks, and a minimum of three BPD features. Participants who did not meet both criteria were assigned to TAU. The assignment of treatment on the basis of inclusion criteria resulted in participants within the DBT condition having more Axis-I diagnoses (M = 2.6, SD = 1.0) compared to the TAU group (M = 1.5, SD = 0.68). Ethnicity was comparable across conditions, with overall representation of ethnicity as follows: 67.6% Hispanic (n = 75), 17.1% African-American (n = 19), 8.1% White (n =9), 0.9% Asian-American (n = 1), and 6.3% classified as "other." This overrepresentation of individuals from minority groups is striking, and may be partly attributed to the location of the study (New York City). This over-representation can be considered a limitation of the study. However, it is notable that the authors disclosed participant racial/ethnic status, demographic information that is missing in many DBT studies.

All four modes of DBT-A were included in the treatment group. These modes included 12 weeks of 60-minute individual therapy sessions, weekly multifamily DBT-STG, client telephone consultation as needed, and weekly consultation meetings. The TAU condition included twice-weekly individual therapy as well as one week of family therapy. Adolescents in the DBT-A condition had 0% re-hospitalizations compared with 13% in TAU, and 0% attempted suicide compared to 9% in TAU. Adolescents treated with DBT-A also experienced significant decreases in suicidal ideation, distress, anxiety, depression, obsessive-compulsive symptoms, impulsivity, emotional dysregulation, and interpersonal difficulties. Furthermore, adolescents treated with DBT-A were more likely to complete treatment (62% vs. 40%). While no differences were found for self-injurious behaviors between conditions, subjects in the DBT-A condition were initially more

suicidal than subjects in the control condition and were diagnosed with more Axis-I disorders than the TAU condition. A significant limitation of the study was the participant attrition rate. Only 62% of participants in the DBT-A condition (n = 18) completed treatment, and only an alarming 40% (n = 32) of participants in the TAU condition completed treatment.

This study was important in providing evidence for the utility of DBT-A in an outpatient setting. The authors concluded that, "given the potential emotional, social, academic, and financial costs of hospitalization, DBT appears to offer an effective approach for managing high risk adolescents on an outpatient basis" (p. 154). The high rate of co-occurring disorders in the DBT-A condition suggested that DBT-A could be beneficial to individuals with co-occurring diagnoses. The sample size (n = 111), while not large, was bigger than most other DBT empirical studies. The primary criticism of the study was the lack of randomization (Dimeff, Koerner, & Linehan, 2006), which is typical for quasi-experimental DBT studies. However, the use of a comparison condition provides greater evidence for DBT-A effectiveness than other studies that lack a comparison.

Following this initial study, several further quasi-experimental studies were conducted that examined pre-post outcomes, lacking either control groups or randomization. These quasi-experimental designs are weaker than the original Rathus and Miller (2002) design, because of the lack of control group comparison. These studies have been conducted with female adolescents (Fleishhaker, Munz, Bohme, Sixt, & Scultz, 2006), adolescents with oppositional-defiant disorder without suicidal ideation (Nelson-Gray, Keane, Hurst, Mitchell, Warburton, Chok et al., 2006), adolescents in a naturalistic community setting (Woodberry & Popenoe, 2008), adolescents with bipolar disorder (Goldstein, Axelson, Birmaher, & Brent, 2007), a single case study of an adolescent with binge eating disorder (Safer, Lock, & Courturier, 2007), and a case study series with 12 adolescent females who had anorexia or bulimia (Salbach-Andrae, Bohnekamp, Pfeiffer, Luhmkuhl, & Miller, 2008).

The empirical studies into the use of DBT-A have obvious limitations. Following Rathus and Miller (2002), every subsequent study except Schuppert et al. (2009) has failed to include a comparison or control group in the design. The sample size for these studies was small, and overrepresented by either males or females. Information was rarely provided for adolescent race/ethnicity, which raises questions regarding whether adequate representation of minority groups was achieved. Finally, the treatment completion rate for some of these studies (e.g., Rathus & Miller, 2002, Goldstein et al., 2007, Schuppert et al., 2009) was far less than desirable. This circumstance could be somewhat expected, due to the higher rates of premature termination found in adolescent clients compared to adults. Positively, it appears that DBT has been used to treat different diagnoses in adolescence, including anorexia, bipolar disorder, binge eating disorder, bulimia, borderline personality features, depression, and oppositional-defiant disorder. These diagnoses are of both internalizing and externalizing natures, suggesting that DBT-A can be applied to a variety of adolescent emotional and behavioral problems.

Empirical studies into the use of DBT-A in an AIPS. To date, a few published studies exist within the empirical literature that examined the use of DBT-A in an AIPS. Katz and Cox (2002) conducted the first DBT study with inpatient adolescents, employing a single case study design with an inpatient adolescent female patient (n = 1).

The authors wrote that DBT-A must be modified for the setting, and thus the treatment hierarchy goals were reduced to four main primary targets: decrease life-threatening behaviors that prompted admission and would delay discharge from the hospital, decrease behaviors that interfere with outpatient treatment or current inpatient treatment, decrease behaviors disrupting the inpatient setting, and increase core mindfulness and distress tolerance skills. The authors explained that these two main areas (core mindfulness and distress tolerance) were chosen above emotional regulation and interpersonal effectiveness since they are "crucial to enabling and maintaining outpatient therapy" (p. 85). The patient attended a daily DBT-STG, with topics that included mindfulness, distress tolerance, interpersonal skills, and emotional regulation. Individual therapy was conducted twice a week with a psychiatrist. As part of the therapy, the psychiatrist reviewed the patient's weekly diary cards. The psychiatrist attended a biweekly supervision group with other staff, to enhance therapist outcomes and maintain compassion. The case had a remarkably positive outcome; at the one-year follow-up, the patient had avoided re-hospitalization, and for the past two months had discontinued medication and refrained from self-injury. The major limitation of the quantitative single case study design is its inability to be reliably generalized, due to the size of the sample. Because the participant in the study had a positive outcome, one must wonder if other patients were considered for the case study, but excluded because they did not respond in the same positive manner (i.e., the file drawer phenomenon).

Katz, Cox, Gunasekera, and Miller (2004) followed up on this case study with a quasi-experimental study. Their design was similar to the initial quasi-experimental study conducted by Rathus and Miller (2002). The inclusion of a comparison group was

important in increasing the rigor and generalizability of the study's findings. Still, the study cannot be considered a legitimate RCT due to its lack of randomization. The original case study by Katz and Cox (2002) was developed from the same program that was subsequently evaluated by Katz et al. (2004). Thus, we must be cautious about the potential presence of bias, since both studies appear to have been conducted by the same research team within the same setting.

The feasibility study compared outcomes for suicidal adolescents (n = 62) who were admitted to one of two inpatient settings. One unit used DBT-A, and another used TAU. The comparison condition featured a psychodynamic model of crisis assessment and treatment. The authors modified the DBT program from a 12-week outpatient program adapted for adolescents (Miller et al., 1997; Rathus & Miller, 2002). Patients were seen by their therapist twice weekly to review diary cards, and received 10 DBT-STGs within a 14-day length of stay. Weekly consultation meetings were held, and evening shift staff members were invited to participate by leaving notes of concern and questions about patient behavior that occurred during the evening hours when therapists were offsite.

The sample was overrepresented by females (84%), which could be somewhat expected considering that borderline personality disorder and self-harm behavior are typically more common in females. The age of the sample ranged from 14 to 17, with a mean of 15.4 years. No differences in behavior or scores on standardized instruments were found among demographic variables at baseline. Follow-up data were collected one-year post-hospitalization. As part of the study's exclusion criteria, individuals with intellectual disability, psychosis, bipolar disorder, and severe learning disabilities were excluded. Furthermore, all participants were voluntary. The voluntary status of participants was understandable considering the ethical issue of voluntariness in research, yet is not representative of most patient populations in AIPS where many patients are admitted on an involuntary basis. In addition, the decision to exclude individuals with disabilities from the study was questionable, since individuals with disabilities are frequently the recipients of psychological treatment (including inpatient care), but historically are ineligible for inclusion in psychotherapy outcome studies. This exclusion could be considered misrepresentative and indicative of privilege being assigned to individuals without disability status. Furthermore, "one of the patients developed bipolar disorder during the year and was not included in the study" (Katz et al., 2004, p. 278). That an ex-patient would be excluded for developing bipolar disorder post-hospitalization also seems unjust and misrepresentative of naturalistic environments.

Despite these stringent exclusion criteria, differences were found on only a few outcome measures. Patients in the DBT-A group had fewer behavioral incidents including self-injury, increased treatment adherence, and increased medication compliance than in the psychodynamic therapy condition. Both were highly effective at reducing re-hospitalization and scores on standardized instruments for depression and suicidal ideation. The authors concluded that, "the promising results of this pilot study suggest that further evaluation of DBT for adolescent inpatients appears warranted" (Katz et al., 2004, p. 276). Follow-up studies were especially needed since the sample contained very few individuals from African-American or Latino/a descent, and was over-represented by females. Furthermore, the authors acknowledged that their length of stay (M = 18 days) was far greater than is typical for an AIPS.

Since these two studies by Katz et al. (2002, 2004), articles have emerged within the literature that have sought to provide better evidence for the utility and efficacy of DBT-A within AIPS. The most significant study was by McDonell, Tarantino, Dubose, Matestic, Steinmetz, Galbreath, and McClellan (2010). The study described the implementation of DBT-A within a long-term psychiatric hospital in Washington State. Although a longer-term inpatient setting has many similarities with an AIPS, the length of stay is significantly longer in this setting compared to the 4-6 day length of stay found in many AIPS. The extended length of stay allows for these programs to offer more extensive DBT-A programs.

The study was conducted over the course of five years (2000 to 2005), and data were compared with historical controls (i.e., patients admitted between 1995 and 1999). Inclusion criteria for the sample (n = 106) was more naturalistic and less controlled. Both voluntary and involuntary admissions were included. Exclusion criteria were not described besides the omitting of individuals who were admitted for criminal offenses. No reference is made to the exclusion of patients based on diagnosis or disability. Demographic data indicated that participants receiving DBT-A ranged from 12 to 17 years of age, comparable to participants in the control group (12-15 years). Females were slightly over-represented in the overall sample (58%), though much less so than the study conducted by Katz et al. (84%, 2004). Three levels of DBT-A intensity were assigned to patients, based on patient need rather than randomization due to the ethical need for inpatients to receive appropriate services. The three levels of intensity were milieu only, milieu plus DBT-STGs, and milieu plus DBT-STGs plus individual therapy (i.e., full

DBT). Full DBT-A treatment was reserved for adolescents who more adequately fit the traditional population for which DBT was developed (i.e., females with BPD symptoms).

All staff members were trained in DBT, including psychiatric technicians, nurses, psychiatrists, psychologists, social workers, teachers, and recreational therapists. The size of the setting was comparable to the case under study, with an average census of 12 to 16 patients. Of participants receiving DBT, most had a history of suicidal ideation or behavior (73%, n = 77). Patients averaged three Axis I diagnoses, with the most frequent diagnoses being externalizing disorders such as oppositional defiant disorder (81%, n = 86) and conduct disorder (71%, n = 75). Internalizing disorders were also prevalent, with major depressive disorder being diagnosed in approximately half of all participants (52%, n = 55).

Individuals in the DBT-A group experienced statistically significant improvements in overall functioning, decreased number of psychotropic medications, and decreased self-injurious behavior compared to historical controls. These effects were found even when age, gender, and length of stay were controlled, and no differences between groups were found for frequency of locked seclusions. Although this study provided important data regarding the effectiveness of DBT-A in inpatient settings, the authors conceded: "research that investigates issues related to dissemination, such as DBT model adherence, impact of DBT on staff outcomes, and cost savings are also important" (McDonell et al., 2010, p. 4).

In another comparable naturalistic effectiveness study, Sunseri (2004), examined the implementation of DBT-A in a residential treatment center for adolescents. The study acknowledged that important outcomes were not measured within the data, such as staff members working more collaboratively with families and clients, and finding DBT-A to be a warmer and supportive approach to treatment than what was used previously. Although the authors implied that these questions could not be answered with data, in fact, it is possible for such findings to be coded and analyzed via qualitative data. Thus, a need exists for mixed method studies that incorporate qualitative data in their examination of the process of organizational change during implementation of DBT-A.

These studies into the feasibility of adapting DBT-A in an AIPS are important because adaptations of DBT to this setting with this population are likely to have previously been discouraged. In an age of treatment fidelity, the manualization of interventions require that few, if any, divergences are made from the original manual in regards to length of treatment, populations treated, and treatment setting. However, Koerner, Dimeff, and Swenson (2007) conceded that although fidelity to the comprehensive form of DBT is desirable, "in an acute psychiatric hospital with a 2-week average length of stay it is not feasible to teach all the DBT skills" (p. 21). Many of the studies reviewed had adapted DBT to better suit the client population and treatment setting under study. The diversity of settings in these studies suggest that DBT "was shown to have some clinical utility in settings where comprehensive treatment is often less feasible or very difficult to implement" (Groves et al., 2012, p. 72). The AIPS is one of myriad settings where DBT appears to have been used effectively.

Implementation Literature on DBT for Inpatient Adolescents

Since DBT-A's introduction as a treatment modality, few empirical studies have been published that examine the process of implementing DBT in an organizational environment. Instead, published DBT implementation studies have tended to examine DBT effectiveness following implementation. Many of those studies were summarized in earlier sections of this literature review (e.g., Rathus & Miller, 2002). In this section, the extant literature on the process of DBT-A implementation is examined. No published empirical studies have investigated the process of DBT-A implementation, though a few publications comment on DBT implementation in inpatient environments. While other studies have been conducted exclusively into the process of implementing DBT in outpatient settings (e.g., James, Taylor, Winmill, & Alfodari, 2008), these are not commensurate with the unique challenges presented when implementing DBT in an inpatient environment. In this section of the literature review, studies were therefore omitted that examined the process of DBT implementation in outpatient settings.

The process of DBT implementation: Pre-treatment. Swales (2010) examined the pre-treatment process of organizational preparation for the adoption and implementation of DBT within the National Health Service of the United Kingdom. She considered data from inpatient settings, in addition to data from outpatient settings and prisons, with both adolescent and adult clients. She identified four stages of pretreatment organizational preparation: identifying organizational goals, assessing organizational suitability, orienting the system, and gaining commitment. The first stage involves clarifying the unmet needs of the organization, which are redefined as goals. Organizations may have multiple needs, and therefore, multiple goals. Organizations consider the cost-effectiveness of an intervention during this pre-treatment stage. In the second stage, organizational characteristics are assessed. Attention must be given to organizational culture, including implicit and explicit norms and rules, organizational climate and staff engagement, and organizational values regarding employee innovation and conformity.

Swales (2010) asserted that once an assessment of an organization's goals and suitability has been conducted, staff within the organization must be oriented to the adoption decision. This orientation must include a review of the population served by the organization, the evidence base for DBT (including limitations), the expected outcomes of the new DBT program, the comprehensiveness of the DBT program, and the resources that are required to implement DBT. Once staff members have been oriented toward adoption, attempts must be made to gain the commitment of the staff to DBT implementation. Although staff members may commit to organizational macro change, they may struggle with specific micro changes required for successful implementation. Thus, the fourth pre-treatment stage must include trouble-shooting specific changes that are required in order for the implementation process to be successful.

Two additional concerns must be addressed during the pre-treatment phase of implementation. First, competing organizational goals must be resolved. An obvious example of this would be cost-saving efforts versus requiring that all clinical staff members be trained in DBT. Another example might be that an organization has recently reorganized and has increased productivity; the organization must resolve internal fears that change attempts will again cause the organization to revert to a prior state or disorganization. Second, the organization must adhere to a dialectical approach to organizational change during implementation efforts. Individuals selling the possibility of DBT implementation must maintain a stance that no single approach is "true" and all others "false;" multiple perspectives are valuable concerning how DBT should be implemented. An autocratic imposition of DBT would be incongruent with the treatment's philosophical foundation. Another example of a dialectical approach to organizational change includes a non-judgmental attitude toward all individuals within the organization, especially those who are resistant to DBT implementation. A non-judgmental stance prohibits the use of extreme value judgments (e.g., good vs. bad, should vs. shouldn't). This enables the individuals responsible for implementation to consider *why* individuals are resistant to DBT, and focus efforts toward identifying productive solutions to barriers faced during the process of implementation. Swales (2010) concluded, "finally, *and this is rather advanced*, team leaders need to develop the capacity to validate the organization's perspective!" (p. 154, emphasis added).

Prior to implementation efforts, an individual is required to take responsibility for change efforts. Swales (2010) identified this person as the "DBT team leader" (p. 146). This individual may be a practitioner or a manager within an organization. Without individuals identifying themselves as responsible for change efforts, organizational pretreatment is likely to be unsuccessful. In the present study, I was identified as the DBT team leader and was responsible for change efforts regarding DBT implementation within the organization.

Barriers to implementation. Barriers specific to the implementation of DBT include resistance by managed care companies to pay for the comprehensive nature of DBT by refusing to reimburse for group therapy, individual therapy, and telephone consultations occurring within the span of one work week (Swenson, Torrey, & Koerner, 2002). Other barriers include practitioners having to change their role definition and therapeutic stance. For example, DBT practitioners are compelled to continuously collect

and maintain data on client outcomes, and must follow strict guidelines during individual therapy such as reviewing weekly diary cards. Practitioners must also adapt to being oncall for client consultations. Finally, DBT requires that practitioners discuss cases within their consultation team, and refrain from making decisions solely on one's own clinical judgment. These changes constitute a drastic change in therapeutic mindset and approach, possibly leading to staff resistance.

While non-specific to DBT, a precedent exists for longitudinal qualitative studies examining EBP implementation efforts. Theberge and Karan (2004) identified six factors that seemed to inhibit the use of peer mediation at a middle school. The study was spurred by reports that 95% of the student body (grades 7-9) knew of the peer mediation program, yet only 8.8% reported they used the program, and only 12% knew people who had used the program. The study identified six factors that influenced utilization of peer mediation services: student attitudes, feelings, and behaviors regarding mediation; student methods of dealing with conflict; student attitudes, feelings, and behavior at school; school climate; structure of the mediation program; and societal issues. Students tended to distrust mediation, and were fearful that mediators would laugh at them, take sides or inform school administration. Subcategories were also identified to explain each factor. For example, the factor student attitudes, feelings and behaviors regarding *mediation* included a subcategory that described the underrepresentation of minority groups among peer mediators in the school. The vast majority of peer mediators in the school (n = 35) were white females (n = 27, 77%), with only five non-white students and three males trained as mediators. This lack of diversity may have inhibited students from

attending mediation, out of perception that mediators would be biased if not from the student's racial/ethnic background.

Summary

This literature review examined the contextual background of DBT (i.e., EBP movement and the implementation of EBPs), the development of DBT as a treatment modality, the specific modes and modules of DBT, the empirical evidence for DBT in outpatient settings, subsequent studies of DBT utilization in inpatient settings or with adolescents patients, literature that explored the implementation of DBT for adolescents in inpatient settings, and barriers to implementation. It appears that a solid body of evidence exists for the effectiveness of DBT with a number of populations, including suicidal adolescents. DBT has been adapted for a number of adolescent problems, including anorexia, bipolar disorder, binge eating, borderline personality features, bulimia, depression, and oppositional-defiant disorder. Several studies have already been conducted into the use of DBT within inpatient settings, and a few have even been conducted with inpatient adolescents. DBT seems to be fairly adaptable and flexible, yet only two studies have been conducted into the sole use of DBT-STG for client problems (Linehan et al., 2003; Schuppert, 2009). Of these two studies, the latter provided evidence for the successful adaptation of DBT-STGs for adolescents by adding the emotional regulation module to TAU. Nevertheless, more deconstruction studies are needed into the specific elements and ingredients of DBT, to understand which modes and modules of DBT are essential to achieving optimal client outcomes. For example, studies could be conducted that included several conditions, such as (1) TAU, (2) TAU + DBT-STG, (3) TAU + DBT-STG + Individual DBT therapy, (4) TAU + DBT-STG +

Individual DBT therapy + client telephone consultation, (5) TAU + DBT-STG + Individual DBT therapy + client telephone consultation + team consultation meetings.

Such studies, while valuable, would only provide more quantitative evidence for the effectiveness of DBT and its related parts. Research into DBT has almost exclusively been conducted within the quantitative paradigm. Groves et al. (2012) noted that criticisms within the literature have focused more on the lack of randomization or lack of control groups rather than the lack of diverse methodological approaches. The reason for the majority of DBT studies being RCTs or quasi-experimental studies can be traced DBT back to the origins of the modality itself. Based in behavioral science, DBT has strong roots within the quantitative tradition. Linehan commented that practitioners must adhere to empirical findings, even if they contraindicate the use of DBT (Linehan, 2007). The hierarchy of research evidence proposed by the APA in 1995 (Task Force for Promotion and Dissemination of Psychological Procedures, 1995) placed quantitative methodology (e.g., meta-analyses, RCTs) at the pinnacle of what constituted acceptable evidence for efficacy and effectiveness. According to the APA's Task Force, qualitative and mixed method studies are not considered reliable evidence for treatment efficacy and effectiveness. In the years following the psychological treatment paradigm, treatments such as DBT were given preference as an empirically validated treatment (Task Force for Dissemination and Promotion of Psychological Procedures, 1995) for having strong quantitative evidence for their effectiveness. Greater empirical weight was allocated to strictly quantitative studies, such as RCTs and quasi-experiments. After the creation of the psychological treatment list, interventions on that list have increased in popularity. Linehan's core texts are now best sellers within the counseling and psychotherapy

literature. It could therefore be argued that DBT's reliance upon quantitative methodology is explained by its place within the context of the psychological treatment movement, which has partially resulted in its current popularity within the field. Unfortunately, the lack of qualitative and mixed methods studies, while understandable, has limited our understanding about the actual *process* of implementation and ways to improve or enhance implementation efforts.

Although a large body of literature exists on the efficacy of DBT, few published studies have examined the process of implementing DBT in naturalistic settings. No published qualitative or mixed methods studies exist that examine the process of implementing DBT within organizational environments. Furthermore, no studies exist that examine the process of implementing DBT within an AIPS for adolescents. While DBT may be an effective treatment, little information exists about how to successfully implement it. This is striking, since McHugh and Barlow (2010) identified DBT as one of the two psychological treatments that have been most successfully implemented. Indeed, McHugh and Barlow wrote in 2010: "an evidence base for the dissemination and implementation of EBTs [i.e., evidence-based psychological treatments] is lacking, and no clear consensus has emerged on best practices for these initiatives" (p. 73). A gap therefore exists in the literature for qualitative and mixed methods studies that examine the process of implementing of EBPs, and a specific need exists for studies that examine the process of implementing DBT for adolescents within an AIPS. At this time, a mixed methods study would be useful to understand this process, and what helps and hinders this process.

Mixed method studies into the process of implementation (e.g., Pazano, Seffrin, Bunt et al., 2006; Gioia & Dziadosz, 2008; Steinfeld et al., 2009) have provided a poor prototype for future studies, since their methodology was often unfocused and did not adequately represent the full potential of a coherent, rigorous mixed methods study into the process of EBP implementation. The existence of these studies indicates that mixed methods *are* being used to investigate EBP implementation, from which we can learn important lessons about research design, data collection and analysis, merging and weighting of data, and interpretation of mixed methods data. Other qualitative EBP implementation studies exist outside of the DBT literature that examine factors helping and hindering implementation efforts (e.g., Theberge & Karan, 2004). A mixed methods approach to investigating EBP implementation seems ideal, considering the longitudinal nature of these studies, and the need to understand the relative importance of identified categories that seemed to help and hinder implementation.

Counseling professionals could benefit from knowing what facilitates and prevents DBT-A implementation within an AIPS, informing subsequent attempts to successfully implement DBT-A within other AIPS. The current lack of studies into the process of DBT-A implementation in AIPS is problematic, since individuals or organizations wishing to adopt DBT-A have few guidelines for ensuring successful implementation. This information may be transferable to other settings, and even to the implementation of other best practices. This case study therefore represents the first pilot attempt to examine what helps and hinders the successful implementation of DBT into an AIPS for adolescents. The central research question for this project is, what helped and hindered the process of implementing DBT-A in an AIPS?

Chapter III: Methodology

In the third chapter, the methodology of this multiphase, mixed methods case study is described. Attention is given to each aspect of this methodology, to enable the reader to conduct a similar study should the need emerge.

Philosophical Foundation

This study was grounded by a pragmatic philosophy. Methodological decisions were made on the basis of "what works" in answering the research questions under study. In this regard, a mixed methods approach is useful for a number of reasons. First, this study features research questions that cannot easily be answered by quantitative or qualitative methodology alone. Findings from nomothetic (numerical) data require a more in-depth explanation for their meaning and relevance, while findings from idiographic (descriptive) data require comparison with population norms in order to generalize findings. Second, some research questions are complex and require the mixing of both methodologies in order to fully answer the question presented. Additionally, data can be mixed to inform subsequent phases of the research process. For example, qualitative analysis from focus groups can provide information regarding constructs for instrument development.

Elements of constructivism are apparent in the methodological choices I made during data collection and analysis of qualitative data. In the constructivist paradigm, knowledge is considered socially co-constructed, and thus reviewing transcripts and/or data analyses with participants is considered a justifiable risk because of its potential to enhance the persuasiveness of methodological rigor. The risk inherent in allowing coconstruction of findings is that it may be more difficult to separate the analysis from the raw data and develop higher-level analyses. My values and biases, another potential risk inherent in the constructivist approach, are addressed directly in the study, since values and biases are considered inescapably present in all research endeavors, especially true when the investigator has emic positioning, as was the case with this study.

Positioning

My positioning is crucial to this study. As the investigator, I had an emic perspective in the setting. *Emic positioning* refers to having insider status as a known entity within a setting. This is in direct contrast to *etic positioning*, which can be defined as having outsider status within a setting as an unknown entity. At the time of the study, I had worked in the AIPS under study for five years. My organizational role during the study was as a primary therapist. I began working at the AIPS as part of the milieu staff as a milieu counselor. At the 12-month midpoint of this study, I was promoted to the role of a primary therapist. This position included such tasks as providing individual, family, and group therapy.

This level of familiarity with the staff and setting had benefits and drawbacks. Advantages included access to the setting and supervisor encouragement to pursue the study. In addition, I had already established a rapport with the staff, thus potentially eliciting more sensitive and rich information from interview participants. In my work role, I was also on-site at the setting between 16 to 32 hours a week throughout the duration of the 24-month period, enabling me to make extensive field observations. I also had permission to adapt and implement DBT-STGs during weekday afternoons. This permission to change one time slot in a highly structured program is not to be overlooked, and conveys a degree of trust in my role as the reseacher. It could easily be argued that without my emic positioning, program changes in the AIPS under study would not have taken place. This is particularly apparent when considering that several other attempted changes in the AIPS under study have been inconsistent, if not unsuccessful (e.g., room safety checks).

Emic positioning is not without drawbacks and risks to validity. By working in the setting under study, the investigator was very familiar with the site and the program. I had to be attentive when making field observations and conducting interviews in the setting to ensure that I did not miss important details that the unfamiliar observer might notice. Conversely, because I was sensitized to the setting, I may have seen patterns and made conclusions that the unfamiliar observer might not notice. To combat this threat to validity, peer checking with peers and faculty at James Madison University was used during data collection, coding, and analysis. Lastly, emic positioning carries the potential for blurred boundaries. For example, I had to navigate the multiple roles of being the investigator, the program developer, the person primarily responsible for implementation, one of the group leaders, one of the DBT-STG supervisors, a staff member, and the person in charge of data collection and analysis. Peer checking was again essential to ensure I was navigating these roles in an ethical and authentic fashion.

Bracketing of potential biases. From the outset of the research project, and prior to the initial literature review, a research log of activities and reflections was kept. As suggested by Richards (2009), keeping a research log assists the researcher in identifying and clarifying potential biases. This informs the *bracketing* process, whereby biases are acknowledged and prevented (to the fullest extent possible) from introducing bias into the data. This acknowledgement is axiological, reflecting the qualitative assumption that all

research is somewhat biased and value-laden (Creswell, 2012). The following are biases that I acknowledged and bracketed as part of my preparation to conduct this research project:

- The implementation of DBT-A will enhance the therapeutic program at the AIPS under study. The process of implementation will be successful, at least in part because of the emic positioning of the implementer.
- The implementer's characteristics, strategies, behaviors, and role in the setting will be one of the most important reasons for successful implementation of DBT-A in the AIPS.
- DBT-A will be beneficial to the patient participants in the study. DBT-A will assist them in learning new coping skills, demonstrated through positive feedback from quantitative and qualitative data. Patients will enjoy these new groups, and accept them as part of their treatment.
- Quantitative and qualitative data gathered during the course of the study will provide a cohesive, fuller, and richer understanding of the research questions under study.
- The researcher's emic positioning will be alluded to during interviews with staff members. The researcher's emic positioning will increase the depth of staff sharing and their willingness to participate in this research project.
- The process of adjustment will not be easy for the majority of the staff working in the AIPS under study, and some staff will resist the implementation of DBT-A.
- The DBT-A program will be sustained following this 24-month period of adaptation and adjustment.

- Adequate coding consensus will be obtained through peer checking with students and faculty members at James Madison University.
- Qualitative findings will have evidence for their validity regarding credibility, trustworthiness, dependability, and transferability.
- Quantitative and qualitative data will be merged successfully during data collection and analysis.
- Enough information will be amassed to adequately address the research questions and meet the objectives of the research project.

Design

This mixed methods study used a multiphase case study design. Each component of this mixed methods design is described below.

Mixed methods. The pragmatic philosophy that grounds this study intones that methodological decisions must be made on the basis of whether the design and methods best answer the research questions. A mixed methods design was chosen for its ability to integrate quantitative and qualitative data, which was necessary to answer the research question under study. Qualitative data were needed to identify what helped and hindered implementation, and quantitative data were needed to understand the relative weight of these findings.

Creswell and Plano Clark (2011) identified three key features of mixed methods research designs: timing, mixing, and weighting.

Timing and mixing. This study has three distinct phases. The entire length of the study was 24 months, and both qualitative and quantitative data were collected concurrently during all three phases of the study. Data were analyzed both *within* and

between phases. The first phase lasted from 0-12 months, during which qualitative data and quantitative data were collected in a concurrent fashion. Qualitative data were collected from field observations and a focus group with the milieu staff at the 12-month midpoint to explore initial staff adjustment and organization acceptance during the early stages of DBT-A implementation. At the conclusion of the first phase, the within-phase qualitative data from 0-12 months were merged and a formative evaluation was conducted with data from the field observations and focus group. Analyses conducted during the first phase informed subsequent implementation.

During the first phase and second phase, quantitative and qualitative data were concurrently collected and analyzed from patient feedback forms that were administered at the conclusion of each DBT-STG. Qualitative data from these feedback forms were counted and transformed into quantitative data. During the first and second phase of the study (0-18 months), formative assessments of qualitative data were conducted at sixmonth intervals: at the conclusion of 0-6 months, 6-12 months, and 12-18 months. These assessments were completed at sixmonth intervals because of the emergent need to adapt the program to the localized needs of the population, who were not initially responsive to the delivery of DBT-A. Patient feedback data were not merged or connected with data from field observations or the focus group. Findings informed the subsequent adaptation of the DBT-STG curriculum.

The second phase lasted from 12 to 18 months, during which qualitative and quantitative data were again collected in a concurrent fashion. Qualitative data were gathered from field observations and patient feedback forms. At the conclusion of 18 months, a summative evaluation was conducted on quantitative and qualitative data

gathered from the patient feedback forms. Qualitative data from the feedback forms were again transformed into quantitative data via counting. Patient feedback data collection concluded at 18 months, and findings were embedded into the summative qualitative interviews during the third phase (12-18 months) by asking interviewees to review descriptive statistics, and comment on whether these were consistent with their experience and the degree to which positive patient response influenced their acceptance of DBT-A in the setting.

At 18 months, transformed quantitative data were analyzed both *within* and *between* distinct phases. Findings from the first phase (0-12 months) were connected with findings from the second phase (12-18 months), to measure reliability in helpfulness ratings via internal consistency and assess the most popular patient ideas for program improvement. Once analyses were conducted on within-phase quantitative data, analyses were conducted on between-phase quantitative data. Finally, total aggregate data from the 18 months of data collection were merged and analyzed. A report of descriptive statistics was prepared, in order to embed its findings into the first round of summative in-depth interviews during the third phase of the study.

The third phase lasted from 18 to 24 months. Both qualitative and quantitative data were collected during the third phase of the study by conducting two rounds of summative interviews with members of the multidisciplinary treatment team. During first round interviews, qualitative data were collected from 60-minute in-depth interviews. Data were coded, analyzed, and merged with qualitative data collected and analyzed during the first two phases of the study from field observations and the focus group. Interviewees were asked to review and comment on the embedded document of

descriptive statistics displaying DBT-STGs helpfulness ratings from patient feedback forms. During data analysis, quantitative and qualitative data were connected to evaluate their convergence (i.e., do the interviewees consider patient feedback ratings commensurate with their own observations?), and to examine whether positive patient response to DBT-STGs had any effect on staff adjustment and organizational acceptance.

Approximately three months later, second round interviews were conducted with the staff. In the interim, categories had been identified during analyses of merged qualitative data (in-depth interviews, focus group, field observations) from 0-21 months of data collection. During these second round interviews, quantitative data were collected from interviewees regarding staff rankings of the relative importance of each category that helped and hindered the implementation process,. The third phase therefore followed an explanatory design (QUAL \rightarrow QUANT).

Category rankings for each interview were assigned a numerical value, based on a mathematical formula:

X = (n + 1) - R.

Total scores were added, and mean values computed. Categories were ranked in value from highest to lowest, based on mean value. This equation was used to identify the relative importance of each category in helping and hindering the implementation effort. Table 3 depicts the timeline for data collection and analysis. A visual representation of this timeline is depicted in Figure 1.

Table 3

Timeline for Data Collection and Analysis

Timeline	Data Collection and Analysis Activity
First phase (0-12 months)	Collected qualitative data from field observations and a focus group with milieu staff. Collected quantitative data from patient feedback forms.
Formative Evaluation (12 months)	Merged and analyzed qualitative data from 0-12 months and made changes to the implementation process based on findings; continuously merged and analyzed transformed quantitative data from patient feedback forms collected during 0-6 and 6-12 months, and adapted the program curriculum based on findings.
Second phase (12-18 months)	Collected qualitative data from field observations. Collected quantitative data from patient feedback forms.
Formative Evaluation (18 months)	Merged and analyzed qualitative data from 12-18 months and made changes to the implementation process based on findings; merged and analyzed transformed quantitative data from patient feedback forms collected during 12-18 months, comparing them to quantitative data from 0-12 months; merged and analyzed total data from 0-18 months, and prepared a report of descriptive statistics.
Third phase (18-24 months)	Conducted first round of in-depth summative qualitative interviews with members of the multidisciplinary treatment team. Participants reviewed a report of descriptive statistics from patient feedback forms. Connected qualitative data from 0-18 months (field observations, focus group) with data from 18-24 months (first-round summative interviews). Identified categories through analysis of connected qualitative data collected from 0-24 months. Conducted second round of summative quantitative interviews with members of the multidisciplinary treatment team. Interviewees ranked the relative importance of each category, identified during prior qualitative data analysis.
Summative evaluation (24 months)	Computed relative importance of each category by using a mathematical formula to determine mean scores and overall rankings; Wrote summative report of the implementation process.



Figure 1. Multiphase mixed methods research design

Weighting. In regards to data type, equal weighting was given to qualitative and quantitative data. The following weighted priority was given to the different forms of qualitative data collected, in order of importance: in-depth interviews, a focus group, and field observations. Maximum weighting was given to summative interviews, because of their in-depth nature and ability to identify and rank categories helping and hindering implementation from most to least important. During the third phase, an explanatory design was used by first collecting qualitative data, and then collecting quantitative data to explain the relative importance of the qualitative data. Although most explanatory designs tend to value qualitative data over quantitative data, identifying the relative importance of each category was considered to be as important as the category itself.

In regards to phases, greater weighting was assigned to the third phase due to the summative nature of this phase of data collection. The first and second phases were considered equivalent in weighting. Peer checking of analyses by students and professors at James Madison University ensured that the weighting priority outlined above was adhered to during data analysis.

Multiphase. A multiphase design was selected, including both concurrent and sequential phases (Creswell & Plano-Clark, 2011), due to the longitudinal nature of data collection and analysis and the need to refine and adapt the DBT-A program. A multiphase design allows for continual formative evaluation, in addition to summative evaluation; this was crucial to the successful development of the program. The shorthand notation for this study was as follows:

qual + quant (qual) \rightarrow qual + quant (qual) \rightarrow QUAL (quant) \rightarrow QUANT.

Note that the third phase of this study included both QUAL (quant) \rightarrow QUANT. The last QUANT notation was not considered to be a separate phase.

Case study. A case study design was selected to explore the implementation process within a single, bounded unit (Stake, 1995). Yin (2009) defined case study research as "an empirical inquiry that investigates a contemporary phenomenon in-depth and within its real life context" (p. 18). The "essence" of the case study is its ability to "illustrate a decision or set of decisions: *why* they were taken, *how* they were implemented, and *with what result*" (p. 17, emphasis added). The answer to the first question, *why* DBT-A was chosen for implementation, was apparent from the beginning of the study because I was a central figure in the decision to implement DBT-A within the organizational setting. The remaining two questions, *how* DBT-A was implemented, and *with what result*, constituted an abbreviated definition of the research questions that were explored in this study.

A case study design was selected because the AIPS under study had enough potential participants for theoretical sampling, but not enough potential participants for credible maximal variation sampling. According to Creswell (2012), the case must be promising in its ability to adequately include an array of different subcases in order for data to reach an acceptable degree of saturation. In this study, access was provided to approximately 50 staff members with differing levels of experience, involvement, roles, and tenure in the setting. This allowed for purposeful theoretical sampling, which is critical for ensuring both theory development and adequate representation of different voices within the setting. Although this number was adequate for theoretical variation sampling, credible maximal variation sampling could not be conducted because single case studies typically do not contain the number of subcases required to provide an adequate range of responses.

There are two main types of case study, according to Stake (1995): intrinsic and instrumental. An *intrinsic case study* examines the specific details of the case in order to learn more about it. An *instrumental case study* examines the specific details of the case in order to make generalizations to constructs that are exterior to the case. This project was an instrumental case study, because of the need to demonstrate some degree of generalization to implementation theory based upon the findings of the case study. *Aggregation of instances*, or categorical aggregation, was used during the coding of interviews, computing mean values from ranked categories, and collecting aggregate patient feedback to assist with the identification of patterns, themes, and emerging theories in the data (Stake, 1995). This strategy is commonly used in instrumental case studies, whereas direct interpretation is used in intrinsic case studies, in which the objective is to understand the case and not to make theoretical generalizations.

Case studies in process research. Yin (2012) reported that case studies are commonly used to analyze the process of implementation, rather than measure outcomes. Case studies are therefore a viable means of exploring the implementation process of EBPs such as DBT-A, whereas experimental and quasi-experimental designs are preferable when seeking to know whether an intervention is effective or not. The implementation process cannot be properly evaluated through quasi-experimental designs, due to their focus on outcomes instead of processes. This distinction is important, because DBT research has almost exclusively used experimental and quasi-
experimental designs. This has occurred due to the focus on outcomes rather than processes in DBT studies.

Variations of case study designs. Different variations of the case study design include (Yin, 2012) single case or multi-case, and holistic or embedded. Multi-case designs are used when another case is available for data collection and analysis. Yin reported that multi-case designs tend to produce more noteworthy and reliable findings, since some degree of comparison is available both within-cases and between-cases. Despite these obvious benefits, a single-case design was selected for this study for several reasons. First, I did not have access to several acute inpatient psychiatric units. Second, it was unlikely that another AIPS located within the same southeastern U.S. state where the study was conducted would be willing to implement DBT-A within their program. Indeed, my emic status was crucial to the study's genesis. Third, a cross-case analysis was beyond the scope of this project and would require a team of researchers. For these reasons, a multi-case design was not selected for this study. Single-case designs can be chosen when the case represents a critical test of theory, a rare or unique circumstance, a representative or typical case, or when the case serves a longitudinal purpose. For this study, a single-case design was chosen due to the longitudinal nature of the study.

A holistic design collects and analyzes data for all subcases within a study, and provides a conglomerate summary of the total (or, holistic) findings for the collective subcases. An embedded case summary also presents total and holistic findings for all subcases, but punctuates this collective summary with subcases that have been chosen for individual spotlighting based on their unique features or representativeness. An embedded case study was selected, because although presenting the total and holistic findings of all interviewees for the first line of investigation was essential, these data could be more fully illustrated by including individual subcases within the report. This would give a human face to the data, enhancing the cohesion and structure of the report.

The embedded design has both strengths and weaknesses. Positively, more concreteness is provided, removing some degree of abstraction from the findings. Negatively, a risk exists for researchers to lose sight of their initial research questions if inferences are not made beyond subcases to the total case. Thus, attempts were made to ensure that the analyses extended from individual employees to the organizational environment as a whole.

Bounding. The boundaries of this case were constrained on the basis of time, place, events, and processes (Creswell, 2012). In regards to time, data were only examined during a two-year period, from May 1, 2011 to April 30, 2013. A 24-month period was chosen to conform to Fixsen et al.'s (2005) recommendation that implementation studies must last longer than one year. A 24-month period was considered adequate for this study, and has been used in previous mixed method implementation studies (e.g., Gioia & Dziadosz, 2008). This *a priori* time limit can help guard against the dilemma of deciding when to end the study. Data in case study research are continually generated and rarely have an obvious end point.

In regards to place, this case study was bounded by a single location, namely an AIPS in the southeastern U.S. that served children and adolescents ages five to eighteen. Data were not collected from another child and adolescent AIPS in the state, since multiple-case study was not chosen for this study. Furthermore, data were not collected from other inpatient units within the same hospital, such as the adult or geriatric unit, or

the residential addiction treatment center. Interview participants consisted solely of staff members whose primary workplace was the child and adolescent AIPS.

In regards to events, data collection was constricted to information that directly pertained to the DBT-A program at the AIPS under study. For example, field observations were not conducted for other therapeutic activities that are offered on the unit, such as family therapy, extraneous staffing matters, such as hiring and firing of staff, nor for extraneous patient matters, such as involuntary commitment hearings. My interview protocol consisted of questions addressing the central research question.

In regards to processes, staff adjustment and organizational acceptance were primarily examined when implementing DBT-A within the AIPS under study. Other changes that occurred within the AIPS during the same time period provided important comparative information about DBT-A implementation, such as the modification of the behavioral point system, the changing role delineations for case managers and primary therapists, and changes to milieu staffing patterns. These processes were explored because they may have affected staff adjustment and organizational acceptance of DBT-A or may have provided insights into that process. Processes not explored in the study included program changes in other inpatient units in the same hospital. Bounding the case by time, place, events, and processes provided sufficient constriction to maintain clarity and focus, which decreased the risk of including extraneous information in the case study report. This bounding enhances the trustworthiness of findings.

Approaches to data collection and analysis. Two approaches to data collection and analysis can be considered when planning to use a case study design: descriptive and exploratory (Yin, 2012). A descriptive approach attends to *what* is happening or has

happened, whereas an exploratory approach attends to *how or why* something happened. In this study, including both descriptive and exploratory forms of data was important to determine both *what* happened in the case and *why* it happened. Although the research subquestions represented both descriptive and exploratory data, my central research question concerned what seemed to help and hinder the implementation process (*how and why*). Thus, while both descriptive and exploratory data were collected and analyzed, greater attention and focus was given to the exploratory approach.

When seeking to answer *how or why* questions, Yin (2009) recommended using either a case study design or field experiment. Yin reported that case studies are the preferred methodological choice when variables cannot be manipulated. In this study, an experiment was contraindicated due to lack of controls. In the naturalistic environment of this study, patients could not be assigned to a control condition. It would have been unethical to place suicidal inpatients on a wait-list control group, and the setting was too small for another group or activity to be run at the same time as the DBT-STGs. Furthermore, this study strove to understand the process of implementation rather than seeking to understand whether or not the intervention was successful.

Reliability within case study designs. The construct of reliability refers to the ability of another researcher to follow procedures and conduct the same case study over again. In this study, reliability was addressed via detailed description of my methodology and procedures for conducting and analyzing data. The appendix of this dissertation includes the questions used for interviews and focus groups and the feedback form distributed at the conclusion of each DBT-STG. External to the manuscript, an audit trail (or, case study database, Yin, 2009) was maintained, to document decisions made during

the course of the study. The audit trail included citations and links to specific notes, documents, memos, tabular materials (e.g., quantitative data), and narratives (e.g., qualitative data) collected during the project. In accordance with Yin (2009), the case record was complete, yet manageable.

A reliable study is one that has successfully attempted to minimize the effect of biases and errors within the study. To this end, a team of colleagues at James Madison University conducted coding consensus checking of qualitative interviews using a codebook to enhance dependability. Credibility was established via member checking, and data triangulation was used to establish trustworthiness (Stake, 1995). The coding team consisted of other doctoral students at James Madison University, including one team member who was of etic status to the counseling field. Readers were also used to ensure that the case study report was comprehensible, succinct, and transferable to their own experience.

Although I sought to minimize biases and errors, I also considered Stake's (1995) suggestion that "research is not helped by making it appear value free" (p. 95). Therefore, acknowledging my own biases and pragmatic philosophy was important for readers to understand what values have guided data collection and analysis. This transparency increases the ability of the reader to consider whether inferences and analyses are appropriate.

Enhancing validity within case study designs. In regards to external validity, the purpose of the case study was to make *analytic* generalizations, not *statistical* generalizations (Yin, 2012). Whereas statistical generalizations seek to make inferences about populations based on the findings of a sample, analytic generalizations seek to

generalize a set of results to a broader theory. Thus, external validity in this study was measured by the consistency to which this study's findings support or expand previously existing theory on implementation processes (e.g., Fixsen et al., 2005). New information that either disconfirms or elaborates on previously existing theory does not necessarily mean that the study lacks external validity, only that further research is needed. Echoing Lincoln and Guba (1985), Yin (2012) noted: "generalization is not that of a conclusion, but, rather, more like a working hypothesis" (p. 19).

Stake (1995) took a slightly different approach to case study generalization. Although both Stake and Yin agreed that the goal of case study research is not to generalize findings to a population (statistical generalization, called *propositional generalization* by Stake), Yin argued that analytic generalizations could be made to existing theory, whereas Stake wrote that *naturalistic generalizations* are more appropriate. Naturalistic generalizations are "conclusions arrived at through personal engagement in life's affairs or by vicarious experience so well constructed that the person feels as if it happened to themselves" (p. 85). Another term for naturalistic generalization is transferability, which is the capacity for readers to compare and contrast the case study with their own experience. In Stake's approach, no overt attempt is made to connect observations and findings to an existing grand theory. Unlike Yin, Stake was more concerned with the inherent value of the unique details of the case.

Yin (2009) reported that inexperienced researchers could benefit from adopting a theoretical perspective when conducting case study research. *Theoretical propositions* are useful in enhancing the validity of a study, through the ability to make analytical generalizations of existing theory. These propositions must be identified prior to

conducting research, and can be used to guide data collection and analysis procedures. The theoretical propositions in this case study were as follows:

- The relationship of the primary implementer with the staff working at the setting is crucial to the successful implementation effort of an adopted practice within an organization. There are certain characteristics that the primary implementer can possess (e.g., high pre-existing level of support within an organization) for a best practice such as DBT-A to be more easily implemented.
- 2. The current attitude and climate of the organization toward change and innovation are important to the successful implementation of an adopted practice. An innovative practice such as DBT-A is more likely to be successfully implemented in an organizational climate where multiple program changes are being concurrently implemented. This is consistent with the theory outlined by Fixsen et al. (2005).
- 3. Program sustainability required ongoing buy-in from both staff and management.
- Although a positive patient response to the intervention is required, it is not sufficient for the successful implementation of a new practice without staff and managerial buy-in.
- Contrary to previous theoretical approaches to implementation (e.g., Fixsen, 2005), formal financial backing by the organization is not necessary for successful implementation efforts in a small organizational environment.

These theoretical propositions were used to guide data collection and analysis in order to make analytic generalizations from these propositions to an existing broader theory (e.g., Fixsen et al., 2005).

Stake (1995) proposed a framework for delineating theoretical propositions, called issues. *Issues* in case study research were defined by Stake as the potential problems in a case that "draw us toward observing, even teasing out, the [actual] problems of the case, the conflictual outpourings, the complex backgrounds of human concerns" (p. 17). In other words, issue questions are ones asked of the investigator when collecting and analyzing data. Stake further wrote that issues could be helpful in providing an organizational framework for the case study, since investigators are guided in their approach to asking questions of the data. Stake's approach is similar to that suggested by Yin (2009), who recommended that case study research should incorporate a protocol which contains questions asked of the researcher. The issues in this case study were as follows:

- 1. What strategies, behaviors, organizational role, and level of support within an organization are required for the primary implementer to successfully implement an EBP such as DBT-A?
- 2. How important is the current organizational climate's attitude toward change and innovative practices within an AIPS, when implementing an EBP such as DBT-A?
- 3. Is staff buy-in necessary for DBT-A to be implemented when support from the management has already been established?
- 4. How influential is a positive patient response to organizational acceptance of a newly implemented EBP, such as DBT-A in an AIPS?
- Can an EBP such as DBT-A be implemented in an AIPS without any formal financial backing?

These issues were reduced to the following titles:

- 1. Primary Implementer
- 2. Organizational Climate
- 3. Managerial Support
- 4. Positive-Patient Response
- 5. Financial Backing

Rival explanations to these theoretical propositions were purposefully sought out, enhancing the validity of findings by minimizing attribution bias. Yin (2012) recommended that researchers using a case study design should seek out evidence for rival explanations that would serve as a plausible rival to the researcher's propositions. This need to look for rival explanations enhances the validity of findings. Rival explanations were welcomed as alternative findings, rather than dreaded as unwanted findings that would discredit theoretical propositions. The discrediting of propositions is suggestive of hypothesis testing. As Stake (1995) wrote, "the qualitative case researcher tries to preserve the *multiple realities*, the different and even contradictory views of what is happening" (p. 12). Research questions sought to understand the *process* of implementation, rather than whether or not the implemented program was effective (the *outcome* of implementation). Thus, answering sensitizing questions in an emergent manner was more important to this study than rejecting propositions. Rival explanations had value in this study, alongside theoretical propositions.

Strengths of the case study design. A major strength of the case study design is the ability to glean information from several different forms of data. Yin (2009) wrote that there are six forms of data that can be used within case study research: direct

observations, interviews, archival records, documents, participant-observation, and physical artifacts. Information from various data sources can be triangulated, which enhances the validity of findings. Yin (2012) reported that regardless of source, information included in a case study design could be both qualitative and/or quantitative. In this study, the following forms of data were collected, organized by weighted priority: in-depth interviews, focus groups, and field observations. The quantitative data collected from patient helpfulness ratings consisted of documents, in the form of aggregate data from a patient feedback instrument. These quantitative data had an ancillary role and secondary importance to the qualitative data collected.

Limitations of the case study design. Threats to transferability are the main limitation of the case study design. A lack of controls can limit the transferability of findings. Case studies typically have a restricted pool of subcases to interview due to bounding. The restricted number of participants available for interviews can create a lack of saturation or redundancy (Lincoln & Guba, 1985). Yin (2009) suggested that the researcher must be able to demonstrate that data have been adequately saturated, not just that the participant pool has been exhausted. The case is also more likely to have inadequate variance for maximal variation sampling, compared to studies with a larger pool of possible participants. Without adequate sampling variation, data saturation can occur too quickly, resulting in a lack of redundancy. In qualitative research, transferability of findings is enhanced when data reach saturation and redundancy. When data do not reach saturation and redundancy, the transferability of findings is threatened. Therefore, the restricted size of the interview pool can lead to less sampling variance which affects saturation and redundancy, and therefore the transferability of findings. A

protective factor against this threat to transferability is the careful use of theoretical sampling, the use of theoretical propositions to enhance transferability, and the triangulation of data from multiple sources to enhance the validity of total findings. These three protective factors were adhered to during data collection and analysis.

Yin (2009) warned that any design examining the implementation process of new programs and organizational change needs to be carefully constructed to address variations in program definition based on staff member perspectives as well as program components that pre-existed the formal designation of the program. This was addressed by defining the DBT-A program to the staff at the beginning of implementation, and providing a definition of the DBT-A program during staff interviews. For example, during summative interviews, interviewees were informed that questions pertained to the 24-month period of DBT-A implementation. DBT-A was defined as consisting of DBT-STGs and the review of diary cards by primary therapists.

Structure of the case study report. There are two main structural types for constructing a case study report: topical/thematic and chronological (Stake, 1995). The former refers to a content-driven approach to describing the case, while the latter refers to a sequential approach to case description. Merriam (2009) reported that it is fairly common for the sequence of a case study report to begin with a descriptive narrative, followed with analysis and interpretation of themes. This outline was followed by first providing an introductory section about the case description, case context, and program description to assist the reader in understanding the background of identified categories that seemed to help and hinder implementation. Thus, a chronological structure was

followed at the beginning of my Results section. Analyses and inferences were then provided, following a more topical or thematic structure.

A mixed methods approach to the case values both analytic generalization (quantitative; Yin, 2009) and particularization (qualitative; Stake, 1995). *Particularization* refers to the unique features of the case, which would be classified as error in strictly quantitative studies (Stake, 1995). Thus, data collection and analysis in this case study contained *thick descriptions* of the case, *experiential understanding* of the particularization of the case, and represented the *multiple realities* of the different voices within the AIPS organizational environment. Information was winnowed (Stake, 1995) to concisely present the most important details of the case study.

Role of the investigator. One of the difficult balances between the use of quantitative and qualitative data in a mixed methods case study is the need to balance the two discordant roles of the investigator in the setting. In traditional quantitative studies, the investigator needs to manipulate variables or create conditions whereby research questions can be answered. In traditional qualitative studies, the investigator takes a non-interventionist and naturalistic observational approach. These two positions seem to be incompatible opposites. In this case study, this dilemma was resolved by assuming a qualitative approach towards the case. As the primary implementer of the DBT-A program in the AIPS, I did not intentionally manipulate variables or create conditions to answer my research questions. Instead, I took an observer role when collecting data through interviews, a focus group, and field observations. When conducting interviews and the focus group, questions were open-ended and unbiased to the extent possible in

order to avoid leading participants or creating unnatural conditions in order to answer research questions.

Challenges posed by the design. The design creates three challenges that needed to be addressed throughout the course of the study. First, the sheer volume of information that is collected in multiphase mixed methods designs required significant organizational prowess and attentiveness to detail, to ensure that the project was not untenable or overwhelming. Second, conduct the formative assessments of the program within a reasonable amount of time was challenging. Due to the large amount of qualitative and quantitative data, completing formative assessments for both lines of investigation was time-consuming. Findings from the midpoint evaluation were used to guide subsequent adaptation and implementation efforts for the remaining 12 months of the study. Third, multiphase mixed methods designs are typically conducted in research teams. As the sole researcher, I collected all data. A coding team assisted with analysis and peers and faculty at James Madison University were consulted to ensure adequate support and guidance through the process.

Researcher's preparation. Prior to the study, I took and passed graduate-level classes in mixed methods and qualitative research, inferential statistics, research design and techniques, and issues and techniques in research and evaluation. I completed one prior mixed methods research project during my master's-level studies, which gathered both quantitative and embedded qualitative data from a survey sent to National Certified Counselors on their utilization of EBPs. My relatively novice status in conducting mixed methods studies required me to consult with faculty at James Madison University, particularly my dissertation methodologist.

Procedure

The procedure is now described, including participant selection, forms of data collection, data analysis procedures, target audience, and budget.

Participant selection. Interviewees were selected from the staff working at the AIPS under study. Different sampling procedures were used to select participants. When selecting focus group participants, purposive, criterion-based sampling was used. Inclusion criteria for the focus group were based on three primary factors. Participants were required to be full-time employees that work during the evening shift, and have worked at the AIPS for at least 12 months. Full-time status was a necessary criterion, because it was important to elicit the perspectives of staff members who had been consistently exposed to changes in the evening shift program over the past 12 months. Evening shift status was a necessary criterion, because participants needed to have direct experiences with DBT-A implementation and related programmatic changes. Day shift or night shift staff members were therefore excluded, since they were unlikely to have been exposed to DBT-STGs, which were scheduled from 3:30 to 5:00 p.m. Twelvemonth employment at the facility was also important, because some questions inquired into first impressions of DBT-A when it was first introduced 12 months prior. Both nurses and milieu counselors were eligible for inclusion.

In regards to sample size for the focus group, guidelines recommended by experts were followed (e.g., Johnson & Christensen, 2004; Krueger, 2000; Langford, Shoenfeld, & Izzo, 2002; Morgan, 1997), that at least six participants were needed to reach data saturation and sustain a fruitful discussion. It was hoped that a sample size of six focus group participants would be obtained. Ultimately, only seven staff members were eligible for participation based on the inclusion criteria, due to the lack of full-time evening shift employees. By deciding to restrict bounding to participants with full-time evening shift status, I risked inadequate group size. Of the seven invited staff members, one was unable to attend the scheduled date, and another did not attend due to other commitments. The remaining five participants were all highly engaged members of the evening shift milieu staff, and represented the spirit of that shift. The loss of one more participant (i.e., if n = 4) would have created increased pressure for the attending members of the focus group to share past their level of comfort, and also would have further decreased adequate representation. While the sample size of my focus group was one smaller than recommended, the discussion was easily sustained. It is difficult to know whether data reached saturation, since the focus group was a one-time event and therefore cases could not be added. Limiting the group to five participants may also have limited the amount of divergence in perspectives and experiences, which decreases the representativeness of data. In all, the focus group was large enough to provide rich information. It is likely that my emic positioning was instrumental to the openness with which focus group members shared, contributing to the success of the group.

Of those who attended, 80% were female (n = 4), with a mean age of 29.8 years. Eighty percent were white/Caucasian (n = 4), and 20% African-American (n = 1). The staff had been employed at the current facility for an average of six years, with a mean of 7.4 years of related work experience. Three participants were counselors (60%, n = 3), and two were nurses (40%, n = 2). These demographics were adequately representative of the milieu staff population that worked at the AIPS during the same time period (April 2012), as seen in Table 4.

Table 4

Staff Demographics	Population		Sample	
	N^{-}	%	N	%
Gender				
Female	33	73.3	4	80.0
Male	12	26.7	1	20.0
Race/Ethnicity				
African-American	8	17.8	1	20.0
Asian-American	1	2.2	0	0.0
Latino/a	1	2.2	0	0.0
White/Caucasian	35	77.8	4	80.0
Job Title				
Counselor	28	62.2	3	60.0
Registered Nurse	17	37.8	2	40.0
Registered Nurse	28 17	37.8	2	40.0

Comparison of Focus Group Sample to Milieu Staff Demographics

Note. Total percentages may exceed 100%, due to rounding. These demographics were taken during April 2012, at the 12-month midpoint.

In comparison to the focus group, purposive, theoretical variation sampling was employed for summative in-depth interviews. Staff members with different roles, periods of employment, demographic variables, and differing levels of exposure to the DBT-A program within the organization were interviewed to ensure adequate sampling. Inclusion criteria for summative in-depth interviews included being a staff member of the multidisciplinary treatment team. Counselors, managers, primary therapists, psychiatrists, psychologists, registered nurses, and unit secretaries were all eligible for inclusion. Five participants were selected for initial interviews, for their theoretically divergent roles in the setting. Subsequent interviews were conducted following these first five interviews. Due to the limitations of a case study design, the number of participants included in the summative interviews may have been insufficient for adequate saturation or redundancy to be reached (Lincoln & Guba, 1985). Thus, it is more likely that data would approach rather than achieve full redundancy or saturation. Because purposeful theoretical sampling was used, the sample was not anticipated to be fully representative of the staff population. For example, large sample ranges were found for years of experience, tenure, and age. Staff interviewed during summative evaluation had been employed at the setting for an average of 5.3 years, ranging from 6 months to 25 years (SD = 7.14). Interviewees were fairly experienced, averaging 10.77 years of working in mental health services, ranging from 18 months to 25 years (SD = 10.91). Average interviewee age was 36.3 years, ranging from 23 to 65 years (SD = 13.85). Despite these large ranges, Table 5 demonstrates that adequate sample representation was achieved.

Other important sample demographics included level of exposure to DBT-A prior to the interviews, self-identified organizational role, and hiring status. Only two staff members (6.6%) had never attended a DBT-A skills training group or individual therapy session. Half of the interviewees (50%, n = 15) were infrequent observers of DBT-A, 26.6% (n = 8) were frequent observers (defined as at least one observation per week), and 16.7% (n = 6) were trained DBT-A group leaders and therapists.

Regarding organizational role, the vast majority of interviewees (86.7%, n = 26) identified themselves as implementers ("someone else makes major program decisions, and I am responsible for carrying them out"). Of the remaining interviewees, two interviewees (6.6%) identified themselves as decision-makers ("I make the major program decisions, and someone else carries them out"), one interviewee (3.3%) selfidentified as a champion ("someone else makes major program decisions, and I am responsible for cheerleading others to carry them out"), and one interviewee selfidentified as "other" ("none of the above.") This was significantly different from Pazano, Seffrin, Bunt et al. (2006), who interviewed far more decision makers (33%). This discrepancy was to be expected, since Pazano et al. predominantly interviewed top executives (40%) and first line supervisors (44%) for their study, in contrast to the two managers interviewed for this study (6.7%). Pazano et al. only interviewed 16% line staff, in contrast to 93.3% in this study.

Table 5

Comparison of Interviewee Sample with Staff Population Demographics

Staff Demographics	Population		Sample	
	N^{\uparrow}	%	N	%
Total	60		30	
Gender				
Female	41	68.3	17	56.6
Male	19	31.7	13	43.3
Race/Ethnicity				
African-American	8	13.3	3	10.0
Asian-American	1	1.7	1	3.3
Latino/a	0	0.0	0	0.0
White/Caucasian	51	85.0	26	86.7
Job Title				
Case manager	3	5.0	0	0.0
Counselor	29	48.3	17	56.6
Manager (unit, director, counseling)	3	5.0	2	6.7
Primary therapist	4	6.7	3	10.0
Psychiatrist	2	3.3	1	3.3
Psychometrician	1	1.7	0	0.0
Registered Nurse	16	26.7	6	20.0
Secretary	1	1.7	1	3.3
Designation				
Milieu Staff	46	76.7	24	80.0
Non-milieu staff	14	23.3	6	20.0

Note. Total percentages may exceed 100%, due to rounding. These demographics were taken during the same time at the first round summative interviews. Milieu staff were classified as registered nurses and milieu counselors.

Regarding hiring status, 46.7% of interviewees (n = 14) were hired after the DBT-

A program was initiated. This disproportionate amount of new staff members occurred

because newer staff members were intentionally selected as part of theoretical sampling, to provide comparative data regarding staff experiences. It was hypothesized that newer staff members would provide discrepant cases compared to older and more experienced staff members who had observed DBT-A implementation from the outset.

Forms of data collection. The following forms of data collected during this study are described in order of weighted priority: in-depth interviews, a focus group, field observations, and patient feedback forms.

In-depth interviews. During the third phase of the study (18-24 months), members of the multidisciplinary team were contacted via email (included in Appendix E), asking for participants to self-select into the study. First-round in-depth interviews were then conducted with various members of the treatment team. Interviewees included managerial staff, milieu counselors, psychiatrists, psychologists, primary therapists, registered nurses, and secretaries. All interview protocols followed a semi-structured format. All interview and focus group questions adhered to Patton's (2002) guidelines (e.g., behaviors/experience, opinions/beliefs, feelings/emotions, knowledge, sensory, background/demographical). Interview questions were open-ended. Interviewees were provided with a concluding question about what should have been asked during the interview, to provide an opportunity for interviewees to share information about a topic that was not directly asked about. During the initial five first-round interviews, a slight adjustment was made to the interview protocol. An item was added to the demographic questionnaire, concerning whether staff members had observed the DBT-STGs before. This was suggested by one of the first five interviewees during first-round interviews. This staff member speculated that the level of staff exposure to DBT-STGs would likely

affect perceptions of DBT-STGs. Interviews lasted for approximately 60 minutes, and no longer than 90 minutes. Faculty at James Madison University reviewed interview questions to ensure their relevance to the research questions under study. The consent form to participate in research is included in Appendix A, the interview protocol is included in Appendix F.

There is an ongoing debate in the literature regarding what constitutes an adequate sample size for qualitative research. Charmaz (2006) reported that 25 participants are "adequate for smaller projects" (p. 114), whereas Green and Thorogood (2009) indicated that interviewing 20 people was typically sufficient for saturation. Empirical studies have also provided varying findings, though suggest that overall, a large sample is not required for saturation. Griffin and Hauser (1993) found that it took 20 to 30 interviews to cover 90-95% of saturation when using heterogeneous subjects. Guest, Bunce, and Johnson (2006) reported that only six to twelve interviews were necessary to reach saturation for homogeneous subjects. In Mason (2010), the mean number of interviewees included in United Kingdom dissertation case studies (n = 179) was 36 (SD = 21.1), ranging from one to 95 interviewees. The author argued that this mean number was unreliable, since the modal number of participants tended to be round numbers (e.g., 20, 30). This suggests that in many dissertation studies, students were not following the flexible nature of the saturation process but instead seemed to rigidly hold to a priori decisions made about sample size. The author pondered if this reliance on a priori decisions at the expense of qualitative rigor was related to pressure placed on students to follow guidelines proposed to their ethics committees.

During the first round of interviews, five in-depth summative interviews were initially conducted using theoretical sampling, with the plan to continue conducting interviews until saturation was reached (Lincoln & Guba, 1985). Theoretical sampling has been defined as "the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges" (p. 45). In theoretical sampling, the total sample is not identified *a priori*, but instead emerges during the process of data collection and analysis (Merriam, 2009). Following the first five interviews, interview participants were deliberately selected whose perspectives were presumed to either support an emerging finding, or else provide divergent perspectives, exceptions, or variants. This is known as negative and discrepant case selection.

To illustrate this, consider the following two examples of how theoretical sampling was used in this study. First, after the initial five interviews, it was decided that the next interviewees would be the remaining full-time evening shift milieu staff members who had not participated in the focus group a year earlier, and who were working at the setting before DBT-A was introduced. It was decided that further exploration was needed into whether other members of the regular evening shift staff shared similar perspectives to a milieu staff member who reported feeling "inferior" to the primary therapists. Through theoretical sampling, it was discovered that this staff member's experience was idiosyncratic and did not generally fit the experience of the other milieu staff or non-milieu staff interviewees. Second, I selected six staff members who were hired after DBT-A was implemented in the setting, two of which were of different race/ethnicity (African-American). This decision was made on the basis of

wanting to explore whether newer milieu staff and staff with different race/ethnicity had also noticed covert resistance to the implementation effort. Neither approaches resulted in significant discrepancy or negative data to the emerging findings.

Attempts to enhance saturation were made by recruiting diverse opinions and attempting to directly answer the research question under study. During the first-round, between 15 to 25 interviews were expected to be conducted. This range was intentionally broad, since saturation and redundancy in qualitative research is an emerging and flexible construct that cannot be fully anticipated. The goal of conducting further interviews is to have *persistent and prolonged engagement* in the setting (Lincoln & Guba, 1985). Several of these interviews was an elite interview (Yin, 2012). *Elite interviews* occur when there are only one or two people who possess certain roles in the case. For example, there was only one director, manager, and counseling manager within the case. While data saturation and redundancy are difficult to fully attain in a single-case study, emerging findings suggested that the data approached saturation and redundancy after 18 interviews. Follow-up interviews were conducted with two of these first round interviewees to clarify information. Before concluding data collection for the first-round of interviews, a methodologist was consulted to ensure agreement regarding saturation from an experienced researcher with etic positioning.

The interviewees were emailed the interview questions and informed consent document at least one week prior to the interview, and provided with copies at the time of the interview. Interviews proceeded only after the informed consent statement had been reviewed and signed by both parties. During the interview, I sat facing the interviewee. Interviews were conducted largely in therapist offices that were located outside of the main locked unit where the patients reside. These offices were quiet and private. Since participants were allowed to choose the interview location, one interview was located in another library room that was on-site but on a different floor from the child and adolescent AIPS.

Interviews were recorded, using a small portable device. Interviewees were allowed to turn off the recorder at any time. A professional transcriptionist transcribed interview recordings, as mentioned in the informed consent statement. To enhance validity, member checks were conducted by providing interviewees with first-round transcripts for review. While I reserved the right to make ultimate decisions regarding inclusion of content in the study, strong consideration was given to the preferences of participants. This was particularly true of sensitive material. Ultimately, all requested changes to transcripts and analyses were accepted and completed, and no conflict emerged during the study between primary researcher and participant.

Second-round interviews were conducted towards the conclusion of the third phase. Summative interview participants were asked to rank identified categories by their relative importance. Because of the quantitative nature of data collection, the interview pool was expanded to 30 participants. All 18 first-round interviewees participated, along with the five focus group members and seven new participants. Interviewees were given six index cards with a category and related subcategories written on each, and asked to arrange the six cards in a vertical manner from most to least helping, and then from most to least hindering. Participants were asked to explain their rank orders. During the second-round interviews, participants also reviewed a narrative concerning DBT-A implementation and made suggestions for improvement. Based on this feedback, the narrative nearly doubled from two to four pages by the conclusion of second-round interviews. Quantitative analysis of overall rankings for categories was conducted by converting rank values into a score from 1 to 6, computing mean values for each category among participants and organizing the relative importance of each category by overall mean value.

Focus group. A focus group was conducted with the milieu staff at the conclusion of the first phase (12 months). The focus group protocol followed a semi-structured format, and lasted for approximately 60 minutes. All focus group questions adhered to Patton's (2002) guidelines. The focus group reflected upon the process of implementing DBT-STGs during the first 12 months. Questions were asked about chronological reactions to the implementation of DBT-STGs, what helped and hindered the implementation process thus far, and the dynamic process of group leader and milieu staff adjustment. The interview protocol is included in Appendix C, and the interview questions are included in Appendix D.

The focus group took place in the unit kitchen shortly after lunch hour, which was located within the locked unit. In many ways, the kitchen was not the ideal setting for the focus group. Patients spend the majority of their time within the locked unit, and thus the potential existed for disruption to the focus group, due to noise from patients and staff needing to enter the kitchen for food. Indeed, despite a "do not disturb" sign being taped to the outer door, on one occasion a staff member briefly entered the kitchen after the focus group was underway. Despite these limitations, the kitchen was chosen since it was the only room in the hospital that was not being occupied by staff or patients during that time, was large enough to accommodate at least seven people comfortably, was in a

closed area to ensure confidentiality, and was a "dead" room without a large amount of reverb or echo.

Chairs were arranged around a circular table in fairly close proximity. This was hypothesized to increase the intimacy between participants, facilitating a greater depth of response. The informed consent statement, interview questions, handout on group leader and milieu staff adjustment model, index cards, and a pen were placed on the table at each chair. In the middle of the table, a recording device was positioned over towels that provided cushioning from vibrations on the floor. As the interviewer, I purposefully sat slightly outside of the main table. This arrangement was chosen to increase interactions between participants and lessen the interviewer's level of participation. Snacks and drinks were arranged at another table, approximately six feet away so that participants could freely get more snacks or beverages while the focus group was being conducted.

Careful thought was given to having a co-leader or facilitator. As the moderator, I chose to take only cursory notes during the focus group since I wanted to be fully present to the discussion. Upon listening to the recording, I don't think I missed any major disclosures that needed further probing. I made sure to expand my initial impressions when listening to the playback of the focus group that same evening. I believe that my training as a counselor enabled me to accomplish such attentive listening to both content and process. It may have been beneficial to have someone else write notes about content and process interactions during the interview. Yet, it is also possible that a co-leader may have impaired the process by creating discomfort and dissonance in the room, resulting in lesser depth of sharing. I was fortunate that my counselor training permitted me to successfully conduct the focus group without a co-leader or facilitator.



Figure 2. Sociogram conversation flow between focus group participants

According to Fontana and Frey (2000), three unique challenges exist when conducting focus groups. First, the moderator must prevent one focus group member from dominating the conversation, which would over-represent one voice. Second, the moderator must draw out quiet and reserved members of the group, in order to avoid under-representing their voice. Third, the moderator must capture the opinions and experiences of each group member, to ensure adequate coverage of the topic. The sociogram analysis in Figure 2 displays that while some group members were more active than others, no single individual dominated the group. Each turn is represented by an increase of 0.5 arrow thickness. "Mod" refers to moderator, and "P1" refers to the first participant. All group members shared, although some shared more than others. In addition, transcript analysis demonstrated that each group member contributed at least one response per question. Therefore, the focus group was successful in representing the experiences of each group member, enhancing the validity of the thematic responses.

Field observations. Informal field observations were conducted throughout the 24-month process. My role was as a participant observer. The focus of observations included staff behaviors, events, verbal and nonverbal communication, informal staff feedback, informal patient feedback, and programmatic changes. An observation log was kept, to maintain objectivity and place observations within their appropriate context. The audit trail and field observations were reviewed by peers and faculty at James Madison University to increase dependability of findings. The informal nature of observations meant that no checklists or protocols were used when making informal observations as a participant observer. Field observations were selected for inclusion in the results section based on relevance to the emerging themes of the in-depth interviews and focus group. Field observations were not included in the descriptions of subcategories if no triangulation existed with data from in-depth interviews and the focus group. Using staff responses to gauge the accuracy of an observation minimized the bias inherent to my emic positioning while conducting field observations. At times, interviewees were asked if my field observations were apparent to other staff members, and accurate. This member checking further enhanced the validity of field observations.

Patient feedback forms. Quantitative data was collected from patient feedback forms, and descriptive statistics computed for this aggregate data. During the first two phases of the study (0-18 months), patients were asked to complete a feedback form immediately after the conclusion of each DBT-STG. This form is included in Appendix B. Personalized responses were discouraged by the group leader, and excluded from data collection. The goal of this feedback was to accrue aggregate data about the helpfulness of the group, whether patients felt they learned new coping skills in the group, whether

patients believe they can use these coping skills in their home setting, what activity patients would most prefer to engage in during the time when the DBT-STG is offered, and how the group could be improved. By the end of the second phase, nearly 1,000 responses were collected between 12 and 18 months. This provided an adequate sample size with which to compute descriptive statistics.

Formal assessments of outcome were not conducted at pre- and post-intervention using standardized instruments. This data would have been essential to a quasiexperimental study, but was unnecessary for the purpose of this study.

Data analysis procedures. Collection and analysis of qualitative data followed the process outlined by Merriam (2009), Richards (2009), and Creswell and Plano-Clark (2011). First, notes were taken during interviews and focus groups on content and process. Within 24 hours, the researcher listened to the audio recording of the interview or focus group and wrote further reflections. Within a week of the interview or focus group, the researcher returned to the audio recording once again and wrote a memo based on reflections thus far. These memos were fairly intensive, usually ranging from 5 to 10 single spaced typed pages. These memos informed the initial development of codes for the codebook.

Interview transcripts and memos were coded. A codebook was developed, with clear definitions provided for each code to enable coding consensus checking. After transcripts were made available by the professional transcriptionist, coding of transcripts began using the constant comparative method, which was first used in grounded theory research (Glaser & Strauss, 1967). Rather than using open, line-by-line coding that is common to grounded theory research (Charmaz, 2005), data was chunked into coded

categories. This method has the benefit of allowing the researcher to make higher order analyses than is typically provided by line-by-line coding, though has the drawback of potentially introducing bias by improperly categorizing data. The use of a coding consensus team helped to mitigate this bias. Interviews were coded in a mixed manner, utilizing both *a priori* and emergent coding. Mixed coding was chosen, to represent constructs identified in the literature *and* identify emerging themes in the data. Codes were bracketed to specifically address what helped or hindered the implementation process. Data was not coded if unrelated to the research questions. Codes were organized into categories and subcategories, to identify what seemed to help and hinder implementation.

A team led by the primary researcher and including two other doctoral students from James Madison University provided coding consensus and validity checks. One of these doctoral students was another student in the counseling program. Another doctoral student was from an entirely different discipline (speech pathology) with little familiarity regarding counseling or DBT. The inclusion of an etic member of the coding consensus team was an intentional decision. It was hypothesized that an unbiased and unfamiliar observer could help counterbalance my closeness to the data inherent to my emic positioning. Memos were created from these coding meetings, which often provided deep insights into emerging themes in the data.

The *recursive* nature of qualitative inquiry meant that qualitative data were reanalyzed once compared to further data that was accrued during the course of the study. As part of the recursive process, data from previously coded and analyzed interviews and focus groups was returned to, resulting in changes to its coding and analyses based on emergent data from subsequent interviews and focus groups. For example, after coding interview transcripts, codes and reflections were added to the original memo. A memo analysis was then written based on emerging findings, which included any relevant insights, connections, or models. These coded data were entered into NVivo 10 for comparison with subsequent data.

Analysis of pooled interviews was performed using NVivo 10 software. Throughout the analytical process, my decisions about data inclusion were informed by my need to answer the central research question. Thus, themes were linked to research questions. Findings were compared to theoretical constructs in the existing literature, and new questions and hypotheses were developed based on emerging findings. While an exploratory stance was adopted during analysis of qualitative data, several *a priori* constructs were hypothesized to affect staff adjustment and organizational acceptance that had been identified in the extant literature. These *a priori* constructs were as follows: primary implementer, organizational climate and culture, managerial support, patient response, and financial backing. These *a priori* constructs were used during data analysis to make analytic generalizations to an existing broader theory (e.g., Fixsen et al., 2005). While theoretical propositions were identified per Yin (2009), an exploratory approach to data analysis was maintained to reduce attribution bias. Throughout the process, peer checking by students and faculty at James Madison University was solicited to ensure that my closeness to the data did not blind me to emerging themes. Peer checking reduced this threat to validity.

Once saturation was reached for first-round interviews, the coding team collectively reached consensus in identifying the six grandparent categories for existing

codes via affinity diagramming. This process helped to identify categories for staff responses regarding what helped and hindered implementation. Approximately forty codes were written on individual sticky notes, and organized into categories onto a large sheet of paper by the team. A methodologist encouraged the coding team to be sensitive to any connections between codes that may be lost via affinity diagramming. The consensus team ultimately saw few lost connections.

During second-round interviews, each interviewee was asked to rank order categories of staff responses regarding what helped and hindered implementation. These categories were identified during qualitative analyses of the initial round of interviews. Rankings for each participant was assigned a numerical value, based upon the mathematical formula:

$$X = (n + 1) - R$$

Here, X represents the numerical value, n represents the total number of categories, and R represents the interviewee's ranking. So for example, when there are six categories identified, a categoriy that is ranked as third most important will receive the following score:

$$X = (6+1) - 3$$
$$X = 4$$

Numerical values for each category and each participant were analyzed, before mean values and standard deviations were computed. Overall rankings for each category were determined, based upon mean numerical values. The average distance of each category from the top ranked category was computed, as was the separation of each category from the next ranked category. This provided insight into the relative importance of each

category. Inferential statistics were then performed to analyze whether differences between categories were significant, and whether some categories were more important than others.

When presenting findings from the summative interviews in the Results section, three to five information-rich subcases were selected to elucidate themes that emerged from the summative in-depth interviews. This conformed to the recommendations of Creswell (2002), who had suggested that three to five single case examples should be included within a larger qualitative case study.

Patient feedback forms. Statistical analysis of patient helpfulness ratings from feedback forms was conducted at 6 months, the 12-month midpoint, and at 18 months. The purpose of collecting quantitative data in this study was to provide descriptive statistics on patient response embedded into qualitative interviews regarding whether a positive patient response affected staff adjustment and organizational acceptance. SPSS was used to compute descriptive statistics for the aggregate data. Following the suggestions of Creswell and Plano-Clark (2011), the data were prepared for statistical analysis. Numeric codes were assigned, the database was cleaned, and the data was inspected. Descriptive statistics were then computed, checking for trends and the normality of the distribution. During summative interviews, descriptive statistics for the second phase (12-18 months) of data collection were presented for mean patient-reported helpfulness ratings, whether patients reported learning new coping skills, patient-reported ability to use these new coping skills outside of the hospital, and preferred activity during the 3:30 – 5:00 p.m. timeslot in the schedule.

Target audience. The primary audience of the study was professional staff members at the site, who were provided with the opportunity to use aggregate information from the study to inform subsequent implementation efforts and enhance program improvement. The secondary audience of the study was the academic community at James Madison University, where the dissertation was formally presented. The tertiary audience of the study included the professional counseling community in the U.S. For the primary and secondary audience, data were presented in the form of a completed dissertation manuscript that was made available to all staff working at the site, and to the academic community at James Madison University. For the tertiary audience, data were presented in the form of paper presentations at regional and national conferences, and manuscript submissions to academic journals.

As the researcher, I reserved the right to use and publish non-identifiable data. While individual responses are confidential, aggregate data are presented representing averages or generalizations about the responses as a whole. Quotations from the transcripts were used to demonstrate themes, and associated with a pseudonym. No quotations used in the report contained any identifiable information.

Budget. No direct internal funds were used to provide support for this study, or the program under study. Some external funds for this project were provided shortly after the 24-month period of data collection concluded, in the form of a \$1,000 dissertation research award grant from the American Mental Health Counselors Association Foundation. The following budget was therefore paid both by this grant money and by my own private funds:

Transcription of interviews: 0.70¢ x 60 minutes x 20 interviews*= \$840.00

Gift card for participants in focus group: \$10 x 6 = \$60.00 NVivo 10 student software package (12-month) = \$215.00 *Total budget: \$1,115.00*

* Two follow-up interviews were conducted during first-round interviews.

Ethical Standards

Prior to conducting the interviews and focus group, participants reviewed and signed an informed consent statement. Confidentiality was discussed with participants. The informed consent statement, along with interview and focus group protocols, are included in Appendices A, C, D, and F. Interviews were audio recorded, with participant consent. Pseudonyms were self-selected by each participant, and used in place of identifying information to preserve confidentiality. Notes were taken during interviews to ensure that some documented record of the interview remained if the audio recording was unsuccessful. Each digital audio file of the recording was assigned a number. All digital audio files were kept on a computer with password protection. Digital audio files were burned onto compact disc, and placed in a secure mailbox in a supervised area at James Madison University. These were collected by a professional transcriptionist and externally transcribed, avoiding potential breaches of confidentiality by not sending data through email or letter mail. All transcriptions and compact discs were returned to the researcher by placement in the secure mailbox at James Madison University. All identifying information was stored in a locked filing cabinet. Recordings and all identifying data were destroyed within one month after successfully defending the dissertation.

Aggregate data were collected and analyzed. No information that would identify patient group participants was collected. For example, no data on demographic information, patient name, or even number of DBT-STGs attended were collected. Due to the use of aggregate data, no possibility of breaching confidentiality was presumed to occur. To provide additional assurance that patient privacy was protected, all data were stored in room behind two locked doors, and spreadsheet data were stored on an external hard drive that was kept in a lockbox. All patient data was destroyed within one month after successfully defending the dissertation. The IRB of both James Madison University and the hospital system where the study took place both reported that using aggregate data for this study, without identifying information, did not constitute a breach of protected patient information per HIPAA law.

Validity

In accordance with the methods suggested by Merriam (2009), validity for the three phases on the first line of investigation was enhanced through triangulating qualitative data derived from in-depth interviews, a focus group, and field observations. Participants were asked to check for accuracy of interpretation and relevancy of developing themes from the interviews and focus group. To increase trustworthiness and credibility, member checks were solicited to increase response validation by recruiting feedback regarding transcription accuracy and emerging findings and models. Managers and directors of the AIPS under study were provided with a draft of the results and discussion section (Chapters IV and V) to edit and amend, to ensure that analyses were fair and accurate. A dissertation committee also provided feedback on the appropriateness of analyses. Consensus coding meetings were used when coding in-

depth interviews, decreasing the potential bias of my emic positioning and enhancing transferability. Category identification via affinity diagramming was conducted with the coding team, to protect against my emic bias influencing the data. One member of the coding team was selected who had no background in counseling or DBT. Discrepant and negative cases in the data that supported rival explanations for the phenomenon were intentionally sought out. As the researcher, I engaged in self-reflection throughout the study regarding assumptions, worldview, and potential biases. I maintained an audit trail. This *reflexivity* decreased the potential for introducing bias into the data, increasing dependability. Interview protocols, instruments, and descriptive statistics embedded into the summative interviews are included in the appendices so that future researchers may be able to replicate this study.

Several approaches enhanced the validity of quantitative findings. A test for internal consistency compared patient feedback data from six-month increments (six, 12, 18, and 24 months) to statistically analyze consistency in scores across different measurement periods. As with the qualitative data from in-depth interviews, a separate coding consensus team counted and transformed the qualitative patient feedback data to quantitative categorical data regarding patient suggestions for improvement. Inter-coder consistency between coding team members was measured via kappa coefficients for degree of agreement among the three members from James Madison University. A test for internal consistency compared patient feedback data from the 12-month midpoint and 24-month endpoint to statistically analyze consistency in scores across different measurement periods. Although the patient feedback form was a new measurement tool that has not been previously analyzed for quantitative reliability and validity, this was
deemed acceptable for the study since the goal of data collection was to solicit selfreported feedback in order to adjust the program and better serve the needs of patients. Thus, the feedback form was used primarily for formative rather than summative analysis. Miller, Wyman, Huppert, Glassman, and Rathus (2000) used a very similar instrument to measure mean helpfulness ratings of DBT-STGs for adolescents. Since the goal of this line of investigation was not to identify findings that can be generalized but to identify how DBT-STGs could be improved, less concern was given to enhancing the external validity of the quantitative data.

Embedding quantitative data within qualitative interviews reduced the bias caused by my emic positioning. I introduced data that are separate from my own perspective. For example, embedding patient feedback data into first-round summative interviews initiated a discussion about whether patient response influenced staff adjustment and organizational acceptance. This enhanced the validity of the study, particularly regarding the degree of positive patient response to the DBT-A program. Although I assumed that a positive patient response had occurred, presenting patient-reported data on helpfulness ratings was a more compelling and less biased approach. Similarly, using staff rankings to determine the relative importance of each category reduced the amount of bias caused by my emic positioning. Allowing staff and patients to evaluate the success of the implementation effort enhanced the validity of findings by reducing attribution bias inherent to my emic positioning.

Topics That Were Not Examined in the Present Study

This multiphase study investigated what helped and hindered staff adjustment and organizational acceptance during the process of implementing DBT-A in an AIPS. In

this study, a successful outcome (objective 1) was defined as the continuation of the DBT-A program after 24 months, with which both staff and patients were satisfied. Thus, this study did not intend to measure whether DBT-A was effective. No formal outcome measurements were collected, nor were standardized instruments used. Additionally, interviews were not conducted with patients post-hospitalization to discover whether coping skills had been generalized to the home setting. These follow-up interviews would not have been appropriate because my research questions pertained to understanding processes rather than outcomes. Lastly, as part of this study, qualitative information was concurrently collected from master's-level counseling interns and group leaders via in-depth interviews regarding their experiences in being trained in an EBP. This data will be used for a further study, and did not help to answer the research questions of this study.

Chapter IV: Results

The Results section is organized by integrating the structures suggested by Stake (1995) and Yin (2009). Stake (1995) proposed the following outline for a case study report (p. 123): entry vignette, issue identification, extensive narrative description to further define case and contexts, development of issues, descriptive detail and triangulation of data, assertions, and closing vignette. This structure was followed loosely. An entry and closing vignette to this case was excluded, as the tone was considered to be too informal when compared with the remainder of the chapter. Instead, the Results section begins with a description of the case and the context in which the DBT-A implementation effort occurred. A narrative description is provided for the 24 month period of implementation. Following the narrative, findings are provided for each of the research questions: what helped and hindered the implementation effort, the relative importance of each identified category, and the degree of data convergence between and within phases. The hierarchical order of importance for categories is displayed first. Categories for what seemed to help implementation are described in order of importance, from most to least important, followed by categories for what seemed to hinder implementation, described in order of importance from most to least important. Stake's (1995) outline was integrated with Yin's (2009) suggestions for organizing the Discussion section. Issue identification, assertions, and development of issues are thus addressed in Chapter V, during evaluation of theoretical propositions and analytic generalizations (Yin, 2009).

Case Description

This case study took place in an AIPS for children and adolescents, located in a small southeastern city in the U.S. with a population of approximately 75,000. According to data from the most recent U.S. Census (U.S. Census Bureau, 2010), the median age of the city's inhabitants was 30.3 years, with 46.9% males and 53.1% females. Whites/Caucasians were the largest racial/ethnic group (64.4%), though African-Americans constitute a sizeable minority (29.3%). Together, these two groups comprised 94.1% of the population. Other groups represented include Asian Americans (2.5%), and "others" (3.5%).

The organization under study was the largest employer in the area, a non-profit regional healthcare organization that has been recognized as a Magnet nursing facility since 2005. The organization was comprised of three hospitals, and numerous other facilities, services, and programs. The child and adolescent AIPS was part of a broad spectrum of child and adolescent mental health services within the non-profit healthcare organization, including a residential treatment center, several private therapeutic day schools, and an outpatient psychiatric practice. During the course of the study, the healthcare system formally aligned with an institution of higher education and was beginning to consider itself a "teaching hospital" at the time of writing.

The AIPS under study received the majority of its admissions from non-local referring agencies, meaning that many patients were admitted from distant areas of the state. Therefore, although the city in which the child and adolescent AIPS is located cannot be considered rural, a large proportion of patients admitted to the AIPS were from rural areas. Parents were not permitted to "room in" with their children, though the setting had a hospitality room and visiting hours in the morning and evenings to

accommodate families who were travelling from out-of-area. As with many AIPS, the average length of stay had decreased dramatically over the past fifteen years. Only a decade ago, child and adolescent patients were hospitalized for periods of up to a month whereas at the time of writing, the typical length of stay for hospitalization in the setting was four to six days. Patient satisfaction scores for this AIPS were typically in the 90th percentile compared to other AIPS serving children and adolescents.

Patient population. The setting served children and adolescents, aged five through 17 years of age. Some 18-year-olds were also admitted to the unit, if still enrolled in school. The setting had the capacity to hold a census of 20 patients. The unit served individuals with both Medicaid and private insurance. Both voluntary and involuntary patients were admitted, with admission criteria including serious risk of harm to self or others, or disorganized thought processes that can occur during a manic or psychotic episode. Other criteria included verbal ability to communicate, ability to manage activities of daily living (bathing, toileting, eating, dressing), an IQ of at least 55, and passing a medical clearance. Potential admissions were considered inappropriate on a case-by-case basis if they had a history of assault against treatment staff, police, or authority figures, extensive legal histories, autism spectrum disorders, or sexually inappropriate behavior. The AIPS did not specialize in the treatment of substance abuse, though many patients served in the setting had substance abuse histories.

Staff population. The multidisciplinary treatment team featured a staff of experienced professionals that included five board-certified psychiatrists, registered nurses, a licensed clinical psychologist, licensed professional counselors and licensed marriage and family therapists, case managers, and a psychometrician. During the course

of the 24-month period, three psychiatrists had left the staff and were being replaced at the time of writing. The psychologist's position was reclassified under "primary therapists," which now included the psychologist and previously classified "family therapists" (i.e., licensed professional counselors and licensed marriage and family therapists). Patients engaged in daily activities as part of a "milieu program," with staff members specifically assigned to direct care within that program. These staff members included registered nurses and milieu counselors. The "milieu counselor" position was fairly unique within the setting. This position was afforded more responsibility than typical psychiatric technicians; for example, milieu counselors led groups. A unit manager was responsible for managing the AIPS, and reported to the director of acute services. In addition, a counselor manager of acute services was responsible for managing primary therapists and master's-level interns. A hierarchy of responsibility was part of the treatment model, with psychiatrists at the top of the hierarchy, nursing staff below psychiatrists, and milieu counselors below nurses. Other staff members were considered ancillary, meaning they provided supportive and adjunctive functions to the main treatment hierarchy. These staff members included case managers, who helped with discharge planning and establishing outpatient services; primary therapists, who provided individual, family, and group therapy on the unit; a psychometrician, who administered and scored psychological testing; a unit secretary, who was responsible for assisting with staffing, discharge surveys, phone calls, and other assorted duties; and managerial staff, who were responsible for the leadership of the unit and for financial planning. A multidisciplinary treatment team met on each weekday morning to discuss

patient care, consisting of case managers, the charge nurse, managers, primary therapists, and psychiatrists.

Pre-DBT-A program. The program under study had historically sought to provide a safe, therapeutic environment for children and adolescents in need of acute crisis stabilization. A structured milieu program was provided to each of the patients, including risk assessment, use of a token economy, individual "issuework," expressive group therapy, and other structured activities. Twice daily risk assessments were performed by milieu staff members for patient safety, assessing their level of harm in the hospital and at home. Although the unit was licensed to perform seclusions and restraints, staff were trained to use the least restrictive means possible to de-escalate patients, such as time-out, diversion, and relaxation techniques.

A token economy, including "points" and "levels," was used for tracking positive behavior. If patients earned "points," they received the privilege of participating in reinforcing activities, such as receiving soda at meal times and playing in a game room that had a pool table and air hockey table. Different privileges and reinforcers were available contingent on a patient's current "level." The levels were as follows: Red (few privileges), yellow (some privileges), and green (full privileges). During the time of the case study, changes were made in the level system to help patients earn reinforcers with more ease than was previously afforded.

The token economy specified that patients could earn points by completing "issuework" and participating appropriately in activities. Issuework was defined as worksheets from professionally written workbooks for children and adolescents on issues that brought them to the hospital (i.e., trauma, depression, etc.). A primary goal of treatment, as reflected on treatment plans, was to teach patients new coping skills during hospitalization. As such, patients were expected to process issuework with their contact staff person in the milieu, as well as participate in all groups and structured activities, unless they were physically ill or too emotionally fragile. Groups included interpersonal psychotherapy for adolescents, play therapy for younger children, and groups for all ages, including spirituality, expressive therapy, and pet therapy.

During summative interviews, staff members retrospectively described a "downward trend" in the unit programming. Over time, a natural "whittling down process" occurred whereby "stellar" staff members who favored "a solid cognitivebehavioral approach" had left the organization, and were replaced by staff members who favored supportive care. Prior to DBT-A implementation, two of the three therapeutic groups provided each day were expressive therapy, consisting largely of arts-and-crafts activities; staff retrospectively referred to the programming that DBT-STGs replaced as "fluff." Despite the program objective of skill building, specific skills training had been missing from the program "for a long time."

The 3:30 to 5:00 p.m. timeslot in the schedule was previously allotted for issuework time in addition to expressive therapy. As with expressive therapy, many of the staff interviewed believed that issuework was largely ineffective. Staff felt that issuework did not meet the needs of patients in the evening program because insufficient time was allotted for evening shift for staff to investigate what problems had brought the patient into the hospital and find worksheets that matched these problems.

Case Context

Many changes had transpired within the past 10 years, as the unit adjusted to changes in insurance reimbursement and reduced length of stay. In the year prior to the adoption of DBT-A, a large amount of managerial and staff turnover occurred. The vicepresident of mental health services, director of acute services, and unit manager of the AIPS had all left or changed positions within the space of 12 months. Several experienced milieu staff members left the organization for the local community mental health center. Remaining staff members felt that a lot of change was occurring at the same time.

The new director and unit manager were both vocal in their support for introducing EBPs in the setting. Prior to the introduction of DBT-A, none of the unit's therapeutic activities followed a treatment manual. While no specific pressure was placed upon the organization to implement EBPs by a managed care system (which has been true of community mental health organizations in other states), management strongly felt that including more EBPs could enhance the program.

Two models existed for power dynamics in the setting. A shared governance model from nursing supported grassroots and horizontal power, and a milieu hierarchy model supported top-down and vertical power (e.g., unit manager \rightarrow charge nurse \rightarrow second nurse \rightarrow milieu counselors). Historically, staff felt that changes within the setting were usually top-down decisions. The milieu staff working in the setting tended to resist top-down changes, which resulted in failed implementation efforts for new ideas or inconsistent success (e.g., room safety checks, twice-daily evaluation of potential safety hazards in patient rooms). In addition, the milieu staff described their workload as increasingly burdensome, leading to staff burnout and impaired teamwork. This burnout, combined with top-down changes made without their input, led to some degree of covert mistrust in the managerial hierarchy.

This resistance by the milieu staff to top-down changes may seem surprising, because it contradicts the unit hierarchical structure. Since everyone knew the chain of command, it could be assumed that the staff would expect and embrace top-down decisions. However, some staff felt committed to the "shared governance" model of horizontal power, and therefore, milieu staff resistance must be understood within the context of the organizational climate and culture. At the time of adoption, employee engagement scores on the unit were among the lowest in the hospital, and management was actively involved in direct attempts to increase staff engagement in the setting.

Adoption. As a milieu counselor, I approached the unit manager in the spring of 2011 to suggest that the unit considering implementing DBT-A in the setting. Prior to the implementation of DBT-A, individualized treatment plans typically indicated that patients were hospitalized for ineffective coping strategies for life stressors, and a large focus of the program was teaching patients "new coping skills" to prevent further crisis incidents and re-hospitalization. I proposed that the AIPS consider implementing DBT-A within its treatment program in order to improve the quality of skills training within the unit's programming. The unit manager supported the adoption of DBT-A for three primary reasons: the need for more skill building in the program, DBT's status as an EBP, and my status as a respected and trusted milieu staff member. I began conducting literature reviews into the use of DBT-A in an inpatient setting. Although I had been trained in the use of DBT prior to the study, I lacked knowledge about how to implement

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DBT within an organizational setting. Furthermore, I also lacked knowledge about how to adapt DBT to an AIPS, since DBT was originally developed as an outpatient modality.

Because two approaches existed for implementing DBT in clinical practice settings, I carefully considered which method of DBT implementation to follow. The first approach to DBT implementation required the organization to introduce a comprehensive DBT program from the outset. This, of course, has benefits and drawbacks. Positively, full DBT implementation is established as a goal early during the process. Staff members are provided with a clear vision about what a successful outcome will look like. Therapists are also trained quickly in full DBT adoption, meaning that patients will more rapidly benefit from comprehensive DBT. Less positively, this approach requires significant financial resources. Therapists must be trained, and funding must be allocated for training as well as paying other therapists to manage some of the trainees' patient caseloads. The organization also must adapt to dramatic and abrupt change if DBT is fully implemented from the beginning of the process. This may result in staff feeling overwhelmed, and may increase resistance.

The second approach to DBT implementation involves a slower, more gradual process. Koerner, Dimeff, and Swenson (2007) reported, "it is not unusual for teams to take a step-by-step route to a comprehensive version of DBT" (p. 23). As with the first method, benefits and drawbacks exist. Positively, staff members have more time to adapt to the gradual nature of implementation, which may decrease resistance. In addition, this approach requires fewer resources, since staff can be trained over time and materials can be purchased incrementally. Less positively, staff members are not provided with as clear of an initial vision of what a successful outcome will look like, which may decrease

staff buy-in. Staff may lack comprehensive training and education about what DBT is. Although some staff members in the AIPS were already familiar with DBT, many staff members (particularly among milieu staff) were unfamiliar with DBT or unaware of its application with adolescents. An additional drawback of the second approach to DBT implementation is that patients do not receive comprehensive DBT from the outset of implementation, which may affect outcomes.

I chose to implement DBT-A gradually over a 24-month period. My decision to follow the second method of implementation was influenced by the lack of resources available to train therapists in DBT-A from the outset, and the need to decrease anticipated opposition and resistance to DBT-A implementation. The milieu staff was facing a lot of changes at one time, and I theorized that gradual implementation would reduce the likelihood of the milieu staff feeling more overwhelmed. On the basis of available resources and funding, I decided to first attempt the implementation of DBT-STGs without the other three modes. At the outset of this study, no primary therapists existed and no plans were made to introduce this model. Miller, Rathus, and Linehan (2007) wrote that inpatient DBT-A programs could still be conducted in AIPS without primary therapists: "inpatient and residential units often utilize milieu therapists instead of primary therapists to achieve skills generalization, since the clients can receive in vivo coaching on the unit as soon as they become distressed" (p. 87).

DBT-STGs were introduced gradually, starting with one group provided per week. As the primary implementer, I was initially the only DBT-STG leader. This created initial confusion about what day of the week DBT-A was provided and which patients were included, creating the staff perception that the DBT-A program was somewhat inconsistent. If the group leader was absent, DBT-STGs were not provided at all for that week. Fortunately, within three months a second milieu staff member who had observed DBT-STGs received training in DBT-STG leadership and began assisting with the responsibility of leading the DBT-STGs on the unit. Both staff members were allowed by management to operate outside of the milieu staffing for the shift, to ensure that they were not "pulled out of group" to attend to admissions or crisis incidents.

Initial implementation (0-6 months). Members of the non-milieu staff (the medical director, psychiatrists, psychologists) were initially unaware of DBT-A implementation. However, once aware, these non-milieu staff members became supportive of DBT-A adoption in the setting because of its EBP status. Some of the nurses on the unit also supported DBT-A implementation because of its EBP status, though milieu counselors were unfamiliar with EBPs and supported implementation because they knew DBT was a "cutting edge" practice used by outpatient providers and by other inpatient psychiatric facilities in the state. DBT-A therefore held different appeal as a treatment modality among staff members.

In response to early implementation, the evening shift milieu staff was skeptical of the DBT-A program and questioned how their role would change. They experienced fears about role reduction and layoffs, since leadership of adolescent groups and issuework time had been removed from their responsibilities. Some staff experienced a sense of loss from no longer providing one-on-one counseling with patients during issuework time. Other staff felt relieved that issuework was being removed from their responsibilities, because they felt rushed to identify worksheets and make photocopies, often with little working knowledge of the patient's personal problems. Some also felt that issuework time was becoming less effective for the patient population being served, because the unit was increasingly admitting patients with learning or intellectual disabilities. Some adolescents could not read or write, making issuework ineffective.

Covert skepticism was somewhat tempered by prior relationships between members of the milieu staff and the implementer, who was considered to be a trusted and respected former milieu staff member. Consequently, because the implementer was known to the milieu staff as a former milieu staff member who was taking initiative, implementation was considered to be a grassroots rather than top-down effort by the milieu staff and therefore more credible and readily accepted (compared to "top-down" implementation). Members of the milieu staff perceived DBT-A as "Thomas' baby," and were therefore more open to its implementation. Some members of the management and milieu staff were also glad that staff resources were being used; both initial group leaders were completing their graduate training in counseling, and were seen to be using their knowledge and skills to benefit the program. Evening shift staff members also boughtinto the DBT-A program because I had communicated to them that DBT-STGs would benefit the milieu program by being intentionally scheduled at the start of evening shift, freeing up staff resources on evening shift to help with admissions and crisis incidents at a busy time of day. The 3:30 to 5:00 p.m. timeslot when DBT-STGs were scheduled occurred immediately following a shift change from day to evening shift, when dayshift ancillary staff left for the day and the evening shift staff needed extra support. It was also a time of day when new patient admissions typically arrived on the unit. DBT-A was soon well received by the evening shift milieu staff, which was aware that DBT-A was intentionally implemented to benefit the milieu program without creating more

responsibilities. However, milieu staff were unclear about the expectations of their supporting role in the group (e.g., when to "step-in" and redirect disruptive group members), and their support of the group was inconsistent.

Adaptation and modification (6-12 months). DBT-A was initially implemented using a manual. Groups were slowly developed, and therefore were largely repetitive for the first 12 months. Some of the adolescent patients resisted the lecture format of the initial groups ("boring, dry"), and a few patients left the group prematurely. Some milieu staff supporting the group developed a negative impression of DBT-A, based on boredom (lecture format, repetitive groups) and negative response by some patients. Packets were provided as an alternative for patients, which reduced staff workload but still did not resolve the problem of negative patient response. Patient feedback was collected, informing changes to the program. Based on patient feedback, a new delivery system ("hands-on" or experiential) replaced the lecture format of previous groups. Patients responded more positively to the "hands-on" learning approach, remaining in the group. They began generalizing skills outside of the group, mentioning their utilization of DBT-A skills in safety agreements, discussions with staff, interviews with psychiatrists, discharge interviews, family therapy sessions, and other groups on the unit. Milieu staff members were also more engaged by the hands-on learning approach, and began to enjoy the groups. Their support for the DBT-A program was further sustained following their observation that DBT-A benefitted the patients, who responded more positively to the groups. Managerial and non-milieu staff (psychiatrists, primary therapists) support for the program was also sustained, based on positive patient response. A focus group about DBT-A implementation was conducted with milieu staff members at the end of the first

year, whose participants were grateful for the opportunity to share their voices regarding how to improve the implementation effort.

The following quotation from a milieu counselor illustrates the two discrete processes of staff adjustment that occurred between the initial implementation stage (0-6 months) and innovation stage (6-12 months): "At first, it just helped us with admissions. But then I learned, it really helps the kids."

Sustaining the program (12-24 months). After 12 months (April 2012), more organizational change occurred. A new position was created, the "counseling manager of acute services." Along with the director and unit manager, this person was also keen to implement EBPs in the setting. Management hired an outside consultant to evaluate the current program approximately nine months after the first DBT-STGs were implemented. The presence of the consultant suggested that the management of the AIPS in this case study were already considering making major organizational changes. The consultant was tasked with identifying areas for program improvement. His recommendations included the institution of a primary therapist model and the inclusion of DBT-STGs in the daily program schedule. The consultant's recommendations further solidified DBT-A's position within the unit programming by providing a comparative analysis that reinforced the importance of DBT-A for management. These recommendations were subsequently heeded by management, and thus important to the success of the implementation effort. The presence of a consultant on the unit was novel for staff members; throughout the history of the unit, nearly all program decisions had been informed by internal staff rather than external experts brought into the setting.

Four primary therapists were hired in April 2012, coinciding with the conclusion of the first year of the study. Therefore, at midpoint review, the implementation effort extended beyond DBT-STGs, to implementing DBT-STGs plus DBT-A individual and family therapy by primary therapists. The primary therapist model was instituted partially because management wanted groups such as DBT-STGs to be included in the daily schedule. Both of the primary therapists hired were the two DBT-STG leaders on staff, which further cemented DBT-A's place in the program. After the milieu staff had become accustomed to DBT-A, subsequent changes in the setting (primary therapist model, level system) replaced DBT-A as the focus of staff fear and resistance ("we have other things to worry about now"). Other members of the staff noticed that there was more covert resistance to the primary therapist model than to DBT-A, because the primary therapist model was perceived to be a top-down decision, whereas DBT was perceived to be a grassroots movement led by two former milieu staff members. Some of the milieu staff experienced a recapitulated fear of role reduction and layoffs with the introduction of the primary therapist model.

An adolescent diary card was introduced for patients to self-monitor and practice skills learned in the group. A formal training protocol was developed for master's-level counseling interns who were trained in DBT-STG leadership. The group length was shortened from 90 to 60 minutes to reduce the overtime of primary therapists who led DBT-STGs. Challenges during this period included the continued inconsistency of group support by the milieu staff, and inconsistency between group leaders about starting and ending the group on time.

Table 6

Stage	Timeline	Implementation activity
Exploration and Adoption		• DBT-A team leader approached unit manager at
		Staff informed about rationale for DBT adoption
Program Installation	0-4 months	 First 90 minute DBT-STG adapted. DBT-STG offered weekly, facilitated by DBT-A team leader. Initiated data collection of patient feedback.
Initial Implementation	4-6 months	 Second, third, and fourth 90 minute DBT-STGs adapted. DBT-STGs offered twice a week. Another group leader was trained in facilitating DBT-STGs along with master's-level interns
Innovation	6-12 months	 Formative evaluation of patient feedback for DBT- STGs conducted. Groups are delivered in more "hands-on" and experiential format.
Initial Implementation	6-12 months	 Fifth and sixth 90 minute DBT-STGs adapted. DBT-STGs are offered four times a week. Formative midpoint evaluation conducted for staff adjustment
Full implementation	12-18 months	 Staff informed about transition to a primary therapist model, and included in the decision making process. Primary therapists hired. Staff adapt to primary therapist model. Four more 90 minute DBT-STGs developed. Primary therapists provide DBT-STGs on daily basis. DBT-A diary cards given to patients and reviewed by primary therapists. "DBT Group" included in daily patient schedule.
Innovation	18 months	 DBT-STGs reduced from 90 to 60 minutes, because primary therapists have too many responsibilities. Content of DBT-STGs continues to be adjusted and modified, based on patient feedback.
Sustainability	18-24 months	 Continued adjustment and adherence of primary therapists to DBT-A model. Primary therapists provide live supervision of staff and interns leading DBT-STGs. Less time available for primary therapists to improve the program.
	24 months	 Concluding summative evaluation conducted. Continuing attention to program sustainability

Stages and Timeline of DBT-A Implementation in the AIPS

Continuing attention to program sustainability
 Note. The stages listed in this table were first identified by Fixsen et al. (2005).

At the end of two years, staff members mentioned in interviews that they would like more education about what DBT-A is, and how it is used on the unit. As the primary implementer, I provided a brief training on DBT-A and the adolescent diary card at a monthly staff meeting. A brief quiz was administered at the conclusion of the training. Staff answered 97.7% of post-test questions correctly. Following this training, most milieu staff began checking more frequently on patient utilization of the diary card, though other milieu staff members remained confused about their role in monitoring patient utilization of the diary card. Some milieu staff members were also initiated into the training program for DBT-STG leadership, due to the need for more group leaders when the census rose above 14 patients and DBT-STGs had to be split into two groups of patients because of large group size. Table 6 depicts the timeline of DBT-A implementation.

DBT-A Program Description

By the conclusion of the 24-month duration of this study, the DBT-A program implemented in the AIPS featured individual and family therapy by primary therapists working from a DBT-A framework, daily 60-minute DBT-STGs, milieu program reinforcement (in place of phone consultation), and a daily multidisciplinary treatment team meeting. Primary therapists adhered to a DBT-A framework during individual therapy by conducting a chain analysis of events leading up to admission and checking on patient utilization of a diary card. The limited number of primary therapists (one of the four worked weekends only, and another declined to participate in using DBT-A diary cards) prevented formal DBT-A consultation meetings from being held among the treatment team regarding DBT-A treatment goals. However, both primary therapists who worked from a DBT-A framework did supervise each other's therapy sessions in vivo, and a daily treatment team meeting was conducted between members of the professional staff, including case managers, the charge nurse, managers, primary therapists, and psychiatrists. This treatment team meeting had some of the features of a DBT-A consultation meeting, though did not specifically focus on behavioral goals since most adolescents in the setting did not attempt suicidal ideation, self-injury, or aggression during the brief length of stay in the setting. Following the advice of Swales (2010), the DBT-A team leader (myself) attempted to model a non-judgmental and radical acceptance stance when working with patients, and brought this stance into treatment team meetings.

Thus, the program under study clearly included three DBT-A modes (individual and family therapy, DBT-STGs, and milieu generalization in place of phone consultation), and it could be argued that the program included an adapted version of the fourth DBT-A mode (case consultation). This was commensurate with the comprehensive level of DBT-A treatment reported in the McDonnell et al. (2010) study of DBT-A in a long-term psychiatric unit.

Following the guidelines of Miller, Rathus, and Linehan (2007), skills taught in the DBT-STGs were reduced in number to cover them in greater depth. Fifteen skills were taught in 12 DBT-STGs, and were mostly from the mindfulness (five skills) and distress tolerance (five skills) modules. These skills were comparable to the Swenson et al. (2007) suggestions for inpatient skills training and Miller and Rathus (2002) suggestions for adolescent skills training. Table 7 provides information about specific skills included.

Table 7

Skills Taught in DBT-STG for Inpatient Adolescents
Observe
Describe
Don't judge
Single focus
Do what works
Distraction
Self-soothing
Improve the moment
Pros and cons
Radical acceptance
Pleasant activity scheduling
Act opposite
Improving the relationship
Getting what you want
Keeping your self-respect

Skills Taught in DBT-STGs for Inpatient Adolescents

Patient inclusion criteria. Patient participants were between the ages of 12 and 18, and had to successfully pass a group leader screening for intellectual and social ability to comprehend the DBT-STG material and ability to engage in appropriate behavior for the group. This age range (12-18) is typical of most DBT-A programs (Miller, Rathus, DuBose et al., 2007). Participants were excluded from DBT-A who were currently "acting out" on the unit, displayed inappropriate behavior during prior DBT-STGs or comparable groups, were unable to sit in a group setting without getting up and walking around frequently, were unable to attend any groups on the unit due to the presence of a severe psychotic disorder or intellectual disability, or had another appointment during that time such as a family therapy session.

The inclusion of adolescent patients with mild intellectual disabilities and/or moderate to severe learning disabilities in DBT-STGs is fairly common in DBT-A

programs, according to Miller, Rathus, and Linehan (2007). Accommodations were made to the DBT-STG program for all patients to fully participate and learn new skills. Miller, Rathus, and Linehan (2007) recommended that when adolescents with intellectual and/or learning disabilities are included in DBT-STGs, fewer skills should be taught, and at a slower pace. Terminology and handouts should be adapted to fit a lower reading level; in addition, patients with intellectual and/or learning disabilities could benefit from repeating the skills curriculum. Accordingly, the inclusion of individuals with intellectual and/or learning disabilities was carefully considered. Modifications were made to the DBT-STG program to adequately address the needs of all patients who participate. Specifically, reading material was simplified and more visual support as well as experiential/kinesthetic learning was included.

Findings related to Research Questions

The central research question for this study was, what helped and hindered the process of implementing DBT-A in an AIPS? To answer this question, qualitative data collected from the focus group at 12 months and summative in-depth interviews conducted between 18 and 24 months were coded and analyzed. A consensus coding team organized codes into categories using the constant comparative method (Glaser & Strauss, 1967). Data collection continued until data approached saturation (Lincoln & Guba, 1985). Intriguingly, the same six grandparent categories were identified for both helping and hindering implementation. Categories were as follows, listed in alphabetical order: appeal of DBT as a treatment modality, impact on patients, implementation process, implementer characteristics, organizational dynamics and structure, and staff

support. Quantitative results for the relative importance of these categories are presented, followed by qualitative descriptions of each category and subcategory.

Quantitative Findings for Relative Importance of Helping Categories

The first subquestion (a) of this study was, what is the relative importance of each category? To answer the first subquestion, interviewees ranked these categories during second-round summative interviews. Data were statistically analyzed to understand the relative importance of each category. Table 8 displays the relative importance of the six categories helping the implementation process.

Table 8

Categories Helping Implementation, in order of Relative Importance

Category	М	Difference	Separation	SD	SEM
Impact on patients	4.37			1.56	0.29
Appeal of DBT as a treatment modality	3.83	- 0.54	- 0.54	1.98	0.36
Implementer characteristics	3.70	- 0.67	- 0.13	1.47	0.27
Organizational dynamics and structure	3.60	- 0.77	- 0.10	1.43	0.26
Implementation process	2.77	- 1.60	- 0.83	1.74	0.32
Staff support	2.73	- 1.64	- 0.04	1.55	0.28

Note. n = 30. Values for each participant's category rank were identified using the following formula: (X = [n + 1] - R). The difference column displays mean difference from the first ranked category. The separation column displays mean difference from previous ranked category.

A one-way ANOVA test was performed for mean differences among categories helping implementation. The data conformed to a normal distribution, although Levene's test demonstrated that the *p*-value approached significance (F[5,174] = 1.79, p = .11) and thus nearly violated the homogeneity of variance. This homogeneity of variance was not a significant threat to reliability, because ANOVA has been reported to be robust regarding error rates when sample sizes are equal (Field, 2009). A significant main effect was found for mean differences among categories (F[5,174] = 4.59, p < .001). It was highly unlikely (a 0.1% chance) that this *F*-ratio would have been found if no differences existed among mean values. This constituted a medium effect size ($\eta^2 = .12$) or proportion of variance attributed to the model, according to Cohen's (1988) guidelines.

Subsequent (post-hoc) pairwise comparisons using the Bonferroni correction revealed that no clustering effects occurred. No statistically significant separation was found between mean values of categories helping implementation when compared to others that were one rank above or below. Significant differences were instead found between mean values for the first ranked category (impact on patients) with mean values from each of the last two ranked categories (implementation process, staff support). Impact on patients was significantly more important as a helping category than the implementation process (mean difference = 1.60 s; 95% CI = 0.35, 2.85; p < .05), and staff support (mean difference = 1.63 s; 95% CI = 0.38, 2.89; p < .05). It therefore appeared that each of the helping categories was relatively important, though some were more important than others. In particular, impact on patients was significantly more important as a helping category than the implementation process and staff support. The relative stability of standard deviations across categories suggests stability in variance regarding their relative ordering. However, these results must be interpreted with caution because the assumption of normality was nearly violated.

Quantitative Findings for Relative Importance of Hindering Categories

Table 9 displays the relative importance of the six categories hindering the implementation process.

Table 9

Category	М	Difference	Separation	SD	SEM
Organizational dynamics and structure	4.93			1.26	0.23
Staff support	4.47	- 0.46	- 0.46	1.50	0.27
Implementation process	3.27	- 1.66	- 1.20	1.50	0.28
Impact on patients	2.97	- 1.96	- 0.30	1.51	0.27
Appeal of DBT as a treatment modality	2.87	- 2.06	- 0.10	1.76	0.32
Implementer characteristics	2.53	- 2.40	- 0.34	1.31	0.24

Categories Hindering Implementation, in order of Relative Importance

Note. n = 30. Values for each participant's category rank were identified using the following formula: (X = [n + 1] - R). The difference column displays mean difference from the first ranked category. The separation column displays mean difference from previous ranked category.

As before, the data did conform to a normal distribution though Levene's test demonstrated that the assumption for homogeneity of variance was nearly violated (F[5,174]=1.90, p=.10). Again, a one-way ANOVA was performed because of its robustness regarding error rates when sample sizes are equal (Field, 2009). A significant main effect was found for mean differences among categories (F[5,174]=12.77, p < .001). It was highly unlikely (a 0.1% chance) that this *F*-ratio would have been found if no differences existed among mean values. The effect size was large $(\eta^2 = .27)$, according to Cohen's (1988) guidelines.

In comparison with categories helping implementation, subsequent (post-hoc) pairwise comparisons using the Bonferroni correction revealed that a clustering affect occurred. A separation was found between the first two ranked categories (organizational dynamics and structure and staff support), and the remaining four ranked categories (the implementation process, impact on patients, appeal of DBT as a treatment modality, implementer characteristics). The mean value of the second ranked hindering category (M = 4.47), staff support, was significantly greater than the third ranked category (M = 3.27), the implementation process (mean difference = 1.20 s; 95% CI =

0.06, 2.34; p < .05). Unlike categories helping implementation, it therefore appeared that two tiers of importance were found for hindering categories, based on clustering. Organizational dynamics and structure and staff support seemed to be the most important hindering categories, followed by the four other categories.

Several conclusions can be tentatively drawn for the relative importance of categories. First, the relative importance of categories hindering implementation was identified with more clarity by participants, compared to categories helping implementation. The top two ranked categories hindering implementation (organizational dynamics and structure, staff support) had greater mean values (M = 4.93and 4.47, respectively) than any category helping implementation; the first-ranked helping category, impact on patients, had a mean value of 4.37. The sixth-ranked category hindering implementation (implementer characteristics) had a lower mean value (M = 2.53) than the sixth-ranked category helping implementation. It appears that more separation was therefore found for hindering categories compared to helping categories. There was a 2.40 mean separation between most and least important hindering categories, compared to only a 1.64 separation for the helping categories. Furthermore, the categories hindering implementation were clustered into two tiers of importance, versus a single tier for helping categories. Greater clarity was found in the relative importance of categories hindering implementation across participants. In contrast, the importance of categories that helped the implementation process seemed difficult to distinguish from each other. Despite the larger spread of mean values for hindering categories compared to helping, both sets of categories had comparable SDs and SEMs within and between groups, and thus their variance was relatively stable.

Qualitative Descriptions of Categories Helping Implementation

Table 10

Subcategories Helping Implementation

Category	Subcategory		
Impact on	Positive patient response		
Patients	DBT-A met a patient need in the program		
	DBT-A prevented re-hospitalization		
	Staff testimonials of patient outcomes		
	Staff members prioritized patient care as their first priority		
Appeal of	Some staff had prior knowledge of DBT		
DBT-A as a	Staff perception of DBT as an evidence-based practice		
Treatment	Alignment and "fit" of DBT-A with the setting		
Modality	The DBT-A program was consistent		
	Group leaders had expertise, commitment, and appropriate personality		
	DBT-STGs were more inclusive than other groups		
	An alternative to DBT-STGs was provided		
Implementer	The primary implementer was "one of us"		
Characteristics	The primary implementer was sensitive to "what was going on"		
	The primary implementer had credibility and respect		
	The primary implementer was visible on the unit		
	Staff strengths were being utilized		
	DBT was congruent with the implementer's personality		
Organizational	Organizational climate and culture		
Dynamics and	Managerial support and financial backing		
Structure	Adaptability of the therapeutic model to a briefer length of stay		
	Scheduling advantages		
	Intentional benefits for the evening shift milieu staff		
	Immunity of DBT group leaders to milieu staffing patterns		
	Cooperative relationship between the group leaders and milieu staff		
	Milieu staff inclusion		
Implementation	Careful planning		
Process	Grassroots movement		
	Gradual inclusion		
	Addition of a second group leader		
	Including more hands-on learning		
	"Working out the kinks"		
Staff Support	Staff overt support		
	Perceived lack of resistance from milieu staff		
	Evening shift milieu staff provided group support		
	Evening shift milieu staff enjoyed participating in DBT-STGs		
	Evening shift milieu staff found DBT-STGs personally beneficial		
Note Catagonias	and listed in and an effectation increased		

Note. Categories are listed in order of relative importance.

In the section that follows, qualitative descriptions are provided to help the reader understand each category and subcategory helping and hindering implementation. Categories helping implementation are first described, in order of importance from most to least important. Table 10 depicts categories helping implementation.

I selected five subcases best representing the divergent perspectives of staff within the case study. These staff members were assigned self-selected pseudonyms to protect their identity. While quotes from other staff members are included in the ensuing report in order to adequately represent the data, I attempted to isolate the voices of these five staff members wherever possible to provide a contextual understanding of the case. The pseudonyms of the five staff members are Bruce, Macy, Mike, Rose, and Skip. These staff members were both male and female, Caucasian and African-American, and represented several important staff positions including, manager, milieu counselor, nurse, and primary therapist.

Impact on patients. The most important category helping the implementation process was the perceived impact of DBT-A on the patients. This helping category encompassed the popularity of DBT-A among patients and DBT's applicability for the population being served. Some staff members identified patient care as their first priority, potentially introducing some confounding variables; staff may have selected this category as most important even if it was not the most helpful to implementation. Subcategories included: positive patient response, DBT-A met a patient need in the program, DBT-A prevented re-hospitalization, staff testimonials of patient outcomes, and staff members identified patient care as their first priority.

Positive patient response. Within six months of implementation, staff members from various disciplines (psychiatrists, therapists, nurses, milieu counselors) were reporting that patients genuinely liked the groups and rarely, if at all, complained about them. Rose commented that the patients frequently cited DBT-A as one of their two most favorite groups on Press-Ganey surveys, a national survey of patient satisfaction utilized throughout the hospital setting. Staff noticed that some patients responded positively to DBT-STGs, even when they were not responding well to other activities in the milieu. This led members of the milieu staff to muse, "There is something about DBT that is helpful to this population." Mike was surprised by the degree to which patients responded to DBT-A: "During the closing round, to sit there and hear that kid say, *who you thought should have been sent out*, actually say that they learned something. And you don't think that they caught it at all."

Staff also noticed that patients seemed to be generalizing skills they were learning in DBT-STGs. Patients recalled skills learned in DBT-STGs during meetings with their psychiatrist, family therapy sessions, daily safety agreements with milieu staff, interpersonal psychotherapy group, discharge contracts, and discharge interviews. For example, patients had written on their daily safety agreements that they could use visualization or other skills taught in DBT-STGs at home when in distress. Staff members "hadn't heard that before," and believed this generalization was a marker of success. Although one staff member had not attended more recent DBT-STGs, this generalization made her believe the groups had improved over time. Similarly, Macy's buy-in to DBT-A increased after observing positive patient response: "The reason that I started to think more positively about it was because the kids really seemed to buy into it."

DBT-A met a patient need in the program. A need existed for more skills training in the setting. Mike stated that, unlike adults, adolescents often did not have the requisite skills to cope with early life traumas. A therapist also felt that "to help these kids handle the crises in their lives, we need to give them the skills to do that." These skills could be used by patients when they left the hospital, meeting a patient need by preparing them for re-entry into their home environment and reducing the risk of re-hospitalization caused by inadequate preparation.

Yet prior to DBT-A implementation, skills training had been missing from the curriculum "for a long time." Two of the three therapeutic groups provided each day were expressive therapy, consisting largely of arts-and-crafts activities. Rose did not feel that these groups met the needs of patients in the program:

They weren't leaving here with the skills they needed to reintegrate. I think they felt better about themselves, but I don't think they had the skills that they needed. Doing the crafts and the stuff is relaxing. It does make patients feel a little bit better to be creative, and all that. But as far as going back to their life, and their parents who are yelling at them, or going back to the same girlfriend who is cheating on them, doing an arts-and-crafts group is not going to help them be prepared for those types of things.

DBT-A met the patient's developmental need for "valuable skills" that were "relevant" to the problems they were experiencing. These skills could be used by patients when they left the hospital, meeting a need by preparing them for re-entry into their home environment and reducing the risk of re-hospitalization caused by inadequate preparation. Even experienced milieu staff members who had led expressive therapy groups for years commented, "I wish we had DBT years ago for the patients. They take it more seriously compared to the expressive therapy. It is way more therapeutic than some craft group. This is definitely what we needed for the unit."

DBT-A helped prevent re-hospitalization. Avoiding re-hospitalization was a major objective of the unit program in general. Hospitalization was costly for patients and families, but also for the unit. Some insurance companies did not pay for repeated hospitalization if a patient was readmitted within a certain time frame. Staff members believed that patients were initially hospitalized and readmitted because they did not have adequate skills to handle stressful situations outside of the hospital. Skip reported that DBT-A "addresses the problem directly," adding, "the patients are here because they lack coping skills. That's why they're in the hospital in the first place."

Staff testimonials of patient outcomes. During interviews, several staff members shared testimonials about the positive outcomes of the DBT-A program. For example, a milieu staff member shared a positive interaction with a patient after a DBT-STG. The patient told this staff member that he had "learned how to accept 'no' today." The patient was still talking about DBT-A and practicing skills taught in DBT-STGs over two hours later, during snack time in the kitchen. The milieu staff member was stunned; she had not observed generalization of material taught in a group prior to DBT-STGs.

Staff members identified patient care as their first priority. A therapist began talking with more vigor and passion during their summative interview when explaining that support for DBT-A derived from commitment to patient care. "When the kids are

excited by it and learning, I am completely supportive of it. That's what we're here for. We're not here for us. We're not here for the administration. We are here for the kids." Macy explained that her support for DBT-A was predicated on patient response: "My personal gauge in how well we do as therapists and counselors has to with how well patients respond to it. And how much they buy into it, how much they get out of it, and their feedback." Many staff members therefore believed DBT-A's impact on patients had the most influence on their buy-in, because of their prioritizing of patient care.

Appeal of DBT as a treatment modality. The second most important category helping implementation was the appeal of DBT as a treatment modality. This category included staff perceptions that DBT-A was a good fit in the setting and was implemented in a consistent and high-quality manner. Subcategories included: some staff had prior knowledge of DBT; staff perception of DBT as an evidence-based practice; alignment and "fit" of DBT-A with the setting; DBT group leaders had expertise, commitment, and appropriate personality; the DBT program was consistent; DBT-STGs were more inclusive than other groups; and an alterative to DBT-STGs was provided.

Some staff had prior knowledge of DBT. A few staff members, such as Rose, had prior knowledge of DBT, which influenced their support for DBT implementation in the AIPS. "My first impression was good because I had a little exposure to the topic in general." However, the majority of staff members were unfamiliar with DBT, particularly the milieu staff.

Staff perception of DBT as an evidence-based practice. The value of EBP status varied among the staff, based upon organizational role. Managerial and non-milieu staff members, such as therapists and psychiatrists, were more aware of DBT's status as an

EBP, and supported its implementation for this reason. One psychiatrist admitted to having some reservations about EBPs, which he once thought were "mumbo jumbo." He now acknowledged that EBPs "could be helpful." While some nurses were familiar with the benefits of using EBPs, the milieu staff largely did not use this language. Rose was aware of this discrepancy: "I am not so sure that the average counselor in the milieu knows or cares that much about research."

Milieu staff used comparable terms to describe their support for best practices. Some staff perceived DBT-A to be a "fresh" and "cutting edge" approach. While one milieu counselor did not mention the term "evidence-based," he did favor "measurable outcomes." When reviewing the patient feedback data, the milieu counselor stated that the findings were not surprising, "because DBT, in my experience, is the only group that outlines what is expected." Another milieu counselor believed that by including "trendy" interventions in the program, the unit was better equipped to compete with other programs in the state that had more resources. Rose felt "it's important to be able to talk about our program to others, that we do have evidence-based therapies."

Alignment and "fit" of DBT-A with the setting. DBT-A fit the program objective of skill building. Milieu staff members were already using terminology such as "coping skills." As a result, "it's been a wonderful fit," and "it complements everything else we teach them on the unit." Skills training was not a huge paradigm shift for patients, either; existing patient knowledge about CBT made for an easy transition. Bruce reported, "It's almost as if they are going to school and have to switch from math to science. There are a lot of similar elements."

The child and adolescent program in the AIPS was highly structured. An intern observed: "It seems there is more structure on this unit than there is on other units." Because the child and adolescent unit programming was already highly structured, a highly structured and manualized intervention such as DBT-A seemed to be a good fit for the setting. Some isomorphism seemed to be apparent, or put simply, consistency between setting and intervention. It is possible that DBT-A would have been unsuccessfully implemented in less structured settings.

DBT-A's structure was also a good fit with the patient population. A milieu staff member explained, "People are wandering around after a couple of days and feeling much better, and thinking, 'why do I feel much better?' It's because you're in a structured environment with structured activities, and you're learning about things in a structured manner."

Consistency between DBT group leaders. A psychiatrist observed that consistency and uniformity was apparent among DBT-STG leaders. The group leaders were "on the same page," and "of the same mind and understanding." Master's-level interns, dubbed "substitutes," were trained and prepared to lead DBT-STGs in the absence of the primary group leaders. By limiting the number of group leaders to a handful of trained therapists, "versus, the twenty or so milieu staff that we have," the program was more consistently delivered. A psychiatrist commented, "I don't think if you left it up to the routine staff working in the milieu, that it would be occurring as regularly." The psychiatrist compared the consistency of DBT-STGs with other groups on the unit that had demonstrated less consistency between group leaders. The DBT-STG curriculum was also consistent. Group leaders followed the same protocol. "I think despite the group leader... because we all have our quirks and how we do things... the point is there. The focus is there, because of the set curriculum." The consistency in the curriculum and between therapists was matched by the consistency in scheduling. Twelve months into the implementation effort, DBT-STGs were offered on a daily basis and occurred at the same time every day. DBT-A soon became a reliable part of the program, which milieu staff compared to other less reliable groups. DBT-A's consistency made it "one of the more mature parts of our program."

Group leaders had expertise, commitment, and appropriate personality. Staff members identified three DBT-STG leader characteristics that facilitated the implementation effort: expertise, commitment, and appropriate personality. Most milieu staff members recognized that a certain degree of expertise and training was required to adequately lead DBT-STGs: "You guys are *way* more qualified to lead DBT." Mike's buy-in was influenced by the amount of training and preparation needed to lead DBT-STGs. "They have to be led by someone who knows the dynamics of group, and how to be an effective leader. The standard to which the group leader needs to be trained is an extremely good impression that I have." By requiring high training standards for group leaders, some degree of quality assurance occurred.

Beyond competence, DBT-A's success was also attributed to the commitment and investment of the group leaders. Milieu staff members recognized that differing levels of commitment were needed to lead DBT-STGs. During her summative interview, I asked Macy if she thought that milieu staff members could lead DBT-STGs. Macy's eyes grew wide in horror, and she blurted out: "No! DBT would fall apart." After composing

herself, Macy elaborated that the milieu staff would not have the same commitment to the program's fidelity or integrity, resulting in a lesser quality group. A nurse supported this: "I have no doubt, that if DBT was run by the milieu staff, it wouldn't be [the] skill-based group that it is now." This was not because of work ethic. Macy characterized both the milieu staff ("not lazy") and the primary therapists ("overworked") as hard workers. Instead, the program would "fall apart" because of commitment. Macy described members of the milieu staff as being fatigued from working long days, and not having the time or energy to invest in developing programs. The primary therapists had greater investment and dedication in developing group programming. By the conclusion of the 24-months, several milieu staff members were in the process of learning to become DBT-STG leaders after requesting to be trained, though the large majority of milieu staff members were not.

In addition to expertise and commitment, several milieu staff members highlighted the personal characteristics of the group leaders: "I think that you and [another group leader], the two people I see most often running the groups, *are so patient* and have the right personality. And not everybody can be that way." Milieu staff felt that the group leaders functioned as models for interns and other staff being trained in DBT-STG leadership: "Hopefully they'll just watch you, and they'll be good to go."

DBT was more inclusive than other groups. Staff appreciated that the screening criteria of DBT-STGs was more inclusive than other groups. Several members of the milieu staff reported that when a patient was excluded, it increased their workload and responsibilities because they must monitor and provide alternative activities for that patient. This "can be a hard pill to swallow" for milieu staff who are preparing for
admissions. During field observations, I noticed that patients also seemed to prefer more inclusive groups because of group cohesion; they missed patients who were excluded.

An alternative to DBT group was provided ("packets"). The counseling manager suggested that packets on the same concepts taught in DBT-STGs could be provided as an alternative to the group. These were photocopied chapters from *Don't Let Your Emotions Run Your Life for Teens* (Van Dijk, 2011). Chapters from this DBT-A themed workbook contained comparable information and exercises to DBT-STGs. Chapters were aligned with the group topic being taught that day. This alternative to group participation occupied patients who did not want to attend or left the group early, which circumvented giving the milieu staff more responsibilities if patients did not attend DBT-STGs.

Implementer characteristics. The third most important category helping implementation was the characteristics of the primary implementer. This category included my insider status as a respected and trusted staff member in the program. Subcategories included: the primary implementer was "one of us," the primary implementer was sensitive to "what was going on," the primary implementer had credibility and respect, the primary implementer was visible on the unit, staff strengths were being utilized, and DBT was congruent with the implementer's personality.

The primary implementer was "one of us." My role in the setting and prior relationship with the staff enhanced the acceptance of DBT-A and the success of implementation. I had been employed as a staff member for three years at the time of DBT-A adoption, and had earned both trust and credibility among the staff. My "insider" status allowed me access to adopt DBT-A, and earned me support from other staff

members. Macy explained that insider status reduced resistance because "there's a perception that you have more compassion."

A therapist provided a further insight: "You had the respect of the milieu staff in doing it, because you were one of them... They knew you had their back. You were part of the team." Not only was I an insider, but both of the primary group leaders (including myself) were also former milieu staff members. The other primary group leader reflected, "The relationship that you and I have with the milieu staff, having come from that background, I think they are much more willing to be on board with supporting or taking a supportive role in the groups if we ask." In Rose's words, having a prior rapport and relationship with the milieu staff granted me "credibility," because "you came up from the ranks." As a recent member of the milieu staff, I was considered "one of us" who "still knew what time it was."

Insider status had other benefits. Skip believed that staff members were more likely to accept change when a central person within an organization could answer their questions about implementation. Therefore, it was beneficial for the implementer and "standard bearer" (or, team leader) to be a staff member. Rose "just can't imagine somebody else coming in and having to do a massive training and then leaving," because "you have no one to answer questions." When the implementer is already a member of the staff, they can serve as a continued resource.

The primary implementer was sensitive to "what was going on." Some staff members mentioned that I was "sensitive" to unit dynamics, and were aware that I was following the correct procedures: "I think you went to [the unit manager] first, and said there's a need for this on the unit." Adherence to correct procedures increased the

likelihood of managerial and staff support. "Inside knowledge" about the time of day when DBT-STGs would best fit into the program schedule influenced the success of the implementation effort. I intentionally began introducing DBT-STGs during the 3:30 to 5:00 p.m. timeslot, based on knowledge of potential gaps and needs in the program stemming from my insider status. I knew that the program would be more readily accepted if it benefitted members of the evening shift milieu staff, who often felt overworked. Other staff members were aware of my sensitivity to the setting, and intentional attempts to ensure DBT-A implementation benefitted the staff. Sensitivity to the needs of the program and staff seemed crucial to staff buy-in.

The primary implementer had credibility and respect. While insider status was important to staff acceptance of DBT-A, some confounding existed. Staff reported that my level of trust and respect in the setting was also vitally important. If I had been an insider with no trust or respect from the staff, Skip believed that implementation would have been a "harder sell." Bruce felt I was "trusted, admired, and respected by 99% of staff on that unit." My level of respect and trust in the setting was atypical. Bruce added: "If it had been someone else, it would have been like, 'well that's nice,' but it wouldn't have been respected in the same way. That played a huge role in this going so well." Skip concurred: "If another staff member had attempted to DBT, I don't think it would have gotten off the ground."

Staff members such as Skip felt more supportive of DBT-A implementation after learning that I was the primary implementer. Skip's support of my implementation derived from two factors. First, Skip recognized my pre-existing credibility among the

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milieu staff. Skip believed that while the DBT-A model was successful, I could have implemented anything because of my level of respect in the setting:

I didn't think the other milieu counselors really understood the problems or challenges associated with that particular kind of therapy. They just had confidence in you personally. You could have told them that you were going to implement circus therapy, and they probably would have gone for it, because they believed in you.

Second, Skip was aware of my reputation for being a staff member with "high standards" who "scrutinized" new practices "fairly closely" before implementing them: "You're someone who tends to ask all the important questions prior to the beginning of that process. I felt more confident that you could implement the program with the level of professional integrity that it required."

The implementer's pre-existing rapport laid the groundwork for implementing DBT-A. Yet, this foundational trust and respect from the staff could have been lost if the implementer had behaved in a "superior" manner after being promoted to a primary therapist. A milieu staff member contended that if I had adopted a superior attitude following my promotion, she would not have participated in the interview. This staff member reflected that my behavior as a primary therapist could serve as an example and precedent for how future therapists could interact within the hierarchy. "I hope that other milieu staff that might be trained for DBT can learn from how you have transitioned and not become an 'I'm better than you'-type, because you have a lot of respect like that."

The primary implementer was visible on unit. The amount of time and effort I spent on developing the DBT-A program was evident to the staff. Rose commented that I

was visible on the unit when developing the DBT-A program. She could see that I was "putting in the time" and this "visibility was important." Visibility on the unit resulted in other staff members associating me as the team leader of the implementation effort, which provided clarity; staff knew whom to approach if they had questions.

DBT was congruent with the implementer's personality. Skip believed that DBT was congruent with my personality. He contrasted me with the primary group leader for interpersonal psychotherapy group, indicating that the other group was better suited to that leader's personality. This congruence led to my allegiance to the model, influencing my commitment and dedication to the implementation effort.

Organizational dynamics and structure. The fourth most important helping category was organizational dynamics and structure. This category encompassed organizational dynamics such as managerial support, and structural benefits including DBT-STGs being scheduled at the best time of day. Subcategories included: organizational climate and culture, managerial support and financial backing, adaptability of the therapeutic model to a briefer length of stay, scheduling advantages, intentional benefits for the evening shift milieu staff, immunity of DBT group leaders to milieu staffing patterns, cooperative relationship between DBT group leaders and the milieu staff, and milieu staff inclusion.

Organizational climate and culture. At the time of DBT adoption, the unit manager, counseling manager, and director had all been replaced within the span of approximately 12 months. All three of the newer managerial staff were supportive of implementing EBPs in the setting, and endorsed DBT-A adoption. Without this top-down support for DBT-A, implementation would likely have been unsuccessful.

The organizational climate and culture valued "hiring from within." The historical precedent for promoting internal staff rather than hiring outsiders to the organization was apparent to Macy, who had overheard staff stating that they were glad the new unit manager had worked in the setting previously and thus had "rose up through the ranks." The case managers, unit secretary, and director had all been staff members before taking their current positions. Within that context, all four of the new primary therapists hired were staff members already working on the unit. Two of these hires included me and the other primary DBT-STG leader, and thus the DBT-A program was supported. Had another primary therapist been hired in my place, it is possible that the DBT-A program would not have reached daily inclusion in the program and would have faded into the background. Thus, the implementation of the primary therapist model and my hiring as a primary therapist was a significant milestone in the success of the implementation effort, all of which was strongly influenced by the organizational climate and culture.

Managerial support and financial backing. From its adoption, DBT-A had "the general backing of the hierarchy of the unit." While implementation was a grass roots and not top-down effort, it required some degree of managerial support to be sustained. Any initial instability that was caused by the infrequent scheduling of DBT-STGs and the groups not being offered when I was absent was mitigated by the "salesmanship" of the unit manager. When asked why the DBT-A program was sustained, Skip replied that the unit manager was instrumental as "your cheerleader." The unit manager "bragged on" DBT-A two or three times in meetings, which was helpful because "the more times you hear the jingle, the more you begin humming the song…. It kinda created the expectation that it was here to stay, that it would become part of our program." Because the unit

manager was considered "credible" by staff, DBT-A was taken more seriously. It was important that both the primary implementer and unit manager were "credible" members of the staff. This credibility likely stemmed from the unit manager and primary implementer both being former members of the milieu staff. DBT-A implementation may have faltered during the unstable period of the first few months of implementation if the unit manager had less credibility, or did not overtly support DBT-A.

Bruce reported that managerial support was sustained once it became apparent that DBT-A was beneficial to the patients and staff in the program. "Because it seemed to be helpful to the staff, helpful to the kids, well put-together, well thought out, someone took a look at that and said, 'this is what we needed.'" And so, "managerial support wanted it to be a staple, wanted it to happen seven days a week...the managerial support is what made it stick." Managerial support became vital to not only the initial adoption but also to the sustainability of the ongoing implementation effort.

Managerial support was vital to the system-wide support that DBT-A implementation subsequently achieved. By the time of summative interviews at the 24month endpoint, Bruce reflected: "DBT has received a stamp of approval from higher management to your floor staff." Without managerial support, Bruce believed that DBT-A would have been considered "fingerpaint." He joked that the milieu staff would have thought, "that's a nice little project that you have there, let's stick that up on the fridge." The implication is that without managerial support, my attempts at implementing DBT-A would have been taken less seriously by the milieu staff and may have experienced the same fate as many others in the setting: it would have been dropped or forgotten. Adaptability of the therapeutic model to a briefer length of stay. The short-term, acute nature of treatment in an AIPS meant that adaptation and implementation of a new practice was much simpler. DBT-A would have been more difficult to implement in an outpatient setting, where therapists have to be trained for longer-term intervention. In longer-term treatment programs, it would be easier for implementation to be derailed because of the sheer number of steps involved in the process. Short-term treatments are more easily sustained. Bruce succinctly explained: "It's been my experience that it is much easier to adapt something that only has to run for several days versus having to adapt something that be to repair" than a long-term process.

Scheduling advantages. Staff believed that DBT-STGs were scheduled at the best time of day, since fewer interruptions occurred on evening shift than day shift, when patients had other engagements that precluded group participation such as psychological testing, family therapy sessions, and meeting with psychiatrists and primary therapists. Furthermore, if DBT-STGs had been scheduled during dayshift, all of the therapeutic activities would have concluded by the time evening shift began. This would have been problematic, since the 3:30 to 5:00 p.m. timeslot was typically a hectic time on the unit when many admissions arrived and crisis incidents occurred. Mike reported that he had conducted nearly 50 admissions on evening shift, compared to only a single admission on day shift. Mike believed that DBT-STGs gave evening shift a "platform" to get through the remainder of the shift, compared to the past, when milieu staff may have felt overwhelmed within the first 90 minutes of the shift. Staff felt that DBT-STGs helped them to "manage the incoming chaos better." Rose insisted, "the time slot you guys

chose was perfect, to facilitate the transition from dayshift to evening shift... You were actually helping the milieu staff and you weren't asking them to do more."

Intentional benefits for the evening shift milieu staff. Per Rose, "Of all the shifts, the evening shift felt most burned out." Bruce felt that the evening shift milieu staff supported DBT-STGs because "it was presented from day one, that it would make the milieu staff's life easier." Prior to DBT-STG implementation, the milieu staff felt overwhelmed with the responsibility of leading groups while also attending to admissions and crisis incidents. A milieu staff member reported, "We had to prepare for admissions and provide therapy for the children at the same time." Resistance to DBT-A would have increased if the milieu staff felt burdened by additional responsibilities. Instead, the scheduling of DBT-STGs intentionally decreased milieu staff responsibilities by assigning responsibility for group leadership to non-milieu staff such as primary therapists and master's-level interns. Milieu staff were therefore able to be "supportive of something therapeutic" while also "freed up" to attend to other pressing duties such as admissions or behavioral incidents. A nurse explained: "You're not just throwing the patients in a room and doing an activity, you're actually doing something that helps. I really think it helps to meet all of the patients' needs."

Immunity of DBT group leaders to milieu staffing patterns. From the outset of DBT-STG implementation, the group leaders were not counted as milieu staff for assignment purposes. Because group leaders were separate from the milieu staff, it allowed the group leaders to provide leadership without being "pulled" into admissions or crisis incidents. Milieu staff members were frequently removed from leading groups to attend to these other duties, affecting the outcome of the group. A pattern existed among

the milieu staff for assigning group leadership to the person arriving last for shift report or the person most gifted at leading groups. This resulted in inconsistent leadership of expressive therapy groups, since some milieu staff members were not assigned to lead groups based on intrinsic motivation. Gifted staff members became tired of leading groups repeatedly when carrying the same responsibilities as other milieu staff members not leading groups, because they were not allocated additional time for charting group notes in the electronic medical record.

Cooperative relationship between group leaders and the milieu staff. A cooperative relationship was reported between DBT-STG leaders and milieu staff. Interviewees from the milieu staff reported that group leaders routinely asked them for screening information. Although communication regarding who was leading the group and which patients had been screened out of group was initially impaired between DBT-STG leaders and milieu staff, interviewees from both the milieu staff and group leaders reported that this had improved over time. Following feedback from milieu staff in the focus group that not enough information was being passed along about DBT-STG participation, the group leaders began communicating information to the milieu staff about patient behavior and participation in DBT-STGs via a shift report sheet.

Milieu staff inclusion. The cooperative relationship between group leaders and milieu staff members was evident in invitations from group leaders for milieu staff to assist with supporting DBT-STGs. When DBT-STG leaders first learned how to lead DBT groups, they merely wanted staff observation, which led to the milieu staff assuming an inactive observer role. This led to disengagement, or only lukewarm engagement. With the passage of time, the group leader became more confident in

leading DBT-STGs and wanted to include the milieu staff more in the group, which resulted in the milieu staff assuming a more actively supportive role. Once the milieu staff assumed a supporter role instead of an observer role, they became more engaged and eventually embraced the new group. Thus, milieu staff support was facilitated by group leader inclusion in a stepwise process.

Although some staff felt unsure about their role in supporting the group at first, the cooperative relationship between group leaders and milieu staff helped to mitigate this problem. Macy indicated that communication, teamwork, and trust were all present between DBT-STG leaders and milieu staff supporting the group: "The people who lead the group, you guys are really good about telling us when to step in, and asking if we can help with that. That was pretty easy in defining my role in a DBT group." As the implementation process continued, the inclusion of the supporting milieu staff in group activities was evident to part-time and limbo staff members: "What I am seeing more, is the group leaders delegating to the interns and the milieu staff." The milieu staff appreciated being included, and reported that this inclusion helped to "build buy-in."

Implementation process. The fifth most helpful category was the implementation process. This category included the thoughtful manner in which DBT-A was scheduled and gradually implemented. Subcategories were: careful planning, grassroots movement, gradual inclusion, addition of a second group leader, including more hands-on learning, and "working out the kinks."

Careful planning. Staff members were aware that I carefully coordinated and planned DBT-A implementation, and trusted my intentions to best serve the unit. When describing the scheduling of DBT-STGs, a therapist noted, "I'm confident that was a

careful, deliberate decision on your part." He connected the care taken in scheduling DBT-A with the success of the implementation effort: "Things done randomly don't slide in as easily." Staff observed that I intentionally chose a particular timeslot in the schedule to implement DBT-STGs, and that this awareness of gaps in the schedule emanated from my insider status within the organization. Rose was also aware that my sensitivity to the climate had influenced me to select a gradual approach to implementation: "Fully rolling out DBT at once would have created more chaos in the setting, which was already experiencing major change. And because of that climate, that's why you guys rolled it out the way you did."

Grassroots movement. The organization had historically implemented changes in the AIPS in a top-down fashion. Top-down implementation efforts were described as forceful, with little input from staff lower on the organizational hierarchy. Skip reported that, "Changes have just been imposed upon people." Several milieu staff reported resenting top-down changes. One reported: "I think sometimes there's an us-versusthem, or the authority, mentality." The resistance to vertical power was understandable when considering that the milieu staff characterized top-down decisions in the setting as aversive. As a result, Skip believed that prior top-down implementation efforts had been unsuccessful: "Top-down fails, because there's not a personal buy-in on the part of the staff. It's better that you send the change through someone who already has a certain amount of implicit power within the group."

In contrast to the historical precedent of top-down implementation, DBT-A implementation represented change that was not imposed by management or a third party. Bruce characterized DBT-A implementation as an "inside job," explaining: "It's

like the milieu staff weren't looked down upon. It was like, one of us has risen up and taken on this task that needed to be done." Skip echoed Bruce, reflecting that, "Authentic change happens from within." Others were glad that staff strengths in the program were being utilized, and that staff were taking initiative to improve the program. This had implications for power relations in the setting: "It wasn't something that felt *placed* on the unit, it was something that was more grassroots." DBT-A implementation proceeded with far lesser resistance, because it did not feel forced or imposed on staff, as top-down implementation efforts had in the past. Skip conjectured, "There's only so many times when you can force adaptation before you trigger resistance."

Gradual inclusion. DBT-A was not implemented abruptly, but slowly and gradually to not overwhelm the staff. More DBT-STGs were added over time, with the diary cards introduced after 12 months. It therefore took over 12 months for the program to be fully implemented. During the focus group at 12-months, a milieu counselor stated: "We've had the time to get used to it" because "it didn't happen overnight, it happened gradually." A psychiatrist believed that DBT-A implementation encountered less resistance because it was not "dogmatically" forced into the schedule at first, as the primary therapist model had been. Rose surmised:

I think the way you implemented it was the best way, because the staff could adjust to that. You crept it in there. You didn't begin doing it five days a week, you did it slowly. You eased into it. Then when it came time to change the program, we already knew what DBT was... That could be a factor of why people are so accepting of it now. This was a rich description. "Crept it in there" suggests a sneak attack, bypassing staff resistance by the stealthy nature of gradual implementation. Rose seemed to suggest that an overt implementation would have caused staff to feel more overwhelmed and resistant to DBT-A. "Ease" conjures the metaphor of slowly entering the waters, not diving in the deep-end. Easing into the program slowly was particularly important because staff already felt overwhelmed by the volume of concurrent changes in the AIPS.

Addition of a second group leader. Within four months of implementation, another former milieu staff member began learning how to lead DBT-STGs, and soon assisted with leadership on a regular basis. With this person's support, DBT-STGs were offered two days a week after six months of implementation, four days a week after nine months, and every day of the week after 12 months. Both group leaders were promoted to the position of primary therapist, further establishing the DBT-A program. Both primary group leaders subsequently trained master's-level interns in DBT-STG leadership. A psychiatrist believed that a central reason for the success of DBT-A implementation was the commitment of the two primary group leaders to provide DBT-STGs. Not only did the group leaders show "investment" in the process of implementation, they also "made sure that it happened on a regular basis."

DBT-STGs were improved by including more hands-on learning. Formative evaluations of patient response to DBT-STGs were conducted at six-month intervals regarding how the group could be improved. Within the first six months, it became apparent that the patients wanted more activities, games, and "hands-on" learning as part of the group; they disliked reading and the lecture-based format. This preference for experiential and kinesthetic learning was honored. The delivery of the group content was

adapted to reinforce the most salient information through roleplaying, mindfulness exercises, and activities, while reducing the amount of reading and teaching points. The unit secretary reflected that this was a more "acceptable style of learning" for the adolescents admitted to the unit with intellectual, developmental, and learning disabilities.

As a result of these changes to the delivery of DBT-STG content, the material seemed to "stick" with patients more easily. A nurse shared that the patient response to the experiential learning activities was striking.

I've been to many places, where the kids just sit there and don't say anything. By using a penny, or a video, there's kind-of a gimmick to get them to respond. It's not like you're just reading some blanket statement to them, and they're like, *oh*, *geez*! They are actually responding to what the gimmick is.

By engaging the patients, they were more attentive during groups and retained more information. A focus group member shared, "I feel like they remember more from that group than the other groups that we've done." Without using patient feedback to improve the groups, the patients might have remained disengaged because of the lecturebased format. Staff would have lost support for the group, because of negative patient response. Without engaging the patients, "the group may have closed down."

"Working out the kinks." Staff understood that "hiccups along the way" and "working out the kinks over time" were inherent to the process of implementation and could be expected. Program improvement was a necessary part of implementation. Part of the success of the implementation effort occurred because problems were addressed as they arose during the course of implementation. Problems that were addressed during the 24 months of implementation included providing packets for patients who elected not to attend the group, passing on information to the evening shift milieu staff on a shift report sheet regarding patient participation in DBT-STGs, posting the name of the assigned group leader and names of patients attending and screened out of DBT-STGs in the mornings for milieu staff to review in preparation for leading other groups on evening shift, conducting trainings for staff about DBT-A, and creating a list of expectations for milieu staff supporting the group and posting it in a public area for review. Addressing these problems sustained staff trust in the primary implementer.

Staff support. The sixth most helpful category was staff support. This encompassed overt support by milieu and non-milieu staff, which was immediate for some and emerging for others. Subcategories included: staff overt support, perceived lack of resistance from milieu staff, evening shift milieu staff provided group support, evening shift milieu staff enjoyed participating in DBT-STGs, and evening shift milieu staff found DBT-STGs personally beneficial.

Staff overt support. Many staff members who worked in the setting prior to DBT-A adoption were excited to learn about its implementation and supported the program from its infancy. Other staff members who were working in the setting prior to DBT-A adoption became supportive of the DBT-A program with increased exposure. Mere exposure to seeing DBT-A's benefits over time naturally facilitated adjustment. For example, Skip's skepticism changed when he observed the groups, saw they were "supported by media," and understood that the concepts were being delivered to patients in a manner that they could comprehend. When Rose reviewed the patient feedback data, she reported that she would have "probably been surprised" at the positive results at the

beginning of implementation, "but just seeing the implementation process and how the kids like it, it doesn't surprise me now."

All of the newer staff hired after initial DBT-A implementation had a positive impression of the program from the outset. During summative in-depth interviews, not one new staff member experienced a change in support for DBT-A from first to current impression. By the time newer staff arrived, most problems had been resolved. Within seven months of implementation, a new staff member reported: "You must have had most of the kinks worked out by then, because it is very well run. I haven't seen a dry session since I began observing." Macy was surprised to learn that DBT-A was a new part of the program when she joined the staff: "It seemed very streamlined and natural." Newer staff did not have to wait before seeing the benefits of DBT-A to the patient population. Furthermore, newer staff members would not have experienced a pre-DBT-A program, and thus had less investment in a former program. Staff skepticism for DBT-A among more tenured staff working at the setting pre-implementation likely occurred because of their allegiance to the pre-DBT-A program.

Perceived lack of resistance from milieu staff. Non-milieu staff supported DBT-A implementation because it did not seem to cause overt disharmony among the staff. Milieu staff resistance was covert, not overt; therefore, with rare exceptions, non-milieu staff members were unaware of any milieu staff resistance to DBT-A. A therapist commented, "I heard zero negative comments, sarcastic remarks. I heard zero negative about DBT from day one." A psychiatrist added: "and there was little opposition, so it's going to happen." These non-milieu staff members observed far more overt resistance to the primary therapist model, because "DBT was seen as a schedule tweak, whereas the primary therapist model was seen as a systemic change."

Evening shift milieu staff provided group support. Following the DBT-STG leader's invitations for milieu staff to support the group, the milieu staff began to take a more active role. When supporting the group, the milieu staff would "zero in" on the patients who were disruptive to the group. This assisted the group leader, who did "not have to be the bad cop." This "good cop/bad cop" interaction between group leader and milieu staff member implied the presence of teamwork and partnership.

When the milieu staff believed in the importance and worth of the group, they were more likely to encourage patients to attend. It appeared that positive patient response resulted in milieu staff further encouraging patients to attend DBT. As one milieu counselor explained: "If there is a patient who doesn't like to leave their room, I might encourage DBT more, to try to go. If someone believes that DBT is effective and beneficial, there might be more encouragement to go to DBT." Thus, milieu staff support was important to patient compliance with the DBT-A program.

Evening shift milieu staff enjoyed participating in DBT-STGs. Incorporating more "hands-on" activities in DBT-STGs was appealing to both staff and patients, assisting with buy-in. Bruce reflected: "Not only are we getting the patients more excited about the model, we are inviting the staff to be more excited about what the patients are learning." By the time of the summative interviews at 24 months, milieu staff members preferred to attend DBT-STGs and complained of "not getting into DBT" and "being stuck" leading expressive therapy group with the "little kids." Bruce observed, "They're lovin' it." This phrase conjures associations with commercials of young people enjoying

fast food at a popular corporate restaurant. The hidden message of this advertising campaign is that the fast food is enjoyable to eat, not just convenient. This association possibly connotes that the milieu staff supported the group because they found it enjoyable and pleasurable, rather than simply convenient.

Evening shift milieu staff found DBT-STGs personally beneficial. For some staff, DBT was their first exposure to a professionally led group. Many staff had not attended interpersonal psychotherapy group, the only other group led by a therapist in the setting. By inviting milieu staff to support DBT-STGs, milieu staff could "see what actual group therapy...looks like." Staff buy-in was facilitated by DBT-STGs "enriching the educational experiences of our newer staff." This enrichment occurred in the context of milieu staff education and training. Many milieu counselors were not educated beyond a bachelor's degree, and some had backgrounds not in psychology but in education or communications. Macy reported that DBT-STGs were "really my first delve into doing therapy with kids," and had personally benefitted from observing a trained therapist lead groups: "I feel like it really helped me to develop as a counselor and a therapist, to get a sense about how to handle things in group." Providing an opportunity for milieu staff to observe a professionally trained group leader may have benefitted the entire program, since milieu staff could then use those modeled skills in their own group leadership.

During the focus group, milieu staff members reported that DBT-STGs had other personal benefits for the staff. One milieu counselor laughed that she had learned things she could apply in her personal life. Another milieu counselor reported taking DBT-STG handouts home, to review in private. Interns reported using some of the coping strategies taught in DBT-STGs in their personal lives, which helped to reduce stress. These personal benefits may have caused milieu staff and interns to develop stronger allegiance

and belief in the effectiveness and applicability of the DBT-A model, increasing the

likelihood of milieu staff and interns reinforcing the importance of the model to patients.

Qualitative Descriptions of Categories Hindering Implementation

Table 11

Category	Subcategory
Organizational	Organizational climate and culture
Dynamics and	Managerial support and financial backing
Structure	Lack of communication between group leaders and milieu staff
	Milieu staff uncertainty about the supporter role
	Therapists were not starting and ending groups on time
	Lack of teamwork among the milieu staff
	Primary therapists had too many responsibilities
	Group location
Staff support	Initial covert staff skepticism
	Milieu staff's natural resistance to change
	Initial loss of responsibilities for milieu staff
	Initial milieu staff fears of role reduction and job loss
	Expectations of a milieu staff "revolt" if asked to lead groups
	Inconsistent group support by milieu staff
Implementation	Initial instability
Process	Staff were unaware of implementation
	Initial "boring" format
	Lack of trained group leaders
	Inadequate curriculum development
Impact on	Initial negative patient response
Patients	Diversity of patient problems
	Disruptive and lower functioning patient recipients
	Ineffectiveness with some patients
	Unobservable benefits post-hospitalization
Appeal of	Lack of staff familiarity
DBT-A as a	Large group sizes
Treatment	Repetitive nature of the groups
Modality	
Implementer	Inadequate education for staff and families
Characteristics	Unfamiliarity with diary cards
	Differing performance among group leaders
Note. Categories are listed in order of relative importance.	

Subcategories hindering implementation are listed in Table 11. Qualitative descriptions of categories and subcategories hindering implementation are provided in order of importance, from most to least important.

Organizational dynamics and structure. The most important hindering category was organizational dynamics and structure. This category included organizational relationships between staff in the setting, in addition to structural challenges such as staffing patterns and group location. Subcategories were: organizational climate and culture, managerial support and financial backing, lack of communication between group leaders and the milieu staff, milieu staff uncertainty about the supporter role, leaders were not starting and ending groups on time, lack of teamwork among the milieu staff, primary therapists had too many responsibilities, and group location.

Organizational climate and culture. Staff members felt that continual and perpetual change occurred in the AIPS, which somewhat reflected the structure of the setting: "We're a crisis stabilization unit, so nothing is ever stable." This instability was evident at 12 months into implementation. Multiple interviewees from both the milieu and non-milieu staff reported that "a lot of changes at one time" had occurred at the 12-month midpoint. The level system and schedule was adapted, a primary therapist model was implemented, new case manager positions were redefined, and new psychoeducational life skills groups were introduced into the morning program. Staff felt "overwhelmed" at the sheer volume of changes. In the confusion of multiple changes occurring simultaneously, staff may have negatively associated DBT-A with concurrent changes. Some staff may have resisted DBT-A simply because they had associated it

with the primary therapist model, which was an unpopular change at first. Associating DBT-A with the primary therapist model would be understandable, considering that DBT-STGs were not included in the unit schedule until the primary therapist model was implemented.

Managerial and financial backing. Few staff members during first-round interviews mentioned managerial and financial backing as being a significant hindrance to implementation. Only one staff member feared that inadequate financial support would be available for DBT-A implementation. He referenced the organizational climate at the time, when there was less money available for other projects due to budgetary concerns. Part of the rationale for training master's-level interns in DBT-STG leadership was the need to reduce overtime and for primary therapists to reduce their work hours.

Lack of communication between group leaders and milieu staff. Some of the milieu staff did not receive adequate communication about which patients had been screened out of attending DBT-STGs. On some days, patients were left out of the group who went to group the day before. DBT-STG leaders made these screening decisions based on prior reports of patient behavior. Information about these decisions was not always communicated the milieu staff, who subsequently questioned why certain patients were not being included in the group. On other occasions, the milieu staff felt unsure about who was leading the DBT-STG that day. Other communication problems included the lack of clear guidelines about which staff member was expected to follow up with patients regarding the packets provided as an alternative to DBT-STGs. To improve communication between DBT-STG leaders and milieu staff, a list of patients attending and not attending the group was posted, with reasons provided for screening decisions.

The name of the scheduled group leader was also posted. At the time of the summative interviews, one milieu staff member suggested that communication about patient screening and group leader assignment had improved.

Milieu staff uncertainty about the supporter role. The lack of communication between DBT-STG leaders and milieu staff was apparent in the role uncertainty that many milieu staff members initially experienced when supporting DBT-STGs. In particular, milieu staff cited a lack of clear guidelines concerning when to intervene if patients were disruptive. Staff members reported receiving little instruction or direction about their role in supporting the group. Macy indicated that "I wasn't really sure how I would respond to it, and how I would play a role as a supporter in the group." Like many staff, Macy learned about the expectations of the supporter role by experience. During another interview, a milieu staff member mentioned that she began "stepping in" to redirect disruptive patients in DBT-STGs after "I observed more experienced staff doing the same thing. But with the new people or an intern, maybe you would like to take them aside and let them know." The lack of clearly defined guidelines for supporting the group led to some milieu staff members believing they would be "policing" the group, suggesting milieu staff perceived they were needed for behavior management ("the muscle") rather than therapeutic support as co-leaders. Milieu staff disdained this role, which may have affected their willingness to support the group. To address this concern, I created a document that listed the expectations for milieu staff supporting DBT-STGs toward the conclusion of the 24-months of implementation.

Leaders were not starting and ending groups on time. A frequent complaint of the milieu staff was that some group leaders did not start and end DBT-STGs on time.

Because DBT-STGs became part of the milieu program, the groups needed to follow the program structure and schedule. Consistency and structure were identified as strengths of the DBT-A program, and the lack of consistency of starting and ending on time affected staff perceptions of DBT-STGs. When DBT-STGs started late, patients became restless, which could lead to negative behaviors. Staff noticed when patients became "antsy," making staff feel "antsy" as well. When DBT-STGs ended late, the patients' prepared dinner became cold, since it had been delivered while the patients were in a group that ran over time. Unfortunately, this problem continued to persist into the third phase of the study (18-24 months). During summative interviews, one milieu counselor indicated that "there have been occasions as recently as last week" when DBT-STGs began 20 minutes behind scheduled time.

Lack of teamwork among the milieu staff. Macy reflected that while there was a lot of trust in upper management, trust among coworkers was lacking. A nurse felt that the milieu staff was not always "team-oriented." Teamwork among staff had been compromised in part because the staff felt overwhelmed by the sheer volume of changes occurring in the setting during the 24-month period of DBT-A implementation. Some struggled to see the "big picture," becoming myopic by focusing solely on their individual roles. A nurse explained, "They take care of their own little circle of patients. It's less of a team approach." During interviews, several milieu staff members were similarly critical of their co-workers. For example, one interviewee intoned: "I think there are some really strong milieu staff, and I think there are some really weak milieu staff. I think some people know that, and know what their strengths and weaknesses are.

And some people are oblivious." This impaired teamwork impacted DBT-STGs, evidenced by milieu staff not actively supporting the group at times.

The lack of teamwork among the staff was concerning to management. A manager intoned that attributing responsibility to management for failures within an organization was far healthier for the organization than when employees blame each other, because this affects patient care. Management attempted to address impaired teamwork by scheduling mandatory team-building and communication workshops for staff during the second year of DBT-A implementation. In retrospect, the staff considered these workshops to be somewhat successful.

Primary therapists had too many responsibilities. Mike believed primary therapists were given too many responsibilities with too little time to complete them. The sheer volume of work that primary therapists were tasked with at times resulted in group leader fatigue or a rushed attitude, impairing the group outcomes. During the first six months of the primary therapist model, the three main therapists worked an average of 10-12 hour days at a steady pace, sometimes even longer. Too many primary therapist obligations and duties resulted in an inadequate amount of time available for group leaders to prepare DBT-STGs. Eventually, this prolonged workday was reduced and adequate time was made available for primary therapists for prepare to lead groups.

Group location. DBT-STGs were usually provided in the activity room, 30 feet from the main locked unit. The benefit to this location was the large amount of space in the room. In addition, the room was primarily used for groups and thus not associated with lighter activities such as playing board games. Bruce shared that the activity room is "the best room possible for it, because it's large enough to allow us to shift to different sides of the room to break it up and make it less monotonous. For an hour-and-a-half long group, you need that." Yet the location also had drawbacks. To reach the staff lounge and unit manager's office, the staff had to walk through the activity room, resulting in interruptions to the group. Although less frequent than in typical dayshift groups, psychiatrists and nurses sometimes interrupted and removed patients from the group. Another interruption occurred when the intercom overhead conveyed an announcement. For one group leader, these interruptions were highly annoying. This group leader fantasized hanging a sign on the door to the room that read, "Do not interrupt group, or else!" Fortunately, these interruptions did not derail the group for long: "It never fails that somebody remembers. We get right back on track."

Staff support. The second most hindering category during the implementation process was staff support. This hindering category included staff skepticism about DBT-A and resistance to change, in addition to inconsistent group support for DBT-STGs by the milieu staff. Subcategories included: initial covert staff skepticism, milieu staff's natural resistance to change, initial loss of responsibilities for milieu staff, initial milieu staff fears of role reduction and job loss, expectations that milieu staff would "revolt" if asked to lead groups, and inconsistent group support by milieu staff.

Initial covert staff skepticism. Initial staff skepticism was often found in the form of questions. Most of these questions implied genuine staff concern for the program, such as: "Are we using the best curriculum?" "Is this going to work for our patients?" "Can our staff easily implement this?" "Would we have enough financial resources available to implement the program?" This skepticism primary related to concerns with how the patient population would respond to DBT-STGs. A milieu counselor had

"delayed judgment," because "I didn't know how it was going to go, really." Skip also felt uncertain about whether DBT-A would be applicable to the adolescent patients on the unit. "I think we needed to take a more rudimentary perspective on things. I had some doubts." Other questions implied resistance rather than genuine concern about the success of DBT-A in the setting. These questions included, "What's so special about DBT?" and "Whose idea was this?" The latter question implied resistance rather than lack of knowledge about who the primary implementer was. Bruce characterized these questions as "facetious," that "just show a lack of understanding about what we're trying to accomplish."

Milieu staff's natural resistance to change. Several milieu staff commented that they and others struggled to adapt to the implementation effort because of the natural resistance to change inherent in systems that favor homeostasis. A nurse explained: "Any time you are implementing something that is different or is change, everybody is going to be resistant to it. In the beginning anyway, it's just natural. When we get used to something, we get used to something." A therapist concurred: "There were probably some staff that were resistant to *any* kind of change... Systems resist change." In his interview, Bruce personally acknowledged that change was difficult. "Change is hard, not to whine or anything, but it's been mighty hard the past couple of months to adapt to our new model or way of doing things."

Staff experienced varying degrees of natural resistance to change even after DBT-A was fully implemented. For example, one milieu staff member experienced anxiety about the reduction of DBT-STGs from 90 minutes to 60 minutes during the third phase of the study (18-24 months). It appears that after innovative practices have been implemented and established, subsequent changes to those practices may be met with resistance because those innovations have become the status quo. Thus, "when we get used to something, we get used to something."

Initial loss of responsibilities for milieu staff. DBT-STGs replaced expressive therapy and issuework time during the 3:30 to 5:00 p.m. timeslot in the schedule. During the focus group at 12-month midpoint, several milieu staff revealed they had been experiencing "grief and loss" and "disappointment" about having their "one-on-one" time with their patients "taken away." Staff worried this would restrict their ability to forge a therapeutic relationship with the patient, and one milieu counselor worried that they would lose their counseling skills ("If you don't use it, y'know, you lose it") if not provided with opportunities for individual counseling. Staff reported that one-on-one time with patients was their "favorite part of the program, because getting to do counseling what was I wanted to do." A nurse indicated that the loss of issuework time gave her less information for charting purposes. She was concerned that utilization reviewers would read over the evening shift documentation from the night before, and wonder what the milieu staff had been accomplishing with the patients. Her personal reaction was also one of professional loss: "What have I done for this patient?" Some staff also mourned losing group leadership responsibilities. Rose believed that these losses could have created "a little animosity" initially, because the milieu staff felt "like they're trying to take our groups." DBT-STGs were later reduced from 90 to 60 minutes, to cut down on the primary therapists' number of worked hours. This reduction returned 30 minutes of one-on-one time with patients to the milieu staff members, who shared their gratitude for this reassigned time during summative interviews.

Initial milieu staff fears of role reduction and job loss. The initial loss of opportunities for individual counseling and group leadership was paired with fears of role reduction. During the focus group, evening shift milieu staff reported that DBT-STGs raised questions about their future role on the unit: "What's going to happen to me?" "What's my role going to be?" "How's this gonna affect my job?" "Am I not needed?" "Will I lose my hours?" Some staff feared being relegated to a "babysitter," merely providing behavior management ("are we just the muscle?"). Staff worried that their position carried less responsibilities and was therefore more expendable.

A somber mood filled the room when job insecurity was mentioned. Focus group participants sat in silence while processing their fears. When participants eventually responded, trepidation was evident in their voice and in the content of their speech: "I'll admit... I think I felt that way." The risk of *admitting* such a thought suggested that acknowledging ownership of job insecurity fears was dangerous. It was unclear whether the danger of expressing fears resulted from fearing this information being leaked to management, or from acknowledging such a vulnerable emotional state. These fears remained covert and were not mentioned to me outside of the focus group, nor during summative interviews, though these fears may have dissipated in the six months between the focus group and first-round interviews.

Expectations of a milieu staff "revolt" if asked to lead groups. If the milieu staff were asked to lead the groups, the implementation effort would have encountered far greater resistance. Several staff members alluded to a potential "revolt" or "mutiny" occurring, with one interviewee suggesting that some staff members would have left the AIPS or asked for a transfer to another unit. When Bruce was asked what would have

occurred if milieu staff were asked to lead DBT-STGs, he began light-heartedly yelling in response, "Anarchy! Anarchy!" Staff mentioned in interviews that even after two years of implementation, resistance would still occur if the milieu staff members were expected to involuntarily lead DBT-STGs. "If there is a decision made going forward at some point to become a DBT-centered unit, with the milieu staff expected to have more responsibilities, there would be more resistance." This resistance affected the DBT-A program, because of the lack of trained group leaders. During the third phase of the study (18-24 months), some staff wanted to be trained, and began the process of learning how to lead DBT-STGs under supervision. The majority of milieu staff was "comfortable" with providing the same level of care as previously, and did not want additional responsibilities.

Inconsistent group support by milieu staff. When I created a list of expectations for milieu staff supporting the group, I intentionally left the level of participation openended. Allowing the milieu staff to choose whether to take a co-leader or observer role had benefits and drawbacks. Some milieu staff naturally gravitated toward active inclusion ("I like to feel like I can be involved, like I can contribute to the group as well"), though some milieu staff members were comfortable with remaining observers. Macy saw advantages to observing the group: "I do enjoy the fact that it's a chance for us to observe the kids, as a fly on the wall. To see how the kids interact with another staff member." For some staff, it was beneficial for them to observe the patient in a different context. Yet, allowing milieu staff to be observers had associated problems. It appeared that some milieu staff members were more likely to choose the observer role out of "complacency," because "they use it as a break." Not only were staff members not participating, but some were also arriving late or leaving early while supporting. Inconsistent group support by the milieu staff led to emails being sent out to the milieu staff by the unit manager during the third phase of the study (18-24), mandating group support. A note was written on the daily nursing board that was read before each shift, about the need for charge nurses to assign milieu staff members to support groups.

Some milieu staff members were frustrated by the perceived lack of adequate group support by other supporting staff. One nurse opined, "it kinda drives me crazy to see a staff member in there who pulls out a magazine or pulls out a book. You're not a lump of coal." While staff complained that the groups were repetitive and "boring" to support at times, Macy added: "But we're not always being active, engaged members of the group, either...The milieu staff assigned to support the group are not always attentive to every little thing that goes on in the group." This frustration by milieu staff members regarding inadequate teamwork among the milieu staff reflected organizational dynamics that were present at the time of implementation.

Implementation process. The third most hindering category was the implementation process itself. This category included initial problems stemming from the gradual nature of implementation, along with sustained and emerging problems largely concerning the group leaders. Subcategories were: initial instability, staff were unaware of implementation, initial "boring" format, lack of trained DBT group leaders, and inadequate curriculum development.

Initial instability. The gradual nature of implementation had drawbacks. The initial DBT-A program was considered unstable, and its success was by no means a foregone conclusion or certainty. Management was skeptical that DBT-A

implementation could be sustained. One manager acknowledged, "I think everyone was just waiting for it to go away." DBT-A's longevity in the setting had surprised Skip: "It was referred to as the ostrich of the program. It was looming its head around, but wasn't on very stable footing." As the only initial DBT-STG leader, DBT-STGs did not occur if I was not working on the unit. DBT-STGs were provided only once a week for the first six months, and then only twice a week for the next three months. This infrequent scheduling was confusing to staff who were unsure of when DBT-STGs would take place. Despite this instability, evening shift milieu staff felt "disappointed," "dependent," and "reliant" on DBT-STGs, even during the first six months of the implementation process. DBT-STGs reduced their responsibilities, enabling them to attend to admissions and crisis incidents.

Infrequent scheduling was resolved by training another staff member in DBT-STG leadership after four months, and training master's-level interns after six months. This ensured that groups would be more consistently offered. Had another staff member not committed to supporting DBT implementation by becoming another group leader, this instability would have continued.

Staff were unaware of implementation. Staff members ranging from the milieu staff to non-milieu staff, such as a psychiatrist and psychologist, reported being unaware ("uninformed") of DBT-A implementation at first. Mike indicated that it was unclear to him why DBT-A was being implemented in the program, why it was beneficial, and how it had been chosen for the program. He wanted an explanation of purpose: "It was kinda like, why the change, what purpose is this serving? There was a need. I'm sure there was something lacking. I'm not sure *how* it was evident, but I know that it was evident."

Other staff members also felt that this explanation of purpose was important: "Being told why we're doing something is helpful, not just being told, 'this is what we're doing." The perceived lack of explanation for implementation thus created some resistance among the staff. This lack of information about the rationale for DBT implementation occurred because comprehensive communication and training for staff in DBT-A was not initially provided due to the gradual nature of implementation.

Initial "boring" format. Staff members reported that DBT-STGs were initially too long, and the lecture format was too boring for the patients and supporting staff. One milieu staff member complained, "How many times have I had to sit there and try to stay awake?" Because patients responded negatively, the staff responded negatively. Once groups were adjusted to include more "hands-on" learning, both patients and staff became more excited about attending the groups. This increased milieu staff support for DBT-STGs.

Lack of trained group leaders. Several staff believed there were not enough group leaders, and that too much reliance was placed on the two central DBT-STG leaders. Staff worried that unless other staff members were trained to help with group leadership in the future, this lack of group leaders could potentially cause future problems. For example, if one of the two central group leaders left the setting, it may be difficult to replace them and continue the consistency of DBT-STG facilitation. Not only would a greater pool of trained DBT-STG leaders reduce the responsibilities of the primary therapists, it would ensure group coverage on days when primary therapists were trained in DBT-STG leadership. In the first year of implementation, only two interns were

trained to lead DBT-STGs. In the second year, eight interns had been trained. On rare occasions, untrained milieu staff members had bravely taken leadership of DBT-STGs when there was not a therapist or an intern available to lead the group. This problem was largely resolved by training milieu staff to lead DBT-STGs when occasions such as these arose. Yet by the conclusion of the study, staff still felt that more trained DBT-STG leaders were needed.

Inadequate curriculum development. The lack of time available for primary therapists to attend to program development also created difficulties. Mike observed that more groups could have been developed if more time was available for primary therapists to prepare them. This dilemma was engendered by organizational dynamics. The need to reduce overtime for all staff as a result of budget cuts resulted in primary therapists having to squeeze their workload into eight hours. As a primary therapist who was also the DBT-A implementer and team leader, I had difficulty developing groups once the primary therapist model began. Mike accurately inferred, "They would have had to develop groups on their own time." Mike was also aware that as a primary therapist, I had less time available to conduct formative assessments of patient response and feedback, and then to adapt the current groups in the program. He considered this to be a hindrance to the implementation of DBT-A: "I know that at some point, the groups were modified, which was necessary. And would those groups have been able to be modified earlier, if the group leaders were able to assess it and make those modifications?"

Impact on patients. Impact on patients was the fourth most hindering category. This category included initial problems with patient response and persisting problems with the patient population being served. Subcategories were: initial negative patient response, diversity of patient problems, disruptive and lower functioning patient population, ineffectiveness with some patients, and unobservable benefits post-hospitalization.

Initial negative patient response. When DBT-STGs were first implemented, some patients "abused" the voluntary participation policy, by leaving groups early or refusing to attend in order to "manipulate their way out of treatment." Once patients left group, they returned to their rooms on the main locked unit. Focus group members reported that patients would engage in "sneaky behaviors" when returning to their rooms, such as flirting with other patients, or making loud noises to distract others. The patients were not provided with an alternative, and thus became restless and disruptive. Furthermore, milieu staff was not always available to monitor this behavior in the hallways. A milieu counselor described this situation as "impossible," since patients became disruptive in the hallway as soon as staff left the hallway to gather issuework for them ("as soon as you turn your back on them!"). This problem was resolved by the creation of "packets," and adjusting the group delivery to feature more "hands-on" and experiential learning.

As a result of this initial negative patient response, Skip suggested that taking patients to DBT-STGs was considered "a risk at first" for milieu staff, who may have thought they could control the patients better if they remained in their rooms or in the game room. He described the thought process of milieu staff members: "I'm going to take these kids to Thomas' group, where they may get squirrely, and then Thomas is going to give them back to me." The milieu staff could have refused to take patients to DBT-STGs following initial problems with patient response. Skip believed, "Your credibility is what carried us through the initial phases of it." The implementer's preexisting trust and rapport with the milieu staff was important in mitigating staff resistance, particularly when a negative patient response occurred initially.

Diversity of patient problems. Patients served in DBT-STGs had a variety of psychiatric diagnoses and behavioral problems. DBT has been used to treat both internalizing and externalizing diagnoses in adolescence, including anorexia, bipolar disorder, binge eating disorder, bulimia, borderline personality features, depression, and oppositional-defiant disorder. However, some have warned that this heterogeneity of DBT-STG recipients may cause the intervention to lose its focus; when the criteria for inclusion is broadened significantly, DBT-A is used to treat a wide variety of problems that may not respond equally to the modality or to similar modules in the modality (Miller, Rathus, DuBose et al., 2007). For example, adolescents with bipolar disorder may be better served with honing emotional regulation skills, whereas adolescents with posttraumatic stress disorders may be better served with honing mindfulness skills. Miller, Rathus, DuBose et al. (2007) suggested that the screening process is frequently complicated by this diversity of adolescent DBT recipients.

Some patients did not engage in any group because they were not "ready" yet. Patients rated the group as "very helpful" on the feedback form, but also indicated they would prefer to "sleep" during that time period. Bruce interpreted this as: "This group *would* be very helpful for me, though I'm too tired or not ready yet to take this group in fully." Like Bruce, a few staff adopted an accepting stance toward the behavior of the patients in DBT-STGs, understanding that their diverse problems and different levels of motivation and maturity impacted their ability to benefit from the groups. By accepting
patients where they were in their treatment, staff demonstrated a "radical acceptance" stance, consistent with DBT philosophy. This stance was apparent in Macy's interview:

I've had enough experience now, to know that [patients] don't respond positively to DBT because they're not at that place developmentally, or they're at another place in their treatment. They're not ready. Rather than, there is something wrong with the group.

Disruptive and lower functioning patient participants. Staff reported that the severity of psychopathology in the patient population served made it "frustrating" to provide high-quality groups at times. A member of the milieu staff shared: "Sometimes the patients are more interested in each other than the life skills, and that can be difficult. So maybe it is more difficult to conduct DBT if the patients are more severe, if they have more disorders." When the group included disruptive patients, it tended to derail the group. "If there's a flow going and someone is disruptive, they have to be sent out. And then the group leader has to get their groove back on, and get the group moving again." Not only did patients engage in "deliberate disruption over and over again" that "sabotages" the group, they also withdrew. Bruce reported that in one group, a patient had "curled up in a ball," which distracted the other patients. During field observations, it was apparent in some groups that the group leader was working diligently to prevent the group from being "hijacked" by disruptive or distracting patient behavior.

Ineffectiveness with some patients. Several staff members had observed that not all patients learned skills in DBT-STGs. Most milieu staff had realistic expectations. While they believed DBT-A was mostly effective, they understood that it was not realistic to expect 100% of patients to benefit from DBT-A. "Of course, you can't expect

every kid to say that they have learned coping skills and say they can use them outside of the hospital. They're teenagers, you can't expect that." Some adolescents were believed by staff to be oppositional or not motivated to learn.

Unobservable benefits post-hospitalization. Staff members such as Bruce noted that once patients were discharged, it was unknown whether they had retained skills or not. Bruce reflected, "It's difficult to see the actual change in behavior occur. We rarely get a phone call or hear from a child about how well their life is going months after leaving here." This lack of knowledge about long-term patient outcomes led to staff speculation. Bruce seemed skeptical when stating in a summative interview, "You have to ask yourself that seriously: are they putting this to work, or is this just lip service?" When reviewing patient feedback data, multiple staff members believed that high percentages regarding the patients' self-reported ability to use coping skills in their home environment were more a reflection of their cooperation in the hospital in order to be discharged earlier, rather than reliable evidence of outcomes. A psychiatrist intoned that patients are "good at saying what they think you want to hear." Some patients may give the group "high marks," believing they are likely to be discharged earlier. Bruce supported this: "They know they have to cooperate and give you feedback to get out of the hospital." This desire to be discharged from the hospital was generated by several factors aside from a mere dislike of staying in a hospital environment. For many adolescents, admission to the AIPS temporarily negated their autonomy. Many patients were detained in the hospital until seen by a judge to assess their mental status, and patients below fourteen years old could be signed into the hospital by parents or guardians without their consent.

A more reliable outcome measure was re-hospitalization. For staff, their only method for knowing whether DBT-A was successful in the long-term was to observe whether patients were re-admitted. Thus, negative patient outcomes were the main source of data from which staff could evaluate the long-term effectiveness of the program. Bruce felt that "every hospitalization in itself if evidence of, 'did it work or did it not work?" Re-hospitalization served as an indicator for whether coping skills were generalized. Bruce believed "they're either using what we taught and managing better, or they throw it out the window and go with old faithful, and wind up back here again." Staff interpreted re-hospitalization as evidence that the patient's positive presentation at discharge was incongruent and superficial: "While we do see a number of patients who appear to do well in groups, appear to do well in the program...we are providing services within a short period of time again for them." The reliance on negative patient outcomes to assess the long-term effectiveness of the program could have been addressed by collecting data on positive outcomes by follow-up studies conducted post-hospitalization. This would have required substantial effort, and could be the subject of a further study.

Appeal of DBT as a treatment modality. The fifth most hindering category was the appeal of DBT as a treatment modality. This category included knowledge and perception of DBT-A, in addition to the content and screening of the DBT-STGs. Subcategories were: lack of staff familiarity, large group sizes, and the repetitive nature of the groups.

Lack of staff familiarity. Several staff members mentioned a lack of prior knowledge about DBT as a treatment modality. Others lacked prior knowledge about its utility for adolescents. A nurse and manager who were both hired after initial DBT

implementation were both "surprised" to find DBT being implemented in the setting, because they were only familiar with DBT's application for BPD in adult populations. This was the population that DBT was known to treat, and thus this familiarity should be somewhat expected. Rose had some knowledge about DBT use with adolescents, but was unfamiliar with its adaptation for inpatient settings. During second round interviews, staff reported that this was a fairly minor hindrance, since staff without prior knowledge of DBT or who lacked knowledge about its use with adolescent inpatients were soon exposed to its utility, which resulted in increasing support for the program.

The lack of staff familiarity with DBT kindled skepticism. Some staff considered its name to be foreign ("out there"). For example, Mike stated: "I think the name had some to do with the weird part, the 'dialectical behavioral.' You think of a scientist in the experiment room, coming up with some kind of concoction." Mike's lack of familiarity led to skepticism: "So that was my first thought. 'What is this? *What in the world is this*?'" Skip felt similarly: "Somebody needs to rename that therapy." He suggested that the name was difficult to explain to staff. "When it comes time to explain it, it becomes more confusing. 'Dialectical behavior therapy? *What the heck is that*?'"

Some of the group exercises were also foreign and "strange" to the staff, especially those who had not been exposed to DBT-STGs. Rose had not attended a group, and thus imagined that patients put "ice in their mouth." This was a misunderstanding; patients held ice in their *hands* for 60 seconds during one activity, to practice tolerating distress. Staff members who were exposed to the group exercises did not feel DBT was foreign. *Large group sizes.* When DBT groups were first introduced, no formal limits were placed on group size. This resulted in some groups of 12 and 13 patients. One group leader shared that leading a large group was often a challenge and not always successful. Like other staff members, he wondered if there should be limit or cut-off in terms of group size. "If there's more than eight people, it can become difficult." The group leader reported that he would have felt more anxious about leading such large groups had he not did not been familiar with the setting and patient population. He imagined that master's-level interns could have felt more anxious. Other supporting staff also recommended that the group size should be reduced, though some felt that if the right screening procedures were put in place, even large groups could be run successfully with staff support. During the second year of implementation, DBT-STG size was capped at ten patients, to address problems with large groups. At times, this resulted in two DBT-STGs being offered at the same time. When this occurred, trained master's-level interns and milieu staff were used as secondary group leaders.

Repetitive nature of the groups. By the end of the 24-months, I had developed 12 DBT-STG outlines. I intentionally restricted the number of groups developed, since patients were only hospitalized for four to six days and therefore would miss important material if the curriculum were broadened. I chose depth over breadth, following the recommendations of Miller, Rathus, and Linehan (2007) that reinforcing concepts through repetition was more valuable than introducing new concepts that were not as reinforced. As a result, some staff members complained that the groups were repetitive. It was difficult for some of the supporting milieu staff not to engage in side-conversation, because they had seen the group "for the umpteenth time." Macy reported: "I think for

the milieu staff, you start getting to the point where it's like, *okay, again*? It can get boring." Macy acknowledged writing "to do lists" while supporting the group. Another staff member brought a book to read. Some milieu staff members requested that more groups be developed, out of this boredom.

Yet milieu staff resistance to repetition was contradictory, since staff typically became comfortable leading a select number of expressive therapy or life skills groups, and offered these repeatedly. Bruce would hear, "Well, I've done coping skills books and I did leisure brochures, so they're getting care labels today." In regards to expressive therapy groups, Rose also remarked: "I did kind of feel that we were doing the same kinds of things over and over, and the kids weren't necessarily getting helped by it." While the repetition found in expressive therapy groups had no perceived benefit, DBT-STG repetition was a minor complaint for some staff members because they understood that repeating groups was beneficial for the patients. Bruce reflected that when a patient was re-admitted to the hospital, they sometimes reported learning or understanding DBT-STG concepts at a deeper level than when they first attended the group. Bruce used the example of a patient who was re-introduced to the pros/cons problem-solving group. During the group, the patient stated: "oh, I didn't catch that before." Bruce understood that repetition helped patients to expand their knowledge base: "repetition is the mother of all learning." Thus, while some milieu staff members felt bored in the groups, they could recognize the benefit to the patients of repeating the same curriculum.

Implementer characteristics. The sixth most hindering category was characteristics of the implementer. This category included specific actions and non-actions by the primary implementer, and the training of other group leaders following

initial implementation. Subcategories were: inadequate education for staff and families, unfamiliarity with diary cards, and differing performance among group leaders.

Inadequate information for staff and families. Staff members knew that DBT-STGs were occurring, but felt they lacked education and exposure. Confusion seemed to exist about the inclusion criteria, age ranges, and intervention approach. Rose "knew it was reputable, that it had good research behind it, but to this day, I'm still not sure of what you guys are doing in there." One milieu staff member reported: "Unless you sat in a group, you really didn't know what DBT was." For Mike, lack of education about DBT-A fostered his initial resistance to the model: "I think this is where some of the weirdness came from. Dialetical behavior therapy, it was something that none of the milieu staff was trained on."

During the summative interviews, staff members requested more formal education on DBT-STGs and the diary card. Following the summative interviews, I conducted brief trainings on DBT-A during mandatory staff meetings toward the conclusion of the 24-month duration of the study to address this deficit in staff understanding of DBT-A.

Unfamiliarity with diary cards. During interviews, several members of the milieu staff were still unfamiliar with the diary cards. Rose spoke for the milieu staff when she shared, "what are we expected to do as milieu staff with these diary cards?" Rose reflected that the diary cards "may be the one thing that maybe could have gone a little bit smoother," since the milieu staff were unable to provide a cogent rationale and explanation for the importance of using the diary card to patients. Another staff member concurred: "And the diary cards are an aspect of DBT that needs to be supported. We should be able to explain to the patients how to use them." Because staff were uneducated

about the diary cards, they were less likely to follow-up with patients to ensure utilization. I attempted to address this deficit by providing education about the diary cards during my presentation to the milieu staff about DBT-A during mandatory staff meetings conducted toward the end of the 24-month duration of the study.

Differing performance among group leaders. Some milieu staff members reported that group leaders had different levels of performance in leading DBT-STGs ("some of them would muddle through it"). This appeared to be more related to competence than familiarity, since some group leaders were "just better at it." Skip used an analogy to explain this difference in quality: "The original copy is always the best." Skip believed that subsequently trained group leaders were usually less effective than the original implementer, due to lower personal investment in DBT-A and tendency to deliver the intervention in a more "stiff and rigid" fashion. When learning to lead DBT-STGs, some master's-level interns were characterized as not being intimately familiar with the material and thus using more of a lecture-based format, which was already known to be unpopular with patients and staff from the initial phase of implementation.

Data Convergence

Subquestions b and c are now addressed by considering the extent to which the qualitative and quantitative data converged *within* different phases of the study, and *between* different phases of the study.

Within phases. The majority of qualitative data gathered from field observations were consistent with qualitative data gathered from the focus group and in-depth interviews. For example, I observed that abrupt changes in the setting were met with more staff resistance; the change to a primary therapist model was an example of this.

Staff disclosed in meetings that they liked the gradual nature of DBT-A implementation, also found during in-depth interviews. However, an important discrepancy existed between the field observations collected during the study with the in-depth interviews and focus group; I was unaware of milieu staff resistance until conducting the focus group and interviews.

Quantitative and qualitative data seemed to converge within phases. For example, impact on patients was the top-ranked category during second round interviews (quantitative), and interviewees identified prioritizing patient care as their first priority during first round interviews (qualitative). The impact on patients was ranked more highly as a helping than hindering category in importance, and likewise, staff support was ranked more highly as a hindering than helping category in relative importance. These mean quantitative values were consistent with qualitative data. One interviewee elucidated why impact on patients was a more helpful than hindering category, and staff support a more hindering than helpful category: "I've seen DBT be a positive thing to the patients. I think it's just the staff that are causing issues, personally." The convergence of qualitative and quantitative data lends greater support for these findings.

Between phases. Data gathered between phases from the focus group and indepth interviews were also mostly consistent, such as the agreement by group leaders (interviews) and milieu staff (focus group) about the stepwise dynamic process of staff adjustment to DBT-STGs. Some information from the focus group was not consistent with the in-depth interviews, such as the milieu staff's acknowledgement of fears regarding role reduction and job loss. This was not mentioned during in-depth interviews approximately six months later, likely because this fear did not persist. Some field observations were also inconsistent between phases. Initial field observations during the first 12 months suggested that DBT-A could be implemented without formal financial backing. However, I later observed that the establishment of the primary therapist model at 12 months was crucial to the full implementation of DBT-A and its sustained place in the program. These examples of non-convergence produced important findings, at times providing support for previously existing research (e.g., the importance of financial support; Fixsen et al., 2005).

During the summative interviews (18-24 months), nearly all staff members (94.4%, n = 17) reported that the positive patient response evident in the quantitative patient feedback data gathered between 0 to 18 months was "not surprising" and "expected." The single interviewee who did report surprise also noted that their limited contact with the feedback slips had biased their perspective; this interviewee had noticed a lukewarm response from patients when personally collecting feedback slips at the conclusion of a few DBT-STGs. In contrast, the majority of interviewees reported that the data were comparable to their own observations regarding positive patient response. Prior to reviewing descriptive statistics of the patient feedback data, Bruce estimated that "85 to 90%" of patients were learning new coping skills during the group. This was very similar to patient feedback data, which displayed that just over 83% of patients reported learning new coping skills that they can use at home. While it is difficult to truly know whether patients had learned coping skills and would generalize them to their natural environment, this triangulation of data provided support for positive patient response.

Chapter V: Discussion

Yin's (2009, 2012) suggestions for organizing the discussion section of this dissertation were adhered to. Implications of findings for this case study are first discussed, regarding the central research question and related subquestions. Next, identified theoretical propositions (Yin, 2009) and issues (Stake, 1995) are addressed. Findings of this study are compared with pre-existing constructs in the empirical literature to make analytic generalizations (Yin, 2009, 2012). Finally, consideration is given to the impact, relevance, and limitations of this research project. The Discussion section concludes with possible directions for future research.

Research Questions

While answering the central research question and first subquestion, it was difficult to distinguish and delineate subcategories. The six categories often interacted with each other, and were difficult to cleanly define. For example, when members of the milieu staff did not adequately support the group, was this best categorized as inadequate information and direction provided about the supporter role (implementer characteristics), the lack of teamwork between group leaders and milieu staff (organizational dynamics and structure), inadequate milieu staff support (staff support), or a "hiccup" that occurred during the process of implementation (the implementation process)? These six categories therefore seemed to represent similar constructs at times, implying that what helps and hinders implementation is complex and interwoven. Their shared variance among categories makes them difficult to separate and define. One could visualize this as a sort of Venn diagram, whereby each category shares similarities with other categories and has unique features of its own.

Assessing the overall importance of each category may not have produced reliable results. During second-round summative interviews, staff reported that all of the categories were important. A milieu counselor stated that while she had ranked a helping category sixth in importance (last place), "It is important to me, just not as important as the other five." Likewise, a different milieu counselor stated when ranking hindering categories: "Honestly, they are all important. It sucks that we have to put them in order." It can be concluded that all six categories were relatively important in helping and hindering the implementation effort, though certain categories are more important than others.

A greater range of values and reduced clustering was observed for categories hindering implementation, suggesting that staff found the relative importance of these categories easier to identify compared to helping categories. Yet several interviewees reported that it was more difficult to rank hindering categories compared to helping categories. No interviewee reported that ranking hindering categories was an easier task. This was supported by quantitative data. Interviewees took a mean time of 479.67 seconds (SD = 249.38) to rank the helping index cards from most to least helping, and took a mean time of 583.00 seconds (SD = 305.70) to rank the hindering index cards from most to least hindering. A *t*-test for dependent means regarding participant time differences between ranking helping and hindering cards was significant ($t_{[29]} = 2.90$, p <.01) with a medium to large effect size (r = .47).

Why would it be more difficult for staff members to identify the relative importance of hindering categories to implementation, compared to helping categories? Three possibilities exist. First, there may have been multiple and varied perspectives regarding what categories were more helpful to the implementation effort. This explanation is difficult to substantiate, considering that standard deviations were comparable between helping and hindering categories. Second, staff may have struggled to rank-order hindering categories because they were all equally important. This explanation was not supported either, since two categories emerged as relatively more important than the others (organizational dynamics and staff support). Both had higher mean values (M = 4.93 and 4.47 respectively) than any of the helping categories.

A third possibility exists for why some staff found the hindering categories more difficult to rank. During second-round interviews, staff reported that many barriers were "easily overcome" and did not persist. When rank-ordering hindering categories, Rose commented: "This is harder to do…I guess because we're at a place where it's successful now, so I'm trying to remember a place when we had more challenges with it. It's easier for me to look at the positives now." Helping categories such as positive patient response and impact on patients continued to persist, making them easier to recall and remember. Thus, the current status of what was helping and hindering the program at the time of the summative interviews seemed to have influenced interviewee response. This suggests that staff members tend to be more aware of persisting issues than historical ones. If hindering issues can be overcome, they are soon forgotten with the passage of time.

The failure to retain historical information by participants has benefits and drawbacks. Positively, if an implementation effort is successful, staff members may tend to forget barriers and difficulties experienced earlier in the process and become more attuned to current successes. This was the case in this study. Negatively, if barriers persist, the staff tends to recall these more readily than past successes that were not sustained. Important facilitative factors such as positive patient response must be maintained over time if they are to continue to exert influence on staff support of the program. This "living in the present" cognitive mindset may help explain why staff members going through the initial phases of implementation tend to be more resistant than during later phases. They are more aware of barriers and hindrances occurring in the present moment, and the program may have a less observable benefit to patients before becoming fully operational. When the program is eventually established and the majority of barriers addressed and overcome, staff may tend to view the program more favorably and forget past struggles.

Subquestions b and c. An important discrepancy existed between the field observations collected during the study and the data collected during the in-depth interviews and focus group. I was unaware of milieu staff resistance until conducting the focus group and interviews; my lack of observation regarding milieu staff resistance indicated that this resistance was covert rather than overt. This lack of data consistency within phases had important implications.

Why was the milieu staff resistance covert rather than overt? It is possible that the milieu staff withheld their complaints and skepticism for fear of managerial response. This connotes a top-down and vertical hierarchy, whereby power is associated with fear and punishment. It is also possible that the staff respected me enough to withhold overt criticism in effort to avoid upsetting someone they cared about. Yet my lack of awareness was not a unique experience; most non-milieu staff members were unaware of covert milieu staff resistance. A milieu staff member provided an insight, when asked about how she would react to an external person implementing DBT-A. She responded in a suspicious tone: "Who is *he* coming in? *Is he going to say something*? I might not be fully comfortable with him yet." This response generates further unanswered questions: What does she have to fear? What might he say? Why did the staff fear that trust would be breached? The fear of an external person "saying something" implies a fear of information being leaked to management, with repercussions. Future implementation efforts in the setting could consider utilizing a similar grassroots approach to the one presented in this study, whereby staff members who are lower on the organizational hierarchy are encouraged to be agents of change within the system. Staff members mentioned during interviews that this approach was welcomed, because it was less forceful and imposing compared with the prior history of unpopular top-down efforts in the setting.

Theoretical Propositions and Issues

Five theoretical propositions (Yin, 2009) and issues (Stake, 1995) were identified *a priori*. These five issues were defined as the role of primary implementer, organizational climate, managerial support, positive patient response, and financial backing in successful implementation.

Proposition/Issue 1: Primary implementer. It was theorized that the relationship between the primary implementer and the staff working at the setting was crucial to the successful implementation effort of an adopted practice within an organization. It was also theorized that the primary implementer could possess certain characteristics (e.g., high pre-existing level of support within an organization) that helped a best practice such as DBT-A to be more easily implemented. My issue question for

Proposition 1 was: What strategies, behaviors, organizational role, and level of support within an organization are required for the primary implementer to successfully implement an EBP such as DBT-A?

Six characteristics associated with my insider status as the primary implementer seemed important to the success of the implementation effort. These characteristics were as follows: insider status, credibility, and respect among the staff; sensitivity to the needs of the setting; egalitarian manner; visibility as team leader; inclusion of staff in decision making; and allegiance to the implemented intervention.

Insider status, credibility, and respect. First, as a former milieu staff member, I had credibility and respect among the staff as an "insider" who had "rose up through the ranks," and was considered "one of us." Considering that the milieu staff was in charge of direct care and managing the milieu, it was important that I was known and respected by this power base. Berwick (2003) suggested that organizational change is commonly facilitated by personal relationships between the implementers and staff: "[staff] learn mainly from people they know well, and they rely on personal familiarity, more than on science and theory, before they decide to test a change" (p. 1972).

Staff members were supportive of another internal person taking initiative in the program, and believed staff strengths were being utilized. They would have resisted an external expert ("outsider") implementing DBT-A in the setting. Rose characterized an external expert as an intruder, who "we don't know, that doesn't know us, that doesn't know our program, that doesn't know our kids, the types of kids we see, their diagnoses, all of it." A nurse imagined that an outsider would be more authoritarian compared to an insider when implementing a new practice. Imitating the voice of an imagined outsider,

she uttered in a menacing whisper: "*We're going to go through changes, and you're going to have to follow our rules.*" Another staff member added, "And so, you're automatically going to be a little guarded." This was compared to the "cheering on" and "people being onboard" that occurs when the implementer is an insider and staff have more implicit trust in the process: "When you have someone within an organization making changes, you think, 'Well, you've got my back.""

Bruce hypothesized that even covert resistance to an outsider would not have "stayed underground for long," and would eventually have become overt. "Even if someone came in who was on a DBT pedestal, the staff would have said, 'So what? Who do they think they are?' You don't know this population.' They would have had to prove themselves." Bruce believed it would have taken months for the external implementer to gain the respect necessary for implementation to be successful. "And even then, I don't feel like it would have been respected nearly as much." It appeared that if someone with more training and experience than myself would have implemented DBT in the setting, even after getting to know the staff over a period of several months, their efforts would not have achieved the same success in implementing DBT-A. "It would have been kinda like a slap in the face. 'You guys aren't capable of this, this is too much for you, so we're going to have to bring somebody else in." This resistance was apparent in staff reactions to the consultant's presence on the unit; even some managers thought that the unit could have implemented changes successfully without external input. Another staff member commented during the summative interviews that the milieu staff had recently been complaining about an outsider teaching a team-building workshop for the staff. "They already had a negative impression about it, because they didn't like the idea of a

third party coming into it. It's like 'in-house,' the organization likes to keep things in the house, they don't like to invite other people into it."

For Rose, the insider status of the implementer was an important "success point" that could be generalized to other settings:

Just the fact that you did it internally is huge. I think that's a huge success point. If a unit is trying to implement this, [instead of] bringing in an outside person, it's probably better just to send a couple people to training who already work for you. Get them competent and roll it out internally.

Sensitivity to the needs of the setting. Second, I was sensitized to the needs of the unit and setting, allowing me to tailor the implementation effort to benefit both staff and patients. This knowledge of gaps in the program was important to staff buy-in, since staff understood that DBT-A was intentionally meant to reduce their workload. By considering both staff and patient needs, I took a dialectical stance to the implementation process (Swales, 2010).

Egalitarian manner. Third, I did not act "superior" when allowed to implement DBT-A or when promoted to primary therapist. I maintained the same attitude and behavior that caused the milieu staff to respect and trust me in the first place. Thus, my prior rapport with the milieu staff was sustained throughout the implementation process. Not all primary therapists were trusted and respected in the same way. Another milieu staff member reported that for other primary therapists, "there isn't that lateral respect...it's a step below superiority." This primary therapist was not a former milieu staff member.

Visibility as team leader. Fourth, I was visible on the unit when developing DBT-STG modules, making copies of handouts, and preparing the program. This visibility helped staff to associate me as the DBT-A team leader; several staff mentioned during summative interviews that DBT-A was "Thomas' baby." This resulted in questions being directed toward the team leader, which helped to control the flow of information. My presence on the unit also allowed me to address problems as they arose during the course of implementation.

Inclusion of staff in decision making. Fifth, I intentionally conducted the focus group solely with the milieu staff, and ensured that milieu staff members were adequately represented during summative interviews. Members of the milieu staff responded to this inclusion with gratitude. During the focus group, several staff members reported that their inclusion had facilitated staff buy-in after 12 months. At the conclusion of the focus group and interviews with the milieu staff, I was thanked for providing an opportunity for the milieu staff to provide input into program improvement decisions. One nurse reported, "It's greatly appreciated in including the milieu staff in your process here, to look at what's being done and how we can make this better for our patients and for our staff." This stood in contrast to interviewing non-milieu staff members, whom *I* primarily thanked for participating. The differences in gratitude may be explained by power dynamics in the setting.

Allegiance to the implemented intervention. Sixth, the structured nature of the DBT-A program was congruent with my personality, enhancing my personal allegiance and commitment to the treatment modality. Following Frank and Frank's (1991)

persuasion model, it can be hypothesized that staff bought into DBT in part because of the commitment and allegiance of the primary implementer to the model.

These six characteristics indicated that the first proposition was accurate: The relationship of the primary implementer with the staff working at the setting *is* crucial to the successful implementation effort of an adopted practice within an organization, and there *are* certain characteristics that the primary implementer can possess (e.g., high pre-existing level of support within an organization) for a best practice such as DBT-A to be more easily implemented.

Proposition/Issue 2: Organizational climate. It was theorized that the current attitude and climate of the organization toward change and innovation was important to the successful implementation of an adopted practice. It was also theorized that an innovative practice such as DBT-A was more likely to be successfully implemented in an organizational climate where multiple program changes were being concurrently implemented. My issue question for proposition 2 was: How important is the current organizational climate's attitude toward change and innovative practices within an AIPS, when implementing an EBP such as DBT-A?

Complex attitudes existed toward change and innovation in the AIPS during the 24 months of the study. From a managerial perspective, organizational climate seemed to inadvertently foster a culture of support for EBPs. Two of the three managers newly hired in the setting supported EBP implementation, and had brought in a consultant to evaluate the program. The presence of a consultant implied that management was already looking to make substantial changes to the program.

Indeed, within the time period of DBT-A implementation, multiple innovations had occurred within the setting. A primary therapist model was introduced, the case management position was reconfigured, life skills groups and Positive Action were implemented, the level system was altered, and the schedule was "tweaked." Thus, from a managerial perspective, a culture of support existed for innovation and change.

Although management supported change and innovation within the program, the sheer number of these innovations was overwhelming to the milieu staff. Historically, the milieu staff charged with implementing those innovations had resisted change. Transition management had not been conducted with the more experienced staff, who had experienced dramatic alterations to the program over the years when "the program got smaller and much more concentrated" because of the reduced patient length of stay. As a result, newer staff hired on the unit noticed greater resistance to change by staff members with longer tenure and reported that the AIPS was "more resistant to change than some of the other units that I've worked on." Staff with longer periods of employment had also become possessive regarding elements of the program with which they had become familiar. Bruce reported that milieu staff with longer periods of employment were more likely to be "indoctrinated into the system of old," and would "jack you up" if you "screwed with" a part of the program that they had become attached to. There were often moments when "people snap at the thought of things changing." Macy acknowledged that changes to the level system were "more difficult than it needed to be, because we were stuck in our ways."

This culture of milieu staff resistance to change and innovation continued throughout the implementation process of DBT-A, making its success all the more

remarkable. Therefore, it does not appear that Fixsen et al.'s (2005) theory was supported by this case study: the success of the implementation effort, despite the hostility toward change and innovation in the organizational climate, suggested that DBT and other EBPs *can* be successfully implemented in settings that are not wholly supportive of organizational innovation and change.

Comparison with Positive Action (PA) group. So how was DBT-A successfully implemented, when an attitude of resistance to change and innovation existed among the milieu staff in the setting? During the 24 months of the study, concurrent implementation processes provided a helpful comparison for how organizational dynamics impacted the success of implementation efforts in the AIPS. In particular, the implementation of the Positive Action (PA) program provided a helpful comparison with DBT-A implementation.

Positive Action (PA) was selected for adoption within the first year of DBT-A implementation. Both programs were selected for adoption based on their EBP status, and were supported by management. Another respected former milieu staff member had selected PA for implementation, and I was included in the decision-making process. Within the first six months of implementation, the PA primary implementer considered PA implementation to be "failing." Greater milieu staff resistance to PA occurred compared to DBT-A, because members of the milieu staff were initially expected to lead the groups. The primary implementer of PA created a training PowerPoint for milieu staff, and posted a sign-up sheet on the unit. Few milieu staff members attended, and none began implementing PA on their own. The milieu staff claimed that the materials were "out of the way," even though milieu staff members visited that location to get

materials for other groups. PA materials were in the same location as the DBT-A materials. The primary implementer of PA grew frustrated, believing these claims were merely "excuses." The PA implementer believed that the staff would have more "buy-in" if they had been more involved in choosing the curriculum. A more accurate interpretation for why PA implementation was initially unsuccessful is because the milieu staff was expected to be the group leaders. PA was originally an addition to the milieu staff responsibilities, not a reduction in their responsibilities.

With the institution of the primary therapist model shortly after the 12-month midpoint of DBT-A implementation, PA groups were successfully implemented. This dramatic transformation in implementation outcomes occurred because primary therapists and master's-level interns assumed group leadership. The responsibility for leading PA groups was removed from the milieu staff. This was a popular decision. During field observations, I noticed that milieu staff members also seemed grateful when a chaplain led spirituality group on Wednesday mornings, because it reduced their group leadership responsibilities for that shift. The argument that practitioner inclusion was needed for successful implemented by primary therapists and interns who were not involved in selecting the group for adoption nor involved in developing group activities. Instead, a far more potent predictor of successful implementation in the setting was the responsibility for group leadership being assumed by non-milieu staff.

Shortly after the 24-month period of DBT-A implementation concluded, a few experienced milieu staff with longer periods of tenure in the setting were promoted to the rank of "team leader," and commissioned with leading PA groups on a daily basis. Team

leaders were considered to have different duties compared to milieu staff, and thus could provide group leadership without carrying the same responsibilities of other milieu staff. While data on the success of this change are not available at the time of writing, this change seems likely to be successful because responsibility for group leadership is not being required by members of the overworked milieu staff.

In contrast, it can be assumed that PA would again be provided at irregular intervals and lack fidelity if the milieu staff re-assumed group leadership. The morning psychoeducational life skills groups, which were implemented shortly after the midpoint evaluation and meant to follow a protocol, were not provided with fidelity because milieu staff members were expected to lead them. Non-milieu staff members had assumed primary leadership for the other main therapeutic group on the unit, interpersonal psychotherapy. On weekends when milieu staff members led that group, problems occurred, such as when milieu staff members who were scheduled to lead interpersonal psychotherapy groups were "called off" for the shift and therefore not able to lead the group. Based on other experiences in the setting with group implementation, it can be inferred with confidence that DBT-STGs would not have been successfully implemented if the milieu staff were solely responsible for leading the groups, because it would not have reduced the milieu staff's responsibility and would have resulted in the DBT groups being offered irregularly or without fidelity.

These contrasting examples indicate that the second proposition was inaccurate. While managerial support for DBT-A adoption and implementation occurred in the context of global support for EBP implementation, DBT-A implementation would likely have been less successful or may even have failed if other organizational dynamics were not addressed such as the milieu staff resistance to implementing innovative practices and the need for non-milieu staff to implement them. In other words, if milieu staff members were not expected to implement the changes, their resistance would become peripheral threat to the success of implementation. Whereas, if milieu staff members were expected to implement changes, their resistance would become a central threat to the success of implementation. It therefore appears that the organizational status of the providers (milieu vs. non-milieu staff) was a central reason for the success of the implementation effort. During summative interviews, all of the milieu staff interviewees agreed that DBT-A implementation would not have been as successful if they had been asked to lead the groups. It can be further concluded that while implementer characteristics, implementation process, impact on patients, and appeal of DBT-A as a treatment modalit were also important, negative organizational dynamics and lack of staff support could make or break an implementation effort.

Proposition/Issue 3: Managerial support. It was theorized that program sustainability required ongoing buy-in from both staff and management. The issue question for Proposition 3 was: Is staff buy-in necessary for DBT-A to be implemented, when support from the management has already been established?

Managerial support for the implementation of DBT-A existed from the outset. The unit manager was vocal in meetings about her support for the DBT-A program. This managerial support for DBT-A influenced staff buy-in because the unit manager held credibility and respect among the staff as someone who had also "risen up from the ranks," having previously worked as a member of the milieu staff as a nurse. Managerial support for DBT-A was maintained when the unit manager and counseling manager observed a positive patient response. Management subsequently included DBT-A in the daily schedule, and hired primary therapists to lead groups such as DBT-A on a daily basis. Managerial support for the adoption and sustained implementation of DBT-A were therefore crucial to its success. The first half of my proposition was therefore accurate, that program sustainability required managerial support.

Staff support for DBT-A seemed to be more important as a hindering than helping category. Interviewees ranked staff support as one of the two least helping categories (fifth and sixth place) over 50% of the time (n = 16). Yet, over half of interviewees (60%) ranked staff support as one of the two most hindering categories (first and second place) affecting implementation (n = 18). It is crucial here to distinguish staff *support* from staff *buy-in*. While staff support hindered implementation, staff had readily bought into DBT-A. Staff buy-in was apparent in multiple data sources. In summative interviewes, only one staff member had significant criticisms about the program (5.6%). Staff believed DBT-A was beneficial and "couldn't imagine" the program without it after 24 months. Gaining staff buy-in was crucial to the success of the implementation effort. As one nurse reported, "I think the staff piece is really critical to the success of something in this unit."

While staff had *bought into* DBT-A, a lack of *support* was apparent. While the majority of problems with inadequate staff support occurred early during implementation and were resolved by the end of the first year (e.g. initial covert skepticism, milieu staff experiencing the natural resistance to change, and milieu staff fears of role reduction and job loss), a more persisting problem in the setting was the lack of consistent DBT-STG

support by milieu staff. This lack of support stemmed from teamwork issues, which were not isolated to DBT-STGs. Teamwork and communication among the milieu staff had become impaired during the course of the study, resulting in low employee engagement scores. As a result of this impaired teamwork and communication, milieu staff members did not provide adequate support to DBT-STGs. Milieu staff members were arriving late or disengaged during group time. During the third phase of the study (18-24 months), the unit manager sent out emails to milieu staff mandating that at least one milieu staff members of the milieu staff had requested training on DBT-STG leadership during the third phase of the study (18-24 months), the majority of the milieu staff did not want to help with leading or co-leading DBT-STGs.

A further example of inadequate staff support was apparent when considering the hypothetical "revolt" that was presumed to occur if milieu staff members were asked to lead DBT-STGs. A comparison of DBT-A with other implementation efforts such as PA suggested that a "revolt" was probably overstated. In the PA implementation, a more passive form of resistance occurred. PA groups were simply not offered when members of the milieu staff were asked to lead the groups. Once non-milieu staff assumed PA leadership, the groups were successfully provided. However, a persisting hindrance was the lack of group leaders in the setting, and therefore it can be argued that lack of staff buy-in, even by supporting staff, was an important hindrance to the implementation effort. It therefore appears that the second half of my proposition is accurate, that program sustainability also required staff buy-in.

Proposition/Issue 4: Positive patient response. It was theorized that while a positive patient response to the intervention is required, it would not be sufficient for the successful implementation of a new practice without staff and managerial buy-in. The issue question for the fourth proposition was: How influential is a positive patient response to organizational acceptance of a newly implemented EBP such as DBT-A in an AIPS?

Staff acceptance of DBT-A was strongly influenced by patient response. Interviewees ranked impact on patients as the most important helping category. Staff identified patient care as their first priority, and therefore it was not surprising that a positive patient response would have resulted in increased staff buy-in. Providing data on patient perceptions of the DBT-STGs was particularly powerful. Staff changed their perceptions of the group after viewing the feedback data. One milieu counselor reconsidered her previously critical statements about the program: "I don't feel that it's a bad group, I feel that I have said a lot of negative things about it...I'm not saying it is all bad altogether." Her perception of DBT-A in the setting appeared to have been positively influenced by her reviewing descriptive statistics that demonstrated positive patient response. Another milieu counselor commented: "it is encouraging to keep doing DBT." This data appeared to be consistent with other settings. A staff member who provided outpatient DBT in another organization found that the feedback data "mirrors the comments that I have heard of some of the people that have continued with their treatment in an outpatient setting."

It appears that a positive patient response was necessary for the sustained support of DBT-A implementation. But was positive patient response *sufficient* for the successful implementation of a new practice? The existence of five other categories affecting this implementation effort suggest otherwise. While a positive patient response was critical to the sustained buy-in for the program by management and staff, it was not present initially. Problems arose during the first few months of implementation because of patients leaving groups early or refusing to attend, and then disrupting the milieu in the main unit hallway. Staff reported that the lecture-based delivery of the DBT-STG content was ineffective and "boring" to the patients. Instead, milieu staff bought-into the DBT-A program at first because it benefitted them by providing a therapeutic activity at a busy time in the schedule, freeing them up to attend to admissions and crisis management. However, once staff observed a positive patient response and understood how DBT-A was beneficial to patients by enhancing skill building, their support was sustained. Thus, the theoretical proposition was correct, that positive patient response was necessary though not sufficient for the successful implementation of a new practice. Although influential, the success of this implementation effort also required staff and managerial "buy-in," in addition to positive patient response.

Proposition/Issue 5: Financial backing. It was theorized that, contrary to previous theoretical approaches to implementation (e.g., Fixsen, et al., 2005), formal financial backing by the organization was not necessary for successful implementation efforts in a small organizational environment. The issue question for Proposition 5 was: Can an EBP such as DBT-A be implemented in an AIPS without any formal financial backing?

At the beginning of this study, start-up costs were low and no internal funds were allocated for DBT-A implementation, although management did purchase materials and

other items needed for the initial DBT-STGs (under \$100). It was therefore imagined at the beginning of this study that, contrary to Fixsen et al. (2005), formal financial backing was not necessary for an organization to successfully implement a best practice within a smaller setting. By the conclusion of the study, it became apparent that the title of "financial backing" was misleading, because it connotes formal internal funding being allocated to a project. While no formal internal funding was allocated specifically for DBT-A implementation, management introduced new lines in the budget for primary therapists. The DBT-A program did not become fully operational until the primary therapists were hired, and DBT-STGs likely would not have become a daily occurrence without this budgeted salary item. Two of the three main primary therapists hired were the main DBT-STG leaders on the unit. The program may not have been sustained if the primary therapists were not the main DBT-STG leaders, since other primary therapists may have opted not to provide DBT-STG leadership or to provide individual and family therapy within a DBT-A framework. Therefore, financial support by the organization was very important to the success of DBT-A implementation in this study, supporting Fixsen et al.'s (2005) theory. This proposition was therefore incorrect: formal financial backing by the organization was necessary for a successful implementation effort, even in a small organizational environment. Financial backing might not be overt in the form of budgeted trainings or materials. Instead, it may take the covert form of budgeting additional positions to meet the emerging need for the setting to provide new interventions and complete new tasks for the EBP implementation effort to be successful.

Other studies have reported similar findings. The Pazano-led research team published a report two years later about 21 respondents who had reported that their attempts at implementing an EBP had been unsuccessful (Massati, Sweeney, Pazano, & Roth, 2008). Half of the 21 respondents reported that financial resources were inadequately provided for EBP implementation, representing the strongest rationale for discontinuing EBP implementation. The authors concluded that it appears financial backing is crucial to the success of an implementation effort.

Analytic Generalizations

Analytic generalizations (Stake, 2009) are defined as connections among the findings of a case study and existing theories in the extant literature. In this section, findings and lessons learned in this study are compared with existing theoretical constructs. These theories are considered in chronological order, beginning with pre-adoption and ending with sustaining implementation. These theories are as follows: Pazano, Seffrin, Chaney-Jones et al. (2006) pre-adoption factors that predict successful implementation efforts; Swales (2010) pre-implementation suggestions; Fixsen et al.'s (2004) top five reasons for and against adopting an EBP; Rogers' (2002), Berwick's (2003), and Denton et al.'s (2003) strategies that facilitate implementation; Aarons and Sawitzky's (2006) research on the impact of organizational climate regarding EBP implementation; Theberge and Karan's (2004) and Bryk and Snyder's (2002) research into the impact of organizational dynamics on outcomes; Fixsen et al.'s (2005) stages of implementation; and McHugh and Barlow's (2010) assertion regarding the importance of sustained training and supervision of EBP providers.

Pazano, Seffrin, Chaney-Jones et al. (2006). In the follow-up quantitative phase of their study, Pazano, Seffrin, Chaney-Jones et al. (2006) concluded that the likelihood of success could be predicted early during the implementation process, at the

exploration and planning phase prior to an EBP even being adopted. Organizations were more likely to successfully implement EBPs when they saw the benefits outweighing the costs, identified tangible outcomes, used objective decision making strategies that included staff members, and had support from leadership during the exploration phase. Barriers to adoption included the perceived risk to the organization, the capacity to manage or absorb this risk, and the risk-taking propensity of the organization. In this study, the relative risk of implementing DBT-A was fairly minor since low start-up costs were required initially. The potential benefits of DBT-A implementation far outweighed the risks. Tangible outcomes were outlined for the implementation of DBT-A, specifically that patients would learn more adaptive coping strategies. By recruiting milieu staff members during the focus group at midpoint evaluation, and multidisciplinary team members during the in-depth interviews at summative evaluation, I established objective decision making strategies throughout the process. Management was supportive of DBT-A implementation throughout the 24-month process, and both the unit manager and myself made the adoption decision (exploration phase). This case study therefore supports the findings of Pazano, Seffrin, Chaney-Jones et al. (2006).

Swales, 2010. Recommendations for orienting staff during adoption of EBPs existed in the literature. Swales (2010) asserted that staff must be oriented to the adoption decision once compatibility with organizational goals and suitability of the intervention to the setting had been assessed. She recommended that staff be provided with a review of the population served by the program, evidence base for DBT, expected outcomes for the new DBT program, and the resources required for implementation. In retrospect, these recommendations were not adhered to during the 24 months of

implementation, resulting in increased staff resistance. For example, the staff in the setting complained in interviews that inadequate education was provided about DBT-A, and several staff members were unaware that DBT-A was even being implemented. Staff may have resisted implementation less if provided at the outset with a cogent rationale for implementation and education about DBT-A. The inclusion of the milieu staff in this adoption decision would be especially important, since milieu staff members reported that inclusion helped to foster support for the program's implementation. This case study therefore supports Swales' (2010) recommendations.

Fixsen et al., 2004. Workshop participants at a children's mental healthcare conference had identified their top five reasons for implementing an EBP as enhancing intervention effectiveness, improving organizational services, available funding for EBP implementation, ability to adapt EBPs, and having relevant information available. In this case study, the success of the implementation effort was influenced by these five factors. Enhancing program effectiveness included DBT-A's impact on patients and enhancement of the program goals. Improving organizational services included DBT-A's ability to meet a need in the program for more skill building. Available funding for EBP *implementation* included managerial and financial support for DBT-A, as evidenced by the hiring of primary therapists and purchasing of materials needed for DBT-STGs. Ability to adapt EBPs included adapting the program delivery of DBT-A to best meet the needs of the patient population being served, by utilizing localized patient feedback data to inform subsequent adaptation by incorporating more hands-on learning. Having relevant information available included having a staff member identified as the DBT-A team leader to answer questions about implementation. It appears that my findings were

consistent with Fixsen et al.'s (2004), especially considering that the authors' top two identified reasons that organizations tend to implement EBPs (enhancing intervention effectiveness, improving organizational services) were similar to the most important helping category in this study (impact on patients).

During a prior workshop, Fixsen et al. (2004) found that the top five reasons for not adopting an EBP included: the research base is unconvincing, EBPs are difficult to implement, EBPs require too much change, EBPs do not comprehensively address clinical problems, and the infrastructure for implementing EBPs either does not exist or is unsupported by research. Since DBT-A was easily adopted in the setting, it is reasonable to expect that none of these barriers to adoption would have been present in this case, or at least, was insignificant. The research base seems convincing for the benefits of DBT, and may be part of the reason why it is one of the two most popular practices to implement in naturalistic settings (McHugh & Barlow, 2010). DBT-A did not require too much change, since a precedent already existed for skills training within the program and group therapies were provided on a daily basis. It is possible, however, that DBT-A would not have been implemented if the milieu staff were asked to lead DBT-STGs. DBT-A seemed to address clinical problems found in the setting, and DBT-A was known to have efficacy for adolescents struggling with a wide variety of clinical diagnoses, including anorexia, binge eating, bipolar disorder, borderline personality features, bulimia, depression, and oppositional-defiant disorder. Although problems such as autism or schizophrenia were not adequately addressed by DBT-A, it could be argued that no program can comprehensively address the needs of all patients in a typical inpatient setting. Finally, although the infrastructure for implementing DBT-A did not

exist in the research, this was the topic of the case study and thus would have been a minor barrier. As could be expected, it does not appear that any of Fixsen et al.'s (2004) barriers were fully present during the adoption of DBT-A, which lends credibility to their findings since DBT-A was successfully adopted and implemented in the AIPS.

Rogers, 2002. Several theories of factors that facilitate organizational change exist in the extant literature. Three of the most salient were outlined by Rogers (2002), Berwick (2003), and Denton, Vaughn, and Fletcher (2003). Rogers (2002) wrote that organizational change was facilitated by clear communication among staff members, a cogent theory regarding the need for change, and the identification of "champions" who can consistently "cheerlead" and encourage other staff members. In this study, several of these facilitating factors were absent and actually represented hindrances to the implementation effort. During summative interviews, staff complained that clear communication was lacking among group leaders and milieu staff regarding which patients were attending the groups, which staff member was leading the groups, and what the expectations were for members of the milieu staff who provided group support. A cogent theory regarding the need for change was also not provided to the staff, and the lack of education provided by the implementer was a significant barrier to implementation. These problems were addressed during the 24 months of implementation, which sustained staff trust in the implementer and thus facilitated the success of the implementation effort. Furthermore, a team leader (myself) and champion (the unit manager) were crucial in "selling" the importance of DBT-A to other staff members and ensuring the success of the implementation effort. Rogers' facilitating

factors were therefore also apparent in this case study, identified as hindrances when absent.

Berwick, 2003. This study supported Berwick's (2003) theory of organizational change, that certain factors facilitate the likelihood of successful change efforts. These factors included the relationship between implementer and the staff, the perceived benefit of the intervention, compatibility of the intervention with the organization's goals, simplicity of intervention, and ability to observe an intervention. All of these factors were found in the present study. Personal relationships among the implementer, champion, and staff facilitated implementation. As the implementer, the staff responded favorably to me as an "insider" who was a current staff member in the AIPS. Both the primary implementer and unit manager had gained respect and credibility as former milieu staff members, and thus our support as implementers and champions for DBT-A had a persuasive influence on staff buy-in. Furthermore, I held trusting, collaborative, and supportive relationships with members of the staff in the setting. This supported Berwick's theory; staff members tend to "learn mainly from people they know well, and they rely on personal familiarity, more than on science and theory, before they decide to test a change" (p. 1972).

DBT-A had the perceived benefit of meeting a patient need in the program for more skill building. Staff had grown frustrated with expressive therapy and arts-and-craft groups that did not provide patients with "the skills they needed to reintegrate" into their home environment. Skill building was already compatible with the organization's goals, evident by the identification of "inadequate coping skills" as reason for hospitalization that were written into treatment plans before the DBT-A program was implemented.
Although DBT-A was not a simplistic intervention to implement, the primary group leaders voluntarily led the groups and the milieu staff was not expected to provide DBT-STG leadership, which minimized the barriers inherent in training unwilling or hesitant staff in a modality that was difficult to conceptualize and comprehend. The milieu staff were invited to support DBT-STGs, and this ability to observe the intervention resulted in support; several staff members mentioned that they began to perceive the group favorably after observing positive patient response and its ability to meet the needs of the patient population.

Denton, Vaughn, and Fletcher, 2003. In Denton, Vaughn, and Fletcher (2003), factors that influenced the sustainability of implemented programs included practitioner acceptance of and commitment to the intervention, buy-in throughout the organization, the program being seen as practical and beneficial to clients, administrative support and leadership, and practitioner feelings of professionalism and self-determination. In the case under study, the two central group leaders and primary therapists demonstrated *commitment* to the intervention. *Buy-in* for the program was found throughout the organization, with DBT-A having received "the stamp of approval from higher management to your floor staff." For all levels (management, practitioners, and staff), support was sustained after staff saw the *practical benefits* to patients and observed a positive patient response. These factors all seemed to help the implementation of DBT-A in the AIPS.

Practitioner professionalism and self-determination is important to consider when implementing a new practice. In this case study, management established practitioner feelings of professionalism and self-determination by allowing primary therapists and group leaders to decide whether to adopt DBT-A in their work. They were not micromanaged or forced to adopt DBT-A within the setting. In fact, two of the primary therapists did not lead DBT-STGs and did not provide individual or family therapy within a DBT-A framework. Both of the two primary DBT-STG leaders were promoted to primary therapists, a position associated with increased professional responsibilities and independence. This can be contrasted with the approach found in Steinfeld et al. (2009), where practitioners were expected to utilize CBT regardless of preference. Forcing hesitant practitioners to adopt CBT increased resistance; practitioners responded with comments such as "clients will never agree to complete this" (p. 413).

All of the factors listed below helped the implementation effort in this case study, consistent with prior existing research (Berwick, 2003; Denton, Vaughn, & Fletcher, 2003; Fixsen et al., 2004; Fixsen et al., 2005; Rogers, 2002):

- Clear communication among staff members.
- Compatibility of the intervention with the organizations' goals and treatment philosophy.
- Buy-in throughout the organization, including management, practitioners, and support staff.
- Identification of team leaders (implementers) and champions (cheerleaders), who must help sell staff on the need for the intervention in the setting.
- Collaborative and respectful relationship between implementers, and champions, and support staff.
- A cogent rationale for change and the benefit of the intervention to the population being served.

- Opportunities for staff to observe the practical benefit of the intervention to the population being served.
- Invitations for staff training, rather than coercion.
- The simplicity of the new intervention.
- Managerial and administrative support.
- Tailoring the intervention to the unique needs of the patient population being served.
- Practitioner acceptance and commitment to the intervention.
- Practitioner feelings of professionalism and self-determination.

Several other factors that also facilitated the successful implementation effort in this case study existed outside of the research by Berwick (2003), Denton, Vaughn and Fletcher (2003), and Rogers (2002). Further studies are needed to validate the importance of these additional factors before other organizations consider these to be recommendations for EBP implementation. Some of these factors may not be transferable to different settings.

- Implementer's status as an "insider" and current staff member in the setting.
- Staff perceptions that the implementer ensured that the program benefitted the staff as well as the patients.
- Implementer's demonstrated allegiance and commitment to the intervention.
- Consistent managerial support for the implementer and the intervention.
- Management encouraged internal staff initiative and risk taking.
- Implementer did not feel micromanaged.
- Intervention addressed desired program outcomes.
- No competing theoretical models or interventions existed.
- The providers of the intervention had adequate expertise, commitment, and training.

- Implementation felt like a grassroots, not top-down effort.
- Staff did not feel imposed upon.
- Implementation proceeded gradually, allowing staff time to adapt and acclimatize.
- Staff were included in decisions about program improvement.
- Resources such as master's-level interns were utilized to help with implementation.
- Patient benefit and impact was demonstrated through data, not just anecdotal reports.
- Problems were addressed and resolved as they arose during implementation.

Aarons and Sawitzky, 2006. Theorists have conjectured that disorganized or unhealthy organizational climates are more likely to produce and include practitioners who are resistant to using new methods, such as EBPs (Aarons & Sawitzky, 2006). The influence of organizational climate and culture on staff resistance to DBT-A implementation was apparent in this study. Negative organizational dynamics and structure and inadequate staff support were ranked as the top two hindering categories 87% of the time (26 of 30 participants). When hindering implementation, organizational dynamics and structure and staff support mainly comprised disorganized and unhealthy relational interactions between members of the multidisciplinary team. Group leaders and milieu staff miscommunicated, and teamwork among the milieu staff was impaired. Organizational dynamics in the setting between management and milieu staff created problems with teamwork and communication among the members of the milieu staff. It appears that the interactions between staff members in the setting can be pivotal barriers that hinder the success of an implementation effort, evidenced by the following process: a great deal of change had occurred in the setting as a result of declining reimbursement rates for extended lengths of stay, resulting in shorter periods of hospitalization. No

transition management had been attempted with staff who had been forced to adapt to those changes. Management historically implemented changes in a top-down fashion, which created further staff resistance. Managerial turnover occurred, and management implemented a lot of changes within the next 24 months. A lot of staff turnover occurred at the same time; milieu staff felt further overwhelmed by having to train new staff members while having to adapt to the new changes. Milieu staff became myopic, taking care of "their own little circle of patients." Teamwork and communication became impaired, and milieu staff did not adequately support DBT-STGs. These dynamics and processes are often unknown to the implementer and are difficult to control. While multiple other factors affected this outcome of inadequate staff support for DBT-A, this study supports the claims of Aarons and Sawitzky (2006) that organizational dynamics are a powerful variable that must be considered when implementing any EBP.

Theberge and Karan, 2004; Bryk and Synder, 2002. Organizational dynamics can also impact adolescent outcomes, as found by Theberge and Karan (2004) in their study of peer mediation utilization by students. The authors identified six factors that hindered the utilization of peer mediation services, and their findings indicated that organizational dynamics loomed large in student underutilization of peer mediation. In the study, an overly punitive disciplinary approach existed at the school. Mediation may have been threatening to the faculty at the school who were used to a disciplinary approach, whereby adults assumed that students were at fault unless proved otherwise. This top-down model of discipline encouraged punitive, win-lose resolutions at the expense of collaborative, win-win problem solving. Mediators complained that peer mediation was coordinated in the Dean's office, not the guidance office, and thus was

associated with punitive discipline. The administration required students at conflict to choose between detention and mediation, establishing mediation services as a forced choice rather than a voluntary act. This again associated mediation with the punitive disciplinary approach of the school. The authors concluded that peer mediation programs could only be successfully implemented if the school's climate and culture can accommodate the values and processes of mediation.

In this case study, impaired teamwork and communication existed among the milieu staff and DBT-STG leaders, which could have impacted patient outcomes. A milieu counselor understood:

We're all here as a team and if you work as one, as a team, it's going to be the best for the kids. If the kids start seeing tension or it's just not united...they see that kind of stuff in their homes. They can probably pick up on that kind of stuff. This counselor implicitly connected staff cohesiveness with parental relations ("they see that kind of stuff in their homes"). Interactional processes from the family therapy field elucidate why impaired staff teamwork affects patient outcomes. Children do better when parents communicate and are on the same "team;" children do worse when parents are disconnected or argumentative. Similarly, the level of trust between staff affects outcomes for patients. In a 10-year study of more than 400 Chicago elementary schools, trust among faculty did not guarantee student academic achievement, but without trust, schools had little chance of improving (Bryk & Schneider, 2002). Barriers to trust included top-down decision-making that was perceived as misinformed or not in the school's best interest. Recommendations for building trust have included supporting experimentation and risk, involving staff in decision making, and facilitating and modeling effective communication (Blase & Blase, 2001).

So why did impaired teamwork and communication between the milieu staff not impact patient outcomes in this case study? Trust existed among the implementer, champion, and the milieu staff. Both the primarily implementer and unit manager were trusted former milieu staff members. By supporting the experimentation and risk inherent to adopting and implementing the DBT-A program, the unit manager modeled trust. By including staff in the decision making process about program improvement via focus groups and interviews, trust was further developed. Providing forums such as the focus group for discussion about the DBT-A program also facilitated and modeled effective communication. These behaviors of the implementer and champion helped to reduce the impact of impaired teamwork and communication on patient outcomes. Future implementation efforts could consider how to build trust within an organization, enhancing the likelihood of success when conducting implementation efforts.

Fixsen et al., 2005. The six stages of implementation identified by Fixsen et al. (2005) were: exploration and adoption, program installation, initial implementation, full operation, innovation, and sustainability. The initial implementation stage was theorized to last for 4-6 months, and full operation was theorized to occur within 12-24 months. Other studies, such as Steinfeld et al. (2009), have reported that Fixsen et al.'s model provided "an excellent template to use in development of an EBP training program" (p. 415).

The implementation process of this case study generally followed Fixsen et al.'s (2005) stage model, with one important divergence. The exploration and adoption stage

occurred first; I approached the unit manager with my rationale for DBT-A adoption, and began developing patient handouts and leader guides for the initial 90 minute DBT-STGs. The program installation stage lasted for four months. During this stage, DBT-STGs were trialed once a week initially and only one DBT-STG leader existed until a subsequent leader was trained. At this time, the implementation effort entered the program installation stage. Between the fourth and twelfth months of the study, further groups were implemented and DBT-STGs were provided at increased daily frequency (twice a week, then four times a week). By the time of the 12-month midpoint, the primary therapist model was implemented. DBT-STGs were provided daily, and patients were provided with individual and family therapy from the DBT-A framework. After 12 months of implementation, the DBT-A program in the AIPS therefore reached the full operation stage. By the 12-month midpoint, focus group members reported that they had "got used" to DBT-A. Bruce stated, "We've been doing DBT for over a year now... it's moved DBT into the accepted category of the program." At the time of writing, the program had entered into its third year of implementation, which can be considered the sustainability stage.

These stages all seemed to proceed in the timeframe outlined by Fixsen et al. (2005). However, the innovation stage of the Fixsen et al. (2005) model was not commensurate with the timeline of innovation that occurred in this case study. Patient feedback was collected throughout the first 18 months, and informed program adaptation beginning within the first six months of implementation. Staff members and patients responded to these modifications in the delivery system, particularly the inclusion of experiential learning rather than lecture format. Staff felt that without those changes, the

program could have failed. If following Fixsen et al.'s model, the innovation stage would occur after full implementation, and not before at least 12 months. This is too long to wait before tailoring an EBP to the localized need and preferences of the patient population being served in naturalistic settings. Furthermore, this study seems to indicate that innovation occurs throughout the process of implementation and is not a discrete "stage," per se.

McHugh and Barlow, 2010. When implementing an EBP, McHugh and Barlow (2010) asserted that sustained training and supervision is needed for the providers of an EBP. Training practitioners in the use of EBPs can be a particularly daunting barrier to implementation. Other practice behaviors in healthcare (e.g., hand washing) do not require a skill set as complex and nuanced as implementing a psychological treatment, but nevertheless require substantial training to ensure staff buy-in and fidelity (McHugh & Barlow, 2010). Unfortunately, DBT trainings for practitioners have typically been limited to one or two day workshops (Linehan, 2007). This is an ineffective delivery model, since brief didactic methods do not meet the need of practitioners, who require both didactic training and supervision to administer a psychological treatment correctly and with integrity (McHugh & Barlow, 2010). Oxman, Thomson, Davis, and Haynes (1995) conducted a systematic review of implementation studies, and found that mere didactic training without supervision did not result in sustained practitioner utilization of a new intervention.

In this case study, DBT-A providers were trained and supervised over the course of several years. Prolonged training and supervision ensured that providers were utilizing DBT-A with fidelity. During in-depth interviews, staff members recognized the intensity of training and level of competence required to provide DBT-STGs. This case study therefore seems to support McHugh and Barlow's (2010) assertion that sustained training and supervision is required for EBP providers.

Other Factors. Several novel factors seem to exist in this case study that helped to sustain the DBT-A program. During summative interviews, Bruce suggested that EBP implementation in an AIPS was more likely to be sustained than in traditional outpatient settings because of the difficulties inherent in managing a long-term treatment versus a briefer treatment that can be provided in several days. He also believed that DBT-A status as an EBP would help to sustain the program, since EBPs are appealing to accrediting bodies: "Because it's an evidence-based practice, the doctors and folks who love to keep Joint Commission happy want to keep it around for a long time."

Another important sustainability factor was time. In the AIPS, staff seemed to acclimatize more to the program with the passing of time. Staff reported, "When we get used to something, we get used to something." At the time of the focus group at the 12-month midpoint, the primary therapist model was due to commence implementation in one week. Focus group members reported: "We've got other things to worry about now." Perhaps this is how change occurs; a new practice is implemented, resistance is resolved, and it becomes accepted as the attention of staff members becomes occupied by newer changes. In other words, subsequent changes replaced DBT-A as the focus of worry and resistance.

During summative interviews, the staff identified future barriers to the sustained implementation of DBT-A in the AIPS. These include concerns regarding the repetitive nature of the groups, and needing to keep the program "fresh." Otherwise, staff worried

it would become stale and "have a shelf life of about two years." Another factor that could threaten the long-term sustainability of the DBT program was concerns about the lack of current DBT-STG leaders, meaning that it may be difficult to replace one of the two central group leaders if they left the setting.

Overall Impact of the Implementation Effort

This DBT-A implementation effort in the AIPS under study had several important connotations for the organization. Through the lens of systems theory, implementation efforts can be understood to have ripple effects on the organization. Akin to the "butterfly affect," change in one part of the system affects change in other parts of the system. Several ripple effects were apparent in the study, such as conceptualizing hospitalization through a skills training lens, attitudes toward EBP, impact on approaches to implementation, conducting research in a practice setting, and staff pride.

Conceptualizing hospitalization through a skills training lens. The implementation of DBT-A in the AIPS seemed to affect how the staff conceptualized hospitalization. In crisis models, hospitalization is merely considered to be a holding environment to prevent patients from having access to means of suicide and homicide, or assist with stabilization of psychosis and other severe mental disorders. A DBT model emphasizes the intensive learning of new coping strategies. From a skills training model, the hospital environment provides a "training ground" for the "game" of the patient's life outside of the hospital. Bruce explained: "I try to remind the patients that being here is practice, and home is the game. They're practicing to go back." This metaphor implies that the staff is preparing patients for their return home; thus, the focus is on life outside the hospital, rather than the here-and-now. Although patients can learn skills by

practicing them in the hospital, this training is purposeless if the patient cannot use these in their lives outside of the hospital.

This skills training model appears more attractive to families and to outpatient therapists, who may desire generalizable outcomes. The skills training model appears to have more benefit post-hospitalization, since learned coping strategies can be applied in home settings. While supportive care is soothing and may increase self-esteem and positive emotions, it is not as generalizable as skills taught in programs such as DBT-A. Thus, a DBT-focused inpatient unit may have more lasting benefit to patients in the long term, as opposed to the immediate benefit of traditional hospitalization models. A skills training model for hospitalization may impact how outpatient providers in the local community consider hospitalization, apparent in the interview of a staff member who also worked in an outpatient community mental health center: "I think they come up here and they get some good skills." This staff member believed that the crisis of inpatient treatment, while undesirable, presented the opportunity of a teachable moment in which adolescents were ready to learn new coping methods. She argued that there were definite benefits to inpatient DBT compared to outpatient DBT, because of daily consistency. "One of the reasons that it is so helpful, is that you do it every day for five or six days. Whereas if you see them once a week, it's a little harder to keep it all together."

The benefits of the skills training model were balanced with drawbacks. This was apparent when staff members conceptualized hospitalization as resulting from patient skills deficits. Mike reported that "a lot of our patients, they lacked a skill. They lack life skills; they lack decision-making skills. They don't have effective coping skills, which is why most of them are here." The skills training model for understanding hospitalization can therefore be problematic, such as when staff attributed sole responsibility to patients for re-hospitalization. This black-and-white thinking was apparent in Bruce's statement: "They're either using what we taught and managing better, or they throw it out the window and go with old faithful, and wind up back here again." Later in his interview, Bruce again demonstrated black-and-white thinking, when wondering if patients were practicing skills outside of DBT-STGs: "If they go, 'no,' then how can you expect to get any better? And if they say 'yes,' then, well, it must mean that they are doing better." The internal locus of control inherent to *solely* attributing responsibility for rehospitalization to patient skill utilization implies polarized thinking, which is not consistent with a dialectical conceptualization of patient behavior. It therefore seems that a skills training model for hospitalization may have both positive and negative effects.

Attitudes toward EBP. Despite the appeal of DBT as an EBP, its implementation did not seem to result in a sustained attitude change toward including more EBPs in the program. Although PA was chosen for adoption after DBT-A specifically because it was an EBP, other non-EBP interventions were selected for implementation, such as psychoeducational life skills groups. It is therefore questionable how much effect DBT-A implementation had on the willingness of management to intentionally seek out EBPs for implementation. Furthermore, I had some influence on the adoption of PA (an EBP), but not life skills (not an EBP). This engenders a disheartening question: was *I* the variable affecting the willingness of the organization to consider adopting EBPs when making programmatic decisions?

Impact on approaches to implementation. Lessons learned from DBT-A implementation were not generalized to other implementation efforts. In this case study,

allowing staff members to gradually become acclimatized to the DBT-A program resulted in less resistance. Staff resistance was further decreased by a grassroots rather than top-down approach to implementation. Yet at the 12-month midpoint, two major program changes were implemented abruptly in a top-down fashion. The primary therapist model was announced to staff without discussion and abruptly implemented in a top-down fashion. As could be predicted, the primary therapist model was considered by all of the staff interviewed to have encountered far greater resistance than DBT-A implementation. Life skills groups were also implemented in a top-down fashion, and, as could be expected, met with greater resistance.

Why were these changes not easily generalized? It is possible that changing the processes of implementation is difficult, because systems favor homeostasis. The grassroots and gradual process of DBT-A implementation was different from prior efforts, and the organization was therefore likely to favor homeostasis and not adjust its approach based on the findings of this study. Time will tell whether the DBT-A implementation effort was more of a first-order than second-order change; in other words, whether DBT-A implementation was merely an exceptional event, or one that caused permanent changes to how the organization implements new practices.

Conducting research in a practice setting. A "process-within-a-process" seemed to occur as a result of conducting research in a practice setting. My emic position and commitment to transparency during the study resulted in staff trust and social capital. By inviting staff to be research participants, staff felt included in the development of the program. For many staff, this was the first opportunity that they were given to participate in a research study. At the conclusion of the focus group, a participant directly thanked

me for being included. By conducting research in a transparent fashion within an organizational system, staff and patients felt that a venue was provided for their voice to be heard. Patients in DBT-STGs asked about why feedback forms were administered, and were pleasantly surprised to learn that the staff cared about their input regarding program development. Similarly, the staff felt their voice was heard by being included in program development decisions, evident in changes made to the DBT-STG program following the focus group. Here, it seems that the research process itself had helped the implementation effort to be successful. Appreciative enquiry has demonstrated that internal change is often facilitated when the researcher bears witness with empathic listening and uses strengths-based interviewing techniques (Cooperrider, Sorensen, Whitney, & Yaeger, 2000; Cooperrider & Whitney, 1999). While it is unknown whether staff will conduct more research in the setting following this study, the effect of conducting research in a practice setting seems to be both positive and facilitative. It seems that conducting research in practice settings has inherent value to the organization, by fostering a sense of intrigue, inclusion, and investment.

Staff pride. Several staff experienced renewed pride in the program, following DBT-A implementation. When reviewing patient feedback data during the first-round summative interviews, a milieu counselor directly asked me if I experienced the same sense of pride regarding positive patient response to DBT-A: "Don't you feel so proud when you see that?" As a result of the changes made to the program, Rose's appraisal of the program dramatically changed:

I feel the quality of the program is 100% better than it was a couple years ago, even last year. I think things are going really well with the program part. I feel like I could really recommend this hospital now. If I was a parent I would totally send my kid here. I don't know if I would have said that a few years ago.It therefore appears that DBT-A implementation had a ripple effect on how staff members perceived the value of the program.

Relevance of This Study

The unit manager in this study mentioned that they sometimes contact other agencies to learn *how* to implement something, not just what programs are most effective. This unit manager understood the value of learning from other organizations:

When people read journals, once you get through the statistics and stuff, if you want to do something, you want to know what worked for other people. I'm constantly talking to [another psychiatric hospital] about different things, because I want to know how they do it there... So, being able to publish something and say, this is what we did right and this is what we did wrong, I mean, anybody can learn from that.

In conducting this study, helpful information was provided to the management and the staff of the AIPS about what seemed to help and hinder the DBT-A implementation effort. This information could be useful for future efforts. Other organizations may find this information useful, although it should be recognized that findings from this study require further evidence before they can be considered recommendations for other organizations seeking to implement an EBP. Further studies are needed that examine how best to implement EBPs in naturalistic settings.

Limitations

This study had several limitations. Methodological design limitations are discussed first, followed by procedural limitations regarding sample size and my emic positioning.

Design. Single case studies provide findings that can be used to support other research, or alternative findings that require further exploration in subsequent studies. Findings cannot be generalized to other settings with any degree of confidence, since they may be idiosyncratic to the setting. Without randomization and controls, research must be understood within the context in which it was conducted. Further research is needed to substantiate findings in this case study that were not commensurate with previously existing research. Therefore, this case study provides helpful insights into the implementation process, but cannot be considered an authority on recommendations for EBP implementation.

Sample size. The sample size for qualitative data collected during first-round interviews (n = 18) was adequate, when considering the recommendations of established qualitative researchers regarding sample size (e.g., Green & Thorogood, 2009; Guest, Bunce, & Johnson, 2006). However, the sample size of the focus group (n = 5) was one smaller than the recommended range for focus group size (e.g., Johnson & Christensen, 2004; Krueger, 2000; Langford, Shoenfeld, & Izzo, 2002; Morgan, 1997). It is possible that the findings of the focus group would have been biased by the small size, though the focus group was successful in sustaining a fruitful conversation and reaching data saturation. Furthermore, the sample size for quantitative data collected during second-round interviews (n = 30) was small for a quantitative research project. The ranked position of categories helping and hindering implementation could have been affected by

this small sample size. Inferential statistics were performed, which may also have been biased by the small sample size. Although the assumption regarding homogeneity of variance for the normality of the distribution had been violated for the data sets of categories helping and hindering implementation, ANOVA has demonstrated robustness when sample sizes are equal. Nevertheless, these inferential statistics must be interpreted with caution.

Emic positioning. My insider status and emic positioning can also represent limitations. Descriptions and analyses were based on my experiences interacting with the complexities of this case. Information was winnowed to the most unique features and important details. Thick descriptions provided a representation of the multiple realities inherent in the different voices, so the reader could understand the case and consider whether these details and implications are comparable with their own experience. This approach to analysis was likely influenced by my emic experiences of working in the AIPS during the time of the study. It is possible that these descriptions and analyses may be more personalized to my own experience rather than commensurate with all experiences in the case. By attempting to capture the collective opinions and experiences of the staff working in the AIPS, experiences may have been omitted that were idiosyncratic.

Bruce insightfully implied during a summative interview that allegiance bias is present whenever the primary implementer is also the primary researcher: "When you invest that much of yourself into something, you see the benefit of it for other people." It is possible that my own allegiance and dedication to the implementation effort had blinded me to some of the hindrances. I was genuinely surprised to later find covert resistance on the part of the milieu staff, which may have been caused by this allegiance bias. In other words, I was looking for success stories and signs of a positive response, rather than indications that implementation was failing or being met with resistance.

Directions for Future Research

Research is a recursive process, generating further questions to be addressed. In conducting this study, directions emerged for future study that would provide important information about how to implement EBPs in naturalistic settings. First, more welldesigned and executed mixed methods designs are needed in the implementation literature. Replication case studies are needed into the longitudinal process of implementation, particularly regarding DBT-A implementation in an AIPS. Second, multi-case study designs are needed to compare and contrast implementation efforts in organizational settings such as an AIPS. Findings from comparison conditions hold greater validity than single case designs. Third, research is needed into the delivery systems of EBPs. For example, a controlled study is needed to evaluate adolescent response regarding lecture-based vs. experiential/hands-on learning, in the provision of psychoeducational treatments such as DBT-STGs. Fourth, a multi-case study into the use and non-use of patient feedback to tailor an EBP to the localized need and preferences of the patient population could be conducted. This would provide helpful information regarding the impact of utilizing patient feedback to inform program adaptation decisions. Fifth, staff in this case study could only evaluate long-term patient outcomes by considering negative patient outcomes (i.e., re-hospitalization). Follow-up interviews with adolescent patients and their families would help to provide information regarding positive patient outcomes, specifically whether coping skills were generalized to the

home environment. Further studies could also examine the effect of positive, sustained long-term patient outcomes on staff acceptance of DBT-A. This would likely have further influenced staff to support the implementation effort.

Appendix A: Consent Form to Participate in Research

Identification of Investigators and Purpose of Research

You are being asked to participate in a research study conducted by Thomas Field from James Madison University, under the supervision of Dr. Lennis Echterling. The purpose of the study is to learn about what seems to help and hinder the implementation of Dialectical Behavior Therapy for adolescents (DBT-A) in an acute inpatient psychiatric setting. I am conducting this research in partial fulfillment of the requirements for the Ph.D. in Counseling and Supervision at James Madison University, and to make a contribution to my field of study.

Research Procedures

Should you decide to participate in this research study, you will be asked to sign this consent form once all your questions have been answered to your satisfaction. This research study consists of a brief demographic questionnaire and two 60-minute individual face-to-face interviews, approximately three months apart. In the first interview, you will be asked a series of questions related to your perception of what has helped and hindered the implementation of DBT-A. In the second interview, you will be asked to rank the categories identified by all participants in order of importance. Deciding to not participate in a follow-up interview will not exclude the first interview from being used for this study. These two interviews will be digitally audio recorded with your permission and transcribed by a paid transcriptionist who has been trained to respect confidentiality and to follow ethical practices. Transcripts will be sent to you via secure email, for review of accuracy. Participants will also be sent aggregate analysis of the interviews, and asked to comment on their accuracy. I will make changes to the analysis, based upon participant feedback. A summary of the results will be made available upon your request.

Time Required

Participation in this study will require the completion of a brief demographic questionnaire used for aggregate purposes, and two separate interviews lasting approximately 60 minutes each. Therefore, participation in this study will require approximately 2 hours of your time.

Risks

There are no perceived risks to your participation in this study. That is, no risks beyond the risks associated with everyday life.

Benefits

While there are no direct benefits to you for participating in this research, the indirect benefits are to be provided with the opportunity to share your voice on the implementation process, and to understand what helps and hinder successful implementation of DBT-A in this setting.

Confidentiality

No personal identifying information about any participant will be released. Your identity will not be disclosed. Pseudonyms will be used in place of participant names, and no identifying information including job title will be attached to the pseudonym. You will assign yourself a pseudonym at the conclusion of your first interview. The recording and transcript of the interviews will be stored in a locked cabinet in the investigator's home office. Upon completion of the study, all information that matches up individual respondents with their answers, including digital audio files and participant lists, will be destroyed after analyses have been completed.

The researcher reserves the right to use and publish non-identifiable data. While individual responses are confidential, aggregate data will be presented regarding generalizations about the responses as a whole. Quotes from the transcript may be used in the formal report to demonstrate themes. Any quotes used in the report will be attributed to pseudonyms, and not contain any identifying information. At the conclusion of the study, a 90-minute staff meeting will be held on the acute inpatient psychiatric unit, where research findings will be presented. This meeting will provide staff with information to improve future implementation efforts.

Participation and Withdrawal

Your participation is entirely voluntary. You are free to choose to not participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

Questions about the Study

If you have any questions or concerns during the time of your participation in the study, or after its completion, or would like to receive a copy of the final aggregate results, please contact:

Researcher:	Academic Advisor:	Institutional Review Board:
Thomas Field	Dr. Lennis Echterling	Dr. David Cockley
James Madison University	James Madison University	James Madison University
(434) 426-2732	(540) 568-6522	(540) 568-2834
fieldta@jmu.edu	echterlg@jmu.edu	cocklede@jmu.edu

Giving of Consent

I have read this consent form and I understand what is being requested of me as a participant in this study. I freely consent to participate. I have been satisfactory answers to my questions. The researcher provided me with a copy of this form. I certify that I am at least 18 years of age.

I give consent to be audio taped during my interview. _____(initials)

Name of Participant (printed)	Name of Participant (signed)	Date
Name of Researcher (printed)	Name of Researcher (signed)	Date

Appendix B: Patient Feedback Form for DBT-STGs

1. How helpful was the group today? *(circle the correct answer)*

Not at all	Slightly helpful	Moderately helpful	Very helpful
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2. Did you feel you learned more coping skills in this group? Yes / No / Not sure

3. Do you feel that you can use these skills after you leave the hospital? Yes / No / Not

sure

4. What coping skills did you learn?

5. How could we improve this group?

6. What activity would be most helpful during this time? (CHECK ONE BOX ONLY)

Skills Training (this group)
Expressive Therapy
Issuework
Watching TV
Sleep
Exercise
Other:

Appendix C: Consent Statement for Focus Group

Thank you for participating in our focus group today. Each person here was chosen for this focus group because you have a valuable opinion and voice on this topic. Each person has something to contribute. As the investigator, my intentions for this focus group are to discuss the topic of how an acute inpatient psychiatric unit adapts to the implementation of an evidence-based practice such as Dialectical Behavior Therapy. Today, I hope that our focus group will provide insights into the adaptation process and ways we can improve the program. This interview is part of my dissertation research at James Madison University, and my chair and committee has briefed me on appropriate ethical behavior and non-maleficence, including your confidentiality.

To ensure that everyone understands how a focus group works, I will attempt to explain. In traditional interviews, the interviewer questions a single person. The interviewer attempts to help the interviewee describe personal experience from one's own perspective. In focus groups, the attention instead is placed on the thoughts and feelings of the group as a whole. The interviewer asks questions that help identify themes on a certain topic. Thus, I am more interested in the collective nature of the group's thoughts and feelings, which includes agreement and divergence on certain issues.

Before we begin, I must inform you that care will be taken in protecting your identity. Pseudonyms will be used during data collection and analysis, and in the subsequent written report. As with all group activities, I cannot guarantee that other focus group members will maintain your confidentiality. I encourage all of you to make a pledge to each other that the information shared in this focus group will not be shared with anyone outside of this group. I'd like to tape record our interview so I don't miss any of it. I don't want to take the chance of relying on my notes and maybe missing something you say or inadvertently changing your words somehow! If at any time you'd like for me to turn the tape recorder off, all you have to do is ask me and I'll turn the recorder off. After the taping, the tape will only be heard by the sole author and a professional transcriptionist. The tape, transcripts, and all data analysis will be kept in a locked file.

After the focus group, I will send you the transcript via secure email and ask for you to check over the content to ensure that the transcript is accurate. I will then send you a later secure email attachment with the analysis of the focus group, and ask again that you review the analysis and provide feedback on its accuracy. Due to the confidential nature of this focus group, I ask each participant to not forward or send these emails to people outside of this focus group. Your feedback is very important to me. Decisions regarding the analysis and content of the written report are open to discussion. I am truly grateful for your willingness to participate, and will provide a \$10 gift card to each of you at the conclusion of this focus group. I hope that your experience in this focus group will in itself be worth your time and investment.

After we open up the dialogue, I would like to request some basic demographic information including your email address. This email address will be kept confidential. I felt that it would be less burdensome to send you email attachments with the transcript and analysis than meet again with you all individually. However, if any person would prefer to meet face-to-face to review transcripts or analysis, I will happily accommodate them. One last thing before I forget – if this focus group is successful, I would like to

conduct interviews with you approximately one year from now. A question in the demographic section asks if you are interested in participating in a subsequent interview. Note that each person will receive a gift card regardless of whether they want to participate in additional interviews. If you indicate an interest, I may contact you again closer to the time to arrange a time for the interview.

I understand the purpose of this focus group, and give my informed consent to participate in this focus group.

Name

Signature

Date

Appendix D: Questions Asked During Focus Group

(Time limit = 10 minutes per question)

- Over the past year, our unit has been adjusting to the gradual inclusion of DBT Skills Training groups in our program.
 - a. What was your first impression of our DBT Skills Training groups?
 - b. What is your current impression of our DBT Skills Training groups?
 - c. So far, what has the adjustment process been like?
 - d. What made the process easier?

(after discussion, we will pause for you to write down the one factor that you believe made this adjustment process easier)

- e. What made the process more difficult? (after discussion, we will pause for you to write down the one factor that you believe made this adjustment process more difficult)
- f. What challenges lie ahead for us as we continue this process?
- g. OK, closing question. Would you say that at this point in time, our unit's adaptation to the inclusion of the DBT program has been successful?

Demographic Information

(This will only be used to generally describe the group as a whole, e.g. "80%

female")

Age:

Gender: M / F

Length of employment at current facility:

years of related experience:

Current job title (e.g., RN, MHC II, etc.):

Email address:

I am interested in participating in a follow-up interview on this topic, one year from now:

Y / N

Appendix E: Email Invitation to Participate in Research

To all staff members:

I would like to invite you to participate in a research study. The purpose of the study is to learn about what seemed to help and hinder the implementation of Dialectical Behavior Therapy for adolescents (DBT-A) in an acute inpatient psychiatric setting. I am conducting this research in partial fulfillment of the requirements for the Ph.D. in Counseling and Supervision at James Madison University.

Participation in this study will require the completion of a brief demographic questionnaire used for aggregate purposes, and two separate interviews lasting approximately 60 minutes each. Your participation in this study would require approximately 2 hours of your time. The interview location can be either on or off campus, depending on your preference. No names, job titles, or other identifying information will be attached to your interview or quotes. Pseudonyms will be used in place of actual names. I am attaching the consent form, in case you wish to learn more about this research and your possible role in it.

If you are interested in being interviewed, please send a secure email back with the subject line: "Interested." If you are not interested in being interviewed, please send a secure email back with the subject line: "Not Interested."

Many thanks,

Thomas Field, M.Ed., NCC Primary Researcher

Appendix F: In-depth Interview Protocol

Thank you for participating in our interview today. You were chosen for this interview because you have a valuable opinion and voice on this topic. As the investigator, my intentions for this interview are to discuss the topic of how an acute inpatient psychiatric unit adapts to the implementation of an evidence-based practice such as dialectical behavior therapy. Today, I hope that our interview will provide insights into the adaptation process and ways we can improve the program. This interview is part of my dissertation research at James Madison University, and my chair and committee has briefed me on appropriate ethical behavior and non-maleficence, including your confidentiality.

For this research project, I will need to conduct two interviews with you, lasting approximately 60 minutes each. After the interview, I will send you the transcript via secure email and ask for you to check over the content to ensure that the transcript is accurate. I will then send you a later secure email attachment with the analysis of the interview, and ask again that you review the analysis and provide feedback on its accuracy. Due to the confidential nature of this interview, I ask you to not forward or send these emails to people outside of this interview. Your feedback is very important to me. Decisions about the analysis and content of the written report are open to discussion. For your participation, you will not receive any financial compensation. I am truly grateful for your willingness to participate, and I hope that your experience in this interview will in itself be worth your time and investment.

Before we begin, I must inform you that care will be taken in protecting your identity. Pseudonyms will be used during data collection and analysis, and in the subsequent written report. I'd like to audio tape record our interview so I don't miss any of it. I don't want to take the chance of relying on my notes and maybe missing something you say or inadvertently changing your words somehow! If at any time you'd like for me to turn the tape recorder off, all you have to do is ask me and I'll turn the recorder off. After the taping, the tape will only be heard by the author and a professional transcriptionist. The tape, transcripts, and all data analysis will be kept in a locked file.

After we conclude the interview, I would like to request some basic demographic information including your email address. This email address (as with all confidential information) will be kept confidential. I felt that it would be less burdensome to send you email attachments with the transcript and analysis than meet again with you all individually. However, if you would prefer to meet face-to-face to review transcripts or analysis, I will happily accommodate this.

Before we begin, I would like to review with you the Consent Form to Participate in Research. Please ask any questions you have about the consent form - I want to make sure that you understand your role as a participant in this study.

Demographic Questionnaire for Interview with Treatment Team Member

Demographic Information (This will only be used to generally describe the group as a whole, e.g. "80% female")

Age:

Gender: M / F

Ethnicity:

Length of employment at current facility:

years of related experience:

Email address:

What is your current level of exposure to our DBT groups?

- A. Group leader
- B. Frequent observer (at least once a week)
- C. Infrequent observer
- D. I have never observed a DBT group.

What is your perceived role in our workplace?

- A. I make the major program decisions, and someone else carries them out (decision-maker).
- B. Someone else makes major program decisions, and I carry them out (implementer).
- C. Someone else makes major program decisions, and I cheerlead others to carry them out (champion).
- D. None of the above (other).

If your direct quotes are included in the final report, what would you like your pseudonym to be?

Questions for First Interview with Treatment Team Member

(Approximate time limit = 10 minutes per question)

- Since May 2011, our unit has been adjusting to the gradual inclusion of Dialectical Behavior Therapy (DBT) in our program. DBT includes skills training groups, and the review of diary cards by primary therapists to ensure that patients are practicing these new skills. The following questions are about the DBT implementation process.
 - a. What was your first impression of our DBT program?
 - b. What is your current impression of our DBT program?
- 2. Next, I would like you to reflect on what facets of the implementation process were easy and difficult. Let's begin by reflection on ease.
 - a. What made the implementation process easier?
 - b. What made the implementation process more difficult?
- 3. Please read over the data analysis on patient responsiveness to DBT groups. Are these findings expected or unexpected? How so?
- 4. Concluding question
 - a. What should I have asked you about our DBT program that I did not think to ask?

Questions for Second Interview with Treatment Team Member

(Approximate time limit = 10 minutes per question)

- In front of you are two piles of index cards. On each card in the blue pile, I have written a category that interviewees reported had made the DBT-A implementation process easier. On each card in the green pile, I have written a category that interviewees reported had made the DBT implementation process more difficult.
 - a. Please take the blue pile of cards first, spread them out, and organize them vertically, based on their relative importance. For example, the most helpful category should be at the top of the blue card hierarchy. Please speak aloud while organizing these categories.
 - b. Please take the green pile of cards second, spread them out, and organize them vertically, based on their relative importance. For example, the most hindering category should be at the top of the green card hierarchy.
 Please speak aloud while organizing these categories.
 - c. Once you have completed the task, I will ask you to help me understand your rankings.
- 2. Concluding question
 - a. What advice would you give to other inpatient psychiatric units who wanted to implement a new intervention like DBT, based on our implementation experience?

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