Mental Health Clinicians' Perceptions, Knowledge, Level of Training, and Utilization of Evidence Based Practices with a Specific Focus on Dialectical Behavior Therapy

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Abstract

In the past decade the push for utilization of evidence-based practice (EBP) in mental health has increased dramatically. Due to managed healthcare, lowered spending on state and federal mental health budgets, and requirements by funding agencies such as Medicaid, it is imperative that mental health clinicians (MHCs) be trained in and utilize EBPs to improve funding and ensure continuity of best practice in clinical interventions with clients. Minimal research exists on MHCs and their knowledge and use of EBPs. The present study examined MHCs' perceptions, knowledge, training, and utilization of EBPs, with a specific focus on Dialectical Behavior Therapy (DBT). To date, it is the most prominent and effective EBP for treating Borderline Personality Disorder (BPD) and associated parasuicidal and suicidal behaviors. Current research supports its effectiveness in treating a myriad of other commonly treated disorders.

The exploratory study provides insight into MHCs level of interest in receiving more EBP awareness and DBT training. Results indicate that though clinicians have received training in EBP and DBT, most of that training has been encouraged through career settings. Age of the clinician, years in practice, and type of training background are predictors of level of education, knowledge and training. Results show the majority of clinicians are interested in EBP, aware of the impact EBP can have on treatment effects, and report desire to have more training in EBPs and DBT specifically. These results could provide a necessary bridge between disciplines to allow clinicians, irrespective of training, to provide the most clinically effective treatments to clients.

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Chapter I: Introduction

Statement of the Problem

In the era of managed care and Health Management Organizations (HMOs) it is becoming progressively important for mental health clinicians (MHCs) to work within the framework of evidence based practices (EBPs). The move toward EBP in community and private mental health care is current and dramatic (Rosenberg & Rosenberg, 2006)). For marriage and family therapists (MFTs) this is an especially important revelation since some of the EBPs supported by funding agencies are not systems oriented. Therefore, it has become very important for the field of marriage and family therapy (MFT) to examine the knowledge base and training that MFTs have regarding EBP so that the field of MFT can provide consistently valid and effective treatments to clients. Reporting MHCs' use of EBP important and relevant as well.

Within EBPs, the model Dialectical Behavior Therapy (DBT) has shown impressive results and has been proven efficacious in the treatment of several difficult disorders and clinical presentations (Harned et. al, 2008). DBT has been shown through numerous clinical trials to be the most successful treatment for Borderline Personality Disorder (BPD) and associated suicidal and parasuicidal behaviors (Miller, Rathus, & Linehan, 2007). The model continues to show promising evidence for treatment of eating disorders, substance abuse, trauma, conduct disorder and other symptom manifestations (Rosenthal, 2006; Miller, Glinksi, Woodberry, Mitchell & Indik, 2007). Dialectical Behavior Therapy is a cognitive-behavioral model and has not been included in most MFT training programs due to its lack of systems orientation (Patterson, Miller, Carnes, & Wilson, 2004). Due to the increasing use of DBT in community mental health settings and the model's increased adaptability to many clinical presentations, it may prove important

that all MHCs are able to show awareness, proficiency, training and clinical interest in the use of DBT to provide efficacious treatments for clients.

Purpose of the Study

This researcher will provide an appropriate review of the literature and explanation of EBP, the development and uses of EBPs within the field of mental health, and will also provide results showing MHCs and their knowledge and utilization of EBP, with specific focus on DBT. The literature review will also provide an examination of the research and provide a critical review of DBT and the disorders it has been shown to effectively treat. The importance of examining this model specifically will also be examined. This researcher will also show limitations in the research and practice of EBP and DBT to support the need to provide more training opportunities within the field. The researcher hopes to provide a call to action to mental health training programs, irrespective of theoretical background, to provide diverse theoretical and clinical training that would improve clinicians' knowledge of EBPs.

Marriage and family therapy and the DBT model is of particular focus because of the researcher's own personal training, theoretical assumptions, and frequent use of DBT in clinical practice. Though the focus of the research is on MHCs in general there is some MFT specific information provided throughout this project that seemed necessary as a support to the researcher's school of training, and due to the researcher's own personal stake in the development of MFT within the mental health community. Ultimately, the goal is to provide exploratory information that may drive the field of mental health to examine the role of EBPs so that all clinicians, regardless of training, can provide best practices for clients who present with disorders shown to be effectively treated with EBPs, and specifically those shown to be successfully treated with DBT.

The literature review addresses previous research that shows a theoretical support for the need for continued assessment of MHCs and their use of EBP. Focus on the history and evolution of EBP is addressed and used to highlight the necessity of adding to the research. Previous research and supportive information about MFT training and interdisciplinary collaboration with other training backgrounds leading to the development of this project is addressed. This research support is provided to establish reasoning for an examination of EBP and DBT specifically.

Chapter Three presents the research questions and hypotheses and presents how the survey instrument and subsequent data were used to answer these questions and provide data supporting the need to continue to explore the role of EBP and DBT. The quantitative methodology used to carry out this exploratory research is delineated. Survey development, sampling, solicitation of participants, and collection and analysis of data is discussed. Limitations to the study are also addressed, and a more thorough examination is provided in the discussion section.

Research Questions

The researcher completed an exploratory study collecting data from MHCs to present MHCs' reported levels of knowledge, training, interest, and utilization of EBPs, and additionally their knowledge, training, interest, and utilization of DBT. The researcher proposed that MFTs in traditional MFT training programs may show differences between groups based on demographic variables, regarding level of training in EBPs, namely DBT. The researcher collected data regarding MFTs' training and experience and their overall knowledge base and interest in DBT. This was done within the larger scope of analyzing all types of MHCs including counselors, social workers, psychiatrists, psychologists and others practicing in the mental health field. This

information was gathered using a web-based survey designed by the researcher. The following research questions were addressed:

1) How important to MHCs is the use of EBP?
2) How much training have MHCs received in EBP?
3) What EBPs do MHCs identify as most effective in their clinical practice?
4) Are there significant differences in the level of training MHCs received in educational settings in comparison to employment settings?
5) How much training have MHCs received in DBT?
6) How interested are MHCs in receiving training in DBT?

Research Hypotheses

The following research hypotheses based on the major research questions were tested:

1) MHCs who report higher number of years in practice will report lower levels of training, knowledge, and use of EBP than MHCs who report lower number of years in practice (Ho: There is no significant negative correlation between years in practice and knowledge, training, and use of EBP).
2) MHCs who report higher levels of training, knowledge, and use of EBPs will also report significantly higher levels of training, knowledge, and use of DBT than those MHCs who report lower levels of training, knowledge, and use of EBPs.

   (Ho: There is no significant positive correlation between levels of training, knowledge and use of EBPs and levels of training, knowledge, and use of DBT).
3) MHCs who report higher levels of employment training in DBT will also report higher levels of interest in receiving more training in DBT compared to MHCs who report lower levels of employment training in DBT.

(Ho: There is no significant positive correlation between levels of employment training in DBT and level of personal interest in receiving more training in DBT.)

The first hypothesis was developed based on a relevant literature indicating that clinicians trained more recently in the field of mental health recognize the pressure and potential to use EBP, whereas clinicians trained earlier in the history of the field are more hesitant to test model effectiveness and often placed more importance of establishing clinical work on core principles, therapeutic relationship, and original training (Pinsof & Wynne, 1995; Nichols & Schwartz, 2001). The development of EBP in the mental health field was not established until the 1990's so it would be helpful to see if clinicians who have been practicing longer have modified their research interests and clinical interventions since the development of EBP.

The second research hypothesis was developed based on trends in EBP research and literature showing that knowledge and utilization of EBP predicts tendency to examine other available EBPs (Stout & Hayes, 2005). Current trends in community mental health mandating clinical practice guidelines and implementation of EBP in clinical settings guided the development of research question three. The funding-driven, empirically-supported shift toward implementing EBP in community mental health settings has encouraged the use of EBP models in clinical interventions.

The researcher hypothesizes that those clinicians who are receiving career-based training and increased employer-focus on DBT will show higher levels of interest in continued training in DBT in order to provide effective interventions while also meeting employment standards of practice. In order to improve funding for agencies, higher levels of career-training focus on DBT is hypothesized to affect clinicians' level of interest in DBT due to clinicians' needs to meet changing policy guidelines and attain grant-supported funds for providing DBT and other EBPs.

Perhaps simply due to the increased awareness of this popular model that provides effective interventions to treat clients in these settings, clinicians will naturally develop heightened interest in continued DBT training.

Usefulness of Study

To date, there is minimal data and statistical research regarding MHCs and their beliefs, knowledge, and utilization of EBP. Even more lacking is any research focused on MHCs knowledge, training, and use of DBT. The researcher's literature review yielded only a few studies that are beginning to examine the important role EBPs play in providing useful, effective treatments in clinical settings. This research could be useful to gather MHCs levels of interest and need for improved focus on EBPs and allow for means to incorporate meaningful and effective modes of treatment. For systems oriented therapists such as MFTs this could prove useful in establishing the role of non-systems oriented approaches through a systems lens.

It is the hope of the researcher that the data collected from the web-based survey provides insight into the level of knowledge, training and use of EBP and DBT and provide the ability to monitor current levels of training and use of EBPs. This information can bring awareness to the field and increase possibilities for training programs and other community based settings to provide the clinical knowledge and use of EBP and DBT to all clinicians regardless of level of systems orientation. The exploratory nature of the study also provides the researcher the ability to make inferences about groups based on results and analyze how these findings may improve EBP implementation, support, and use in clinical practices. The intent is to support the expanding nature of training programs for MFTs so that MFTs can be seen within the mental health community as equally qualified as social workers, licensed professional counselors, and psychologists to provide proven efficacious treatment for a myriad of disorders shown to be

effectively treated with the use of EBPs. The data could also help establish an initial collection or baseline of statistical information on which future research can build to monitor the changes in clinicians' perspectives.

Definition of Terms

The term "evidence based practice" is often synonymously used with other terms, including "empirically supported treatments", "empirically validated treatments", "empirically based treatments", and "evidence-based treatments. For purposes of this study the term used is "evidence based practice" (EBP) and refers to any model that has been shown to be effective based on positive results from clinically developed studies. The term "efficacious" applies to those models that have had at least two clinical experimental trials and research studies showing marked differences between groups treated with the specific model or treatment as usual in a laboratory setting. The term "effective" applies to those models that have shown positive outcome data on treatment effects carried out in a more realistic clinical setting.

Chapter II: Literature Review

The current state of mental health care in the United States may have practitioners concerned about options for providing best practices within the bounds of the limitations set by federal and state governments, insurance companies and funding programs such as Medicaid. There is significant stake in ensuring the overall financial stability of private and community-based programs and agencies and an ethical need to provide quality services to the clients who solicit them. Mental health practice as an institution is leaning toward the use of evidence based practices (EBPs) to assist in meeting best practice demands of fiscal and bureaucratic limitations. In the era of managed care and Health Management Organizations (HMOs), more demands are being placed on the mental health field and all practitioners to provide EBPs that demonstrate principle, clinical, and cost effectiveness (Steenrod, 2005).

As the use of interventions shown to be time and cost effective is a developing requirement in the mental health field it is important to the field of marriage and family therapy (MFT) to also be able to provide such treatments in a manner that fits into the principle theory and core practice beliefs of MFT. The following review of relevant literature focuses on the history, development, and current trends in EBP. Within the bounds of EBP, the model of DBT is examined to show the importance for MHCs to be trained in and develop competencies in this specific EBP modality in order to effectively treat several commonly presented disorders, including Borderline Personality Disorder (BPD). A special focus on the practice of MFT is due The specific systems-oriented theoretical training of MFTs and the importance of learning how to orient to changes in the use of EBP while maintaining core MFT tenets is examined. The presentation of other relevant literature supporting the need for this research is provided.

Evidence Based Practice and Community Mental Health

The use of science to direct clinical interventions is not a new practice. Since the origin of medicine, research and reported results guide practice has driven the evolution of medicine. Having shown improvement in clinical interventions and an increase in the ability to train practitioners, medicine has developed as a field in which most clinical interventions are science-based and developed from strategic, studied practices that have been researched and developed based on use of the scientific method (Rosenthal, 2004).

Following improvements in establishing improved practices in the medical field, mental health has followed suit. Evidence based practice emerged in psychotherapy in the mid 1990's and the American Psychological Association encouraged publishing of established empirically validated treatments (Rosenthal, 2004). Empirically supported treatments and empirically validated treatments are some of the synonymous terms for EBP in the literature.

Rosenthal (2004) operationally defines EBP in behavioral health as "the use of clinical interventions for a specific problem that has been (a) evaluated by well-designed clinical research studies, (b) published in peer-reviewed journals, and (c) consistently found to be effective or efficacious upon consensus review". The need for this type of intervention in behavioral healthcare developed from the use of EBP in medicine as clinicians recognized the importance of having a wealth of clinical interventions shown to be effective to treat the problem presented. Rooted in empiricism, this method of clinical intervention in mental health utilizes the scientific method and the use of research questions and hypotheses to elicit specific results that lead to the development and use of the most effective avenue of treatment.

In 2001, The American Psychiatric Services deemed the year, "the year of evidence based practice", and called for an increase in research and utilization of EBPs (Anthony, Rogers, & Farkas, 2003). Community agencies were strongly encouraged to develop strategies to

maximize clinical time with clients since available reimbursement was being reduced by funding agencies. Developing and implementing EBPs has become the treatment path that most community and privatized mental health agencies are utilizing to meet the financial burden that managed care and governmental funders such as Medicaid are still placing on such agencies. The burden to provide quality services in shorter prescribed periods of time is necessary to receive adequate reimbursement to cover proven services shown to be efficacious and effective (Savin & Soldivera-Kiesling, 2000).

Though the psychotherapy field has evolved through the implementation and use of EBPs, there remains some inability to fully adopt the use of EBPs. Many clinicians' training elevates the importance of taking individual presentations of symptoms and issues as more complex than any one specific EBP treatment module can effectively address (Rosenthal, 2004). Clinicians and scholars may be concerned that adhering to EBPs will restrict other options and aspects of therapy known to be effective (Patterson, et al., 2004). However, in the midst of financial budget cuts and increases in financial strain to clients and agencies, it is imperative that clinicians in the field adapt their individualized skills to meet the needs of clients in the most efficacious manner (Reamer, 2004). Awareness of EBPs and the role EBPs hold in current mental health practice is part of the necessary change to provide the best services in a financially and time-limited manner.

The field of mental health is increasingly being pressured by state and federal payers to show cost-effectiveness and overall benefit of service to validate the funds allocated to public and private sectors. Due to this pressure, community based services in particular are developing strategies such as cost-benefit analyses to validate the funds received. In these studies, agencies that can show marked increases in recovery coupled with decreases in need for longer term

methods show reliability for the shift in services provided. In this sense, clinical interventions that are evidence-based help payers are able see cost-effective benefits and they are more likely to fund services. Services deemed evidence-based are seen as cost-effective to agencies and payers.

Qualifying a specific approach as an EBP can be complex. The process of diagnosis in mental health is important to establishing the correct clinical intervention, and therefore an inherent limitation to implementing EBP in mental health is the range of error in diagnosing a particular mental health issue or disease. Most behavioral health agencies implement or are in the process of implementing clinical practice guidelines to decrease the variability in diagnosing, assessing, and treating mental illness presentations. Clinical practice guidelines are defined by the Institute of Medicine as "systematically developed statements to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances" (Field & Lohr, 1990). With the development of such guidelines in clinical practice, implementing EBPs in clinical practice is less invasive and less overwhelming to clinicians (Savin & Soldivera-Kiesling, 2000)

Mullen and Bacon (1994) conducted a survey of psychiatrists, psychologists and social workers to see if they were aware of and implemented clinical practice guidelines. Results showed that 94.1% of psychiatrists, 81.3% of psychologists, and 42.3 % of social workers had heard about practice guidelines. Only 64.3% of psychiatrists, 6.3% of psychologists, and 18.7 % of social workers reported having utilized practice guidelines in their clinical work. However, 86.7% of psychiatrists, 81.4 % of social workers, and 54.5 % of psychologists reported that they would be inclined to use practice guidelines to improve guidance, increase knowledge and skills, and improve overall treatment for clients.

Interestingly, 70.9% of social workers, 81.3% of psychologists, and 82.3 % of psychiatrists reported frequently reading or referring to research articles on outcomes and effectiveness of techniques, case studies, clinical theory, and assessment and intervention (Mullen & Bacon, 1994). Thus it is clear that practitioners in the mental health field show interest in utilizing information from research and find EBP helpful in guiding their clinical interventions. The burden then comes to employers and other funding agencies to provide appropriate clinical practice guidelines and education in EBP treatment models through training and increased focus on supervision and use of EBP.

Evidence Based Practice and Marriage and Family Therapy

The use of EBP in the field of marriage and family therapy is still developing. With the publication of Pinsof and Wynne's (1995) special issue on family therapy effectiveness research, it was clear that the trend of utilizing EBP and encouraging use of practices proven to be effective was beginning to integrate into research and clinical practice. This was an important assertion to provide stakeholders, funding agencies, and other professionals evidence that MFTs were equally able to provide effective treatments. As the 21st century arrived, it was becoming evident that EBPs were becoming more frequently used and more visible in the literature (Denton & Walsh, 2001). It was also becoming evident that MFTs needed to address the ethical obligation to support this growing trend and become proficient in researching, developing, and providing such treatments.

Since Pinsof and Wynne's (1995) major review of the research, there has been a significant increase in focus on clinical research and EBP in the field. The researcher's review of the EBP literature in MFT showed that these significant gains in clinical research are improving models and methods to help clinicians provide treatment in the best interest of clients

while meeting specific governmental funding requirements. Sprenkle's (2002) subsequent publication of effective research modalities illustrates the intent in the field to be competitive in offering EBPs shown to have proven treatment effects and reduction in symptom manifestation.

By the time of Sprenkle's review, MFT models that were considered possibly efficacious at the start of the EBP era were now supported by positive outcome data reporting high effectiveness rates, favorable outcomes, and significant decreases in symptomology. The development of EBP research continued. Ward and McCollum (2005) suggest that though the efficacy of MFT models is a particular research focus, more effectiveness research regarding outcomes is necessary. Improved effectiveness research and continued development of EBPs in the field is a strong trend in the research literature. Clinician focus on specific systems-oriented models continues to build proof of clinical relevance and assists in MFTs gaining of respect throughout the mental health community.

Sprenkle and Piercy's (2005) research methods publication provides insight into improvements MFTs have made in establishing reliable and valid research in the field. With improvements in the means to establish EBP in the field, MFTs are validating the importance of effectiveness research and the complex research methods needed to empirically support these treatment models. Analyses of the effectiveness of systems models continue to develop and show promising results that MFT models are consistently effective (Shadish & Baldwin, 2003).

The treatment modalities most heavily researched and developed in the MFT field are theoretically systems-oriented and signify the principles that developed the progression of the field, including systems theory and family focus (Becvar & Becvar, 2000). Treatment such as Emotionally Focused Therapy (EFT), developed by Sue Johnson and Les Greenberg in the 1980's, has progressively gained following due to the high effectiveness rates shown in clinical

studies (Greenberg & Johnson, 1988; Johnson, 2004). Continued examination of the model, clinical research and improvement in training and clinical practice have allowed for EFT to demonstrate increasingly favorable results by working with more populations with varying symptom manifestations.

It is evident that continued statistical testing, clinical research, and continuing growth of EFT's popularity in the literature has proven helpful in catapulting this MFT-based model to the forefront of EBP in the field. Other models and outcome research will not be addressed for purposes of this research, but the researcher acknowledges that other prominent EBP models in the field are gaining positive reviews and leading to improvements in effectiveness research as well (Carr, 2000; Shadish, Montgomery, Wilson & Wilson, 1993; Shadish, Ragsdale, Glaser, & Montgomery, 1995; Stratton, 2005).

To date there is very limited research on MHCs and their use of EBPs in clinical practice. The lack of descriptive exploratory studies reporting MHCs use of EBP clinically creates a barrier for agencies to implement changes knowledgably. Research regarding clinicians' attitudes about adopting EBP is limited and more exploratory research is necessary since clinicians' attitudes will directly affect the success of EBP implementation. Further, if MFTs are using EBP, there is even less available literature on how important MFTs perceive the use of EBP to be. Implementation of EBPs in varying degrees in clinical settings is still relatively new and this can explain the lack of research and literature and provides adequate reasoning for the call for additional study.

Aarons (2004) constructed an instrument to measure clinicians' attitudes about adopting and implementing EBP into their clinical work settings. Aarons surveyed 322 clinicians working in community mental health to assess their attitudes regarding adopting new interventions and

practices in their specific clinical setting. Development of Aarons' Evidence-Base Practice Attitude Scale (EBPAS) was guided by the intent to explore four specific measures including overall appeal of EBP, likelihood of adopting EBP given requirements to do so, openness to new practices, and changes in current practice with incorporation of EBP.

Respondents were MFTs (33.9%), social workers (32.3%), psychologists (22.4%), psychiatrists (1.6%), and other disciplines (9.9%). Groups showed no significant differences across disciplines in attitude to adopt EBP. Those who scored lower on appeal of EBP were also less likely to incorporate EBP into clinical work even when mandated by employers. Level of education was associated with appeal of EBP and openness to new practices, showing that those with lower degree attainment were more open to adopting and implementing EBPs. Specifically, interns, who had the lowest level of experience, showed the highest level of appeal of EBP, openness to new practices, and likelihood to adopt EBPs.

Aarons' (2004) study was useful in the current researcher's development of hypotheses and questions regarding differences between groups and how they will score regarding knowledge, training, and use of EBP. The current researcher also hypothesized that those clinicians who completed training more recently will shower higher knowledge, training, and use of EBP than earlier trained clinicians. Aarons' study provided support for the argument that exploratory research is necessary to continue to gather more data and that it is possible to capture clinicians' attitudes toward implementing EBPs into their current clinical framework.

Gray, Elhai, and Schmidt (2007) examined clinicians specializing in trauma regarding their attitudes toward utilizing EBP A web-based survey was designed and completed by 461 clinicians with varying education, training, and theoretical orientations. They showed that younger respondents held significantly more favorable opinions of EBP, and 83.6% of all

respondents scored higher than "neutral" regarding their perceptions of EBP. The study showed that clinicians had overall favorable attitudes toward the use of EBP in clinical work. Respondents identifying as practicing within the scientist-practitioner model showed significantly more favorable attitudes toward EBP than did practitioner-scholars and practitioners.

The Grey, Elhai, and Schmidt study (2007) was useful in the development of this researcher's hypotheses and questions as there were no other demographic variables connected to EBP attitudes, and more specific clinical orientations were not addressed. The current researcher intended to expand the purpose of the Gray et al. study by evaluating groups based on other descriptive variables. The researcher further explores clinical background and theoretical framework by requesting information about specific training programs, licensure, and clinical discipline. Based on the limited research available on implementation and utilization of EBP, it is imperative that a focus on this aspect of EBP research be continually developed. Another area of development in establishing EBP can be addressed in educational programs and training.

Marriage and Family Therapy Education and Training

Marriage and family therapy training programs are specifically designed to address systems orientation and clinical models that support the core tenets of MFT. Because of differences in training and core tenets, the field of MFT has often been underrepresented in mainstream mental health literature. Marriage and family therapists have had to work hard to earn the right to be considered as competent and effective as other, more established fields such as psychology, social work, and psychiatry. Bridging the gap between training and practice would help solidify the role MFTs hold in this era of change in mental health (Simmons & Doherty, 1998). Research is relatively new in establishing what it is MFTs do, how MFTs are

trained, and the specific skill sets developed in MFT training and is helping to more firmly establish the role of MFT in the field of mental health.

Hines (1996) surveyed MFT graduates from accredited MFT training programs regarding their beliefs about their training. Hines' respondents reported they were adequately trained in couple and family therapy, but less comfortable with individually based treatment, especially with children and adolescents. There were differences among groups based on level of degree attained. For purposes of the current project, the researcher has also addressed differences among groups based on educational level and examined the evolution of attitudes and beliefs of degreed MFTs.

Simmons and Doherty (1998) assessed differences among MFTs trained in varying disciplines including psychology, social work, MFT, and counseling, related to their practice patterns and client outcomes. Their national study explored whether academic training affected treatment modes of clinicians and client outcomes, and found that academic background had no significant effect on treatment. Practicing MFTs with a range of academic training in different disciplines provided similar treatment and outcomes. Therefore it was inferred that training in other disciplines than MFT provided equal outcomes and therefore was able to establish that MFT training is equally effective as other training modes in treatment of clients. These results provide support to the tenet that the field of MFT, though designated as unique in theory and training, may have some similar treatment elements or theoretical components that would make collaboration with other mental health disciplines logical and useful.

Nelson and Smock (2005) addressed the issue of MFT training and education and reported that there is a growing need for MFT training to provide MFTs the ability to adapt to the changing nature of mental health by adopting a science-based model of training and practice in

this era of managed care. Calling for an outcome-based training paradigm, they asserted that such changes in traditional MFT training would allow for a shift from purist systems training to a more inclusive model of training that would support examination and use of other relevant models shown to be effective. They also called for applying attention to EBP and ensuring a broader assessment of mental health theories and practices to adjust to these changes in mental health. They also supported the need to shift perspectives in training programs to provide more collaboration with other disciplines to continue building effective and ethical practices.

Previous cited research shows that integrating research and clinical training is necessary to improve the role of MFTs in the field of mental health. The ability to integrate clinical and research skills is also necessary to show funding agencies and policy makers the effectiveness of modes of treatment. The use of the scientist-practitioner model in training programs can assist with this integration and encourage continued growth in the field to meet changing standards for practice (Hodgson, Johnson, Ketring, Wampler, & Lamson, 2005). There is increasing focus on the scientist-practitioner model that will continue to shape and inform the evolution of mental health educational development (Cranea & McArthur, 2002). The integration of research with clinical focus in training could improve clinicians' ability to analyze and discuss EBPs and delineate the benefits and risks of adopting EBPs across disciplines.

Cranea and McArthur (2002) support the idea that it is possible to encourage policy makers to incorporate this scientist-practitioner model in a manner that would improve training programs while maintaining the integrity of a specific discipline's theoretical training. They also support of the idea that adjusting training to address current science and theory equally is not only possible, but valuable when they are integrated appropriately. Perhaps faculty and student perceptions of training would help ensure that the unique "art" of therapy is maintained even as

science and practice is increasingly integrated. Cranea and McArthur 's training recommendations helped the current researcher validate the interest in scientifically-based approaches. The need to incorporate EBP into clinical training would improve the quality of training and overall satisfaction with a more eclectic training process (Hodgson, et al., 2005).

The above discussion provides evidence of a growing trend in MFT research to evaluate the effectiveness of MFT-based models. The researcher reviewed the available effectiveness research concluded that there is a distinct focus on ensuring MFT practice is evidence-based and providing effective outcomes. The researcher asserts that an inclusion of non-systems-based in training programs may provide clinicians and researchers options to expand their clinical interventions and provide a more inclusive set of available effective treatments. It is the hope of the researcher that training programs can include models from other disciplines, encourage collaboration in the field and expand MFTs' knowledge and competencies in EBPs not traditionally included in MFT training.

Training Trends in other Disciplines

Other mental health disciplines acknowledge the benefit of collaboration with MFTs. Kaslow, Celano, and Stanton (2005) addressed the need for collaboration with family and systems-oriented theory and practice to help build competency for psychologists to meet standards of care in the era of EBP. They asserted that shifting training focus to be more expansive in theory and interventions addressed in psychology training programs could provide trainees the ability to provide more competent services to couples and families. Effectiveness research showing the utility of systems-based models was a factor in their assertion that these models should be integrated into the psychology training model. Some of the systems-oriented models deemed appropriate for integration were Behavioral Couples Therapy, Functional Family

Therapy, Multidimensional Family Therapy and Multisystemic Family Therapy. They also called for an improved skills competency requirement for psychologists to manage family and couple problem presentations and the interventions that would be useful in treating specific issues. They call for the provision of an integrated and more eclectic theoretical and clinical training model that would include other disciplines and concepts.

Berman and Heru (2005) addressed the importance of family systems training in psychiatric residencies, asserting that "common sense" dictates that family systems training is necessary for psychiatric residents to provide best practices to patients and their families. The authors assert that this has not traditionally been an easy integration due to differing theoretical views, conflicting attitudes, and other constraints. Due to research that shows that psychiatric illness is created in and maintained by the family, Berman and Heru assert that the above constraints be managed by programs and helpful family skills training be incorporated into psychiatric residencies as a more expansive lens through which to see the patient as a part of the family system.

The above discussion of MFT and other disciplines' research shows that interdisciplinary collaboration is the logical move in this era of EBP utilization. By integrating differing principles and helpful treatment models into the knowledge base of MFT, clinicians can establish a framework for working with non-MFT clinicians. This could provide additional training and knowledge that can benefit all clinicians, improve relationships between disciplines, and increase other professionals' positive perceptions of MFT competency. This would not only advance the field of MFT, but would inform the general field of mental health, improve policy and treatment, and provide best practices for clients in a unified manner. An ideal thought, as according to Hanson (1995), the whole is greater than the sum of its parts.

Justification for Focus on MFT and DBT

Most likely a reader of this research project is wondering why the researcher has chosen to focus on DBT, a traditional cognitive-behavioral model within the scope of assessing MHCs, specifically MFTs, and their knowledge and utilization of EBP. Theoretically it would seem that the research should focus on traditional systems-oriented EBP models to add to the existing literature. However, it is the view of the researcher that DBT provides therapeutically sound concepts and modalities that can be adapted by MHCs to provide effective interventions designed to treat difficult disorders. A critical review of DBT and its treatment use and effectiveness follows.

The researcher's personal use of the model in treating adolescent females with Borderline Personality Disorder (BPD) characteristics who present with parasuicidal and suicidal tendencies has increased respect for the cognitive-behavioral treatment model and has improved the researcher's ability to treat clients diagnosed with BPD. As an MFT it is important to the researcher to support the field and represent fairly any personal bias toward specific training. Therefore there is a specialized focus on MFTs threaded throughout this project. However, the general focus on all MHCs is most important, as the researcher hopes to bridge the gap that often separates clinicians with different clinical or theoretical assumptions.

As a systems therapist, the researcher has aimed to incorporate a traditional cognitive based treatment into the scope of clinical interventions, and has been able to maintain core MFT tenets in the utilization of this model. This accomplishment drives the researcher's interest in monitoring other MHCs and their ability to incorporate EBPs into their clinical frameworks. It also encourages the researcher to provide evidentiary support for merging disciplines to offer the greatest clinical benefit for clients. One aspect of interest for purposes of this project is MHCs

and their use of DBT, as research establishes DBT as an efficacious treatment shown to be effective in the treatment of severe mental illness (Linehan, 1993a).

Dialectical behavior therapy (DBT) is a manualized cognitive-behavioral treatment developed in 1993 by Dr. Marsha Linehan (Linehan, 1993a). The multi-mode treatment was originally developed for treating chronically suicidal female clients. After clinical analyses in outpatient and inpatient settings, the comorbidity of suicidality and Borderline Personality Disorder was overwhelming, thus the treatment evolved to treat BPD and associated suicidal and parasuicidal behaviors (Linehan, 1993b). Developed to treat women with these self mutilating behaviors, DBT has evolved into an EBP shown to be efficacious in reducing suicidality of clients diagnosed with BPD.

Clients with BPD have environmental, biological and interpersonal characteristics that lead to a propensity to develop difficulties regulating emotions (Linehan, 1993b). Because of this emotional dysregulation, clients with BPD show a pattern of pervasive instability in relationships, self-image, mood, and behaviors (APA, 1994). Because of their distinct inability to regulate emotions, clients with BPD often present in clinical populations with extreme distress in relationships and interpersonal interactions and show a tendency toward self harming behaviors or suicide attempts.

Approximately 2% of the population fits criteria for BPD, and they are typically female. They represent a large portion of clients seen in clinical settings, so the need to provide effective treatment is necessary. Clients diagnosed with BPD typically present with high rates of parasuicidal behaviors and ultimately 9% of suicide attempts are successful (Linehan, Comtois, Murray, Brown, Gallop, Heard, et al., 2006). Often this population is avoided by clinicians due to the instability of treatment outcome because of BPD clients' lack of skills in interpersonal

relationships (Linehan, 1993b). Supporters of the DBT model assert that training in DBT may prove beneficial to clinicians in need of learning how to effectively treat BPD symptoms and empower the BPD client to manage emotions, build healthy interpersonal relationships, and learn to accept validation from themselves and others.

The DBT treatment philosophy is based on dialectics present in thoughts and behavior. The theory of dialectics asserts that there are inherent polarities in the human experience, thus we function within a system that works much like a continuum. The BPD client has the inherent inability to exist within the middle range of this continuum and utilizes either polarity to guide thinking and behavior. This polarity of thinking, often described as "black or white thinking" is what enables the BPD client to exhibit extreme emotional lability and an overly dramatic view of the world. Clients with BPD visualize the world through these polarities; people either love them or hate them, they are good or bad, they are successes or failures. The BPD client is never able to see themselves as existing somewhere in the middle of this dichotomous view of reality, thus are never "normal" or "acceptable" to themselves or the world (Linehan, 1993a).

Because of fears of abandonment and invalidating environmental experiences such as critical families of origin or severe abuse or neglect, the BPD client is often desperate to seek meaningful connection to others. Due to associated fear of vulnerability, the BPD client often dissolves important relationships in the midst of attempting to connect. This invalidating experience reinforces the negative world view of the BPD client, and "proves" that they are not worthy of others' love or acceptance, evidenced by the dissolved relationship (Linehan & Kehrer, 1993). The negative, self-deprecating cycle continues and the BPD client continues to attach and detach, become vulnerable and then stonewall, love and hate themselves and others.

The DBT model is specifically developed to help validate the client and help build a life worth living full of emotional connections built on trust and vulnerability. Treatment goals include changing the negative world view of the client and improving the client's ability to regulate emotions. The balancing of acceptance and change allows the BPD client to accept themselves and the world and simultaneously acknowledge the need for change (Linehan, 1993a). Synthesis of the polarities of self perception, relationships, and view of reality is the ultimate treatment goal of DBT. It is within this synthesis that acceptance, validation, and adoption of self worth emerge and change occurs.

Implementing DBT in clinical practice includes several components. Specific modes of intervention include weekly individual therapy, weekly skills group participation with co-therapists for 2 to 2.5 hours, after-hours telephone consultation as needed, and weekly consultation team meetings for therapists. Skills group training consists of teaching clients five modes of skills acquisition, including core mindfulness, interpersonal effectiveness, emotion regulation, distress tolerance, and middle path. Individual therapy addresses clients' use of diary cards to record daily thoughts, emotions and impulses, as well as use of skills to manage these experiences.

Telephone contact with clients is necessary during crises to coach clients to use skills and deescalate emotional reactivity within a supportive environment to ensure clients' safety. Finally, weekly consultation team meetings are held to ensure clinicians' fidelities to the model and provide support and debriefing in the midst of what can often be stressful work. There are several levels of implementation of the model, including the full scale use of DBT, and the use of some modes of the treatment in what is called DBT-informed therapy. Both levels of DBT

treatment, implemented in varying clinical settings, have shown positive treatment effects and empirical support.

Empirical Support for DBT

Clinical trials have established DBT as the most effective treatment for BPD (Linehan, Comtois, Murray, Brown, Gallop, Heard, et al., 2006). The literature shows numerous controlled, clinical studies reporting DBT to be effective in reducing suicidal and parasuicidal behaviors (Linehan, Armstrong, Suarez, Allmon & Heard, 1991; Miller, et al., 2007) , decreasing number of inpatient hospitalizations (Linehan, 1993b) , decreasing dual-diagnosis symptomology (Rosenthal, 2006) , treating substance use disorders (Linehan, Schmidt, Dimeff, Craft, Kanter, et al., 1999; Rosenthal, 2006, Van den Bosch, Verheul, Schippers & Van den Brink, 2002,), and treating eating disorders (Chen, Matthews, Allen, Kuo, & Linehan, 2008; Miller et al., 2007). Recent research is also focusing on DBT as effective for treating trauma, psychosis, conduct disturbances, and suicidal adolescents (Dimeff, Linehan, Koerner, 2007, Miller, et al., 2007).

The literature on the efficacy and effectiveness of DBT is vast and continues to grow. The New York Times (Carey, 1994, July 13) reported on the significant impact of DBT, and it was termed "one of the most talked about new approaches in decades." Clinical trials and program evaluations have shown DBT to be highly effective in decreasing the hallmark symptoms of BPD and decreasing instances of hospitalization, and parasuicidal and suicidal behaviors. Linehan, et al. (1991) reported results from a randomized clinical trial of DBT in comparison to treatment as usual (TAU), a cognitive behavioral therapy. Forty four female clients diagnosed with BPD based on DSM-III (1980) criteria with histories of parasuicidal behavior were randomly assigned to two treatment groups. The group receiving DBT for a one year period showed significant decreases in parasuicidal behaviors and had fewer

hospitalizations than those participants in the TAU group. All subjects were reassessed every four months for treatment effects and results showed significant skills retention and lasting treatment effects based on reductions in symptoms, hospitalizations, and need for continued skills training.

A follow up study randomly assigned 39 women into DBT and TAU groups. Assessment of clients' numbers of inpatient hospitalizations, parasuicidal behaviors, anger, social adjustment, and Global Assessment of Functioning (GAF) was completed at six and 12 month follow ups. The researchers found that at six month follow up, DBT group participants showed significant decreases in levels of anger, number of hospitalizations, and self-mutilating behaviors. Throughout the one year follow up, DBT participants showed increases in GAF scores. Results concluded that DBT was significantly more effective in treating BPD than TAU (Linehan, Heard, & Armstrong, 1993).

Scheel (2000) reported and critiqued the empirical basis of DBT from the analyzed studies. Higher analysis of the research showed positive treatment effects in inpatient and outpatient settings with significant decreases in parasuicidal behaviors and symptomology as well as improved functioning. Methodological issues in the research were examined and called for improvement to validate DBT as a prominent model for treating BPD. Scheel reported that in the midst of empirical support and increasing use of the model in treatment settings, continued research was necessary to build credibility of the already published empirical data and called for continued research of the model due to the lack of any other models showing similar effectiveness rates.

Bohus et al. (2000) conducted a pilot study to evaluate the use of DBT in an inpatient setting. Participants were 24 females diagnosed with BPD. Participants were evaluated for level

of psychopathology and parasuicidal behaviors at admission and one month after discharge. Significant decreases in self mutilation, anxiety, depression, level of dissociation, and overall improvements in GAF scores were reported. Treatment effects were significant and results showed that DBT was effective for reducing symptomology in an inpatient clinical setting. Results provided empirical support to continue toward a clinical trial to examine further the overall effectiveness of DBT in varying clinical settings.

Bohus et al. (2004) evaluated DBT in an inpatient setting for three months. Fifty female BPD clients were grouped into DBT treatment (n =31) or TAU (n =19). Pre-testing levels of self-mutilation and psychopathology including depression, anxiety, interpersonal relationships, GAF and social adjustment were collected. Post-testing data on the same variables were collected one month after discharge. Results showed that intensive inpatient treatment of BPD with DBT was significantly effective and showed highly positive treatment effects. Participants in the DBT group showed significantly fewer self-mutilation acts (31%) when compared to TAU participants (62%). Degree of symptomology was also significantly lower for DBT participants compared to TAU participants receiving therapy in an outpatient setting.

Recent articles acknowledging the role of DBT in the treatment of BPD have shown clinically significant treatment results for decreasing BPD symptomology and improving functioning of BPD clients. Bruce (2006) acknowledged that the therapy modes of DBT were the effective measure of the model, not the specific therapist. Studies by Muehlenkamp (2006), Rosenthal (2006), Linehan et al., (2006) and Tarrier, Taylor, and Gooding (2008), all have reported significant treatment effects in clinical trials proving the efficacy and effectiveness of DBT in treating clients diagnosed with BPD and other disorders (Koerner & Linehan, 2000).

The National Institute of Mental Health (NIMH) has funded the development and continued study of DBT and provides grants for continued research on this model. An NIMH-funded, two year, randomized clinical trial of DBT was conducted by Linehan et al (2006) with 101 female BPD clients. Participants were randomly assigned to DBT (*n* =52) or Treatment by Experts (TBE) (*n* =49) groups. Participants in the DBT group showed fewer suicidal attempts (23.1%) than those in the TBE group (46.7%), and fewer inpatient hospitalizations (19.6%) than TBE participants (48.9%). Conclusions were that DBT reduced suicide attempts by half, and further asserted that specific model aspects were directly related to improvements in functioning, showing that DBT is effective in the treatment of suicidal clients.

Miller (1999) adapted DBT to treat suicidal adolescents and has since established that DBT can be effectively adapted to treat adolescents with parasuicidal and suicidal behaviors (Miller, et al., 2007). Family skills training is a key aspect of this adapted model, and calls for improved family relationships as a means for change. Miller, Glinksi, Woodberry, Mitchell and Indik (2002) proposed the expansion of DBT by incorporating a family systems orientation to treat adolescents with comorbid diagnoses. Aspects of DBT that are specifically family-systems oriented were addressed. Results established favorable evidence that the integration of models across disciplines of mental health is useful and an issue of current clinical focus. Hoffman et al (2005) conducted an NIMH-funded trial of a program called Family Connections, developed for educating family members of clients with BPD. The model incorporated family support with DBT strategies. Results showed positive treatment effects for family members, and supported the collaboration of DBT and systems-oriented training.

The above research provides strong relevance to the researcher's current exploratory project, as it is apparent that there is a trend in developing DBT to treat some of the most

difficult clinical presentations and clients. Grants by NIMH, the Substance Abuse and Mental Health Services Administration (SAMHSA), and private funding agencies on state and federal levels are increasingly funding studies on the effectiveness of DBT and supporting continued development and research. Past and current research results are establishing DBT as an effective EBP for the treatment of parasuicidal and suicidal behaviors. It also is the most established treatment for BPD, thus it is imperative that MHCs receive appropriate education regarding this model so they may make an educated choice to implement this model as a possible treatment method for clients. For those clinicians that choose to integrate the model into practice, it may prove beneficial to provide necessary training to help clinicians utilize and implement aspects of this treatment modality into systems-oriented clinical interventions.

Limitations of the Empirical Data for EBP and DBT

For all the research and empirical support for the use of DBT there are also some limitations that are necessary to note to ensure a critical examination of the model. As there are clinicians supporting the use of EBP and DBT specifically, there is also a faction of the population supporting the anti-EBP movement (Duncan & Miller, 2006). In order to establish DBT as a model that is effective for clinicians, a critical review of the empirical basis of its success must be examined and provided to clinicians so that clinicians can establish their own evidence base for utilizing a particular model. Some of the main criticisms of EBP research have been that the funding sources for the trials typically hold some stake in the outcomes. As for DBT research, a common critique is that the developer of the model, Dr. Marsha Linehan, is often cited as an author or supportive contributor to the trial research.

In the previous cited research, DBT has been tested against another non-manualized treatment, such as cognitive behavioral therapy or what researchers deem as treatment as usual or

treatment by experts. As some anti-EBP clinicians have addressed, manualized treatments have not been empirically proved to be more effective than non-manualized treatments (Addis, Wade, & Hatgis, 1999; Norcross, Beutler, & Levant, 2006). Another aspect to be addressed is the sample sizes, effect sizes, and overall statistical significance of results of these clinical trials. Often effect sizes, aspects of sample size, or treatment effects are not fully explained or established in the midst of touting the model as effective.

Though there have been several recent clinical trials that are more overt with effect size, provide a more critical glance at the method, and yet provide appropriate clinical implications in comparison to other treatment models (McMain, et al., 2009; Harned, et al., 2008) there remains to be some hesitancy with some clinicians to support the model fully based on empiricism alone. And as any anti-EBP clinician would espouse, perhaps focusing more on the common factors that make treatment effective, the therapeutic relationship (Hubble, Duncan, & Miller, 2002), and the effects of just treatment in general compared to no treatment (Duncan, Miller, & Sparks, 2004), will allow any clinician to make an educated and clinically relevant decision regarding the choice to support or utilize DBT or any other EBP to treat clients most efficiently.

Marriage and family therapists, as well as other-trained clinicians treat a myriad of disorders and clinical presentations. Clients with parasuicidal and suicidal behaviors, clients diagnosed with BPD, clients with substance use disorders, eating disorders, and other difficult presentations are treated by MFTs in various treatment settings. To meet the changing trends in EBP and to establish MFTs as prominent educators, clinicians, and researchers in the field, there must be an eclectic awareness and use of the most effective treatments available to provide the best possible treatment for clients, regardless of the orientation from which they evolved.

Clinicians have an ethical obligation to implement best practices in work with clients, and though clinicians may have divergent theoretical backgrounds, the implementation of non-systems oriented models and interventions can only improve the scope of disorders clinicians can effectively treat. Future research in the field of MFT may provide continued assessment and development of the use of DBT through a systems lens. Marriage and family therapists' unique knowledge and focus on the family provides the means to improve DBT with a family or couple focus. Clinicians have the opportunity to bridge the gaps between disciplines, and ultimately bridge the gap from research to practice. Perhaps developing awareness of MHCs' perceptions of EBP will help align all clinicians regardless of training background or basic theoretical assumptions.

Chapter III: Methods

The researcher solicited responses from mental health clinicians (MHCs) via use of a self-designed web-based survey. The 25-item survey was developed to support this exploratory research project to gather quantitative data about MHCs and their knowledge, level of training, and utilization of evidence based practices (EBPs), and specifically, their knowledge, level of training, and utilization of Dialectical Behavior Therapy (DBT). Since there was minimal information regarding web-based surveys as a method of inquiry, the researcher chose to use a quantitative design to gather initial research data, and chose to use nonpurposive sampling to gather as many responses as possible. After obtaining IRB approval from Virginia Tech, the experimental stage of the project began.

In this chapter the researcher explains the methods used to construct the survey instrument, pilot-test, select appropriate sample size, disseminate the survey, and gather, code, and interpret results and statistical data. Data was analyzed with the use of the student version of SPSS 17 and JMP statistical analysis systems and the researcher also utilized the consultation services of the staff at the LISA statistical lab at Virginia Tech.

Quantitative Methodology

A quantitative design was chosen to show differences among respondents and groups of respondents (Dickey, 1996). Quantitative data were collected regarding the numbers of MHCs who recognize EBP as useful in clinical interventions, have interest in improved training, and who use EBP in their clinical work. The researcher also intended to report data on marriage and family therapists (MFTs) specifically, as well as MHCs overall knowledge, level of training, and utilization of DBT. There is such limited descriptive data on MHCs and EBP, specifically MHCs and DBT, that this exploratory research could prove useful for establishing a baseline

from which one could monitor the field's evolution in the utilization of EBP. A researcher-developed web-based survey was used to collect data.

Research Questions

The following research questions are addressed with the data collected. The researcher's main purpose was to gather quantitative data, measure frequencies, and percentages of sample responses to gather an initial data set to explore whether further inquiry into this topic is relevant or appropriate. Pertinent descriptive statistics and statistical outcomes of interest are also presented to create a record of such responses in the literature. The main research questions are listed as follows:

1) How important to MHCs is the use of EBP?

2) How much training have MHCs received in EBP?

3) What EBPs do MHCs identify as most effective in their clinical practice?

4) Are there significant differences in the level of training MHCs received in educational settings in comparison to employment settings?

5) How much training have MHCs received in DBT?

6) How interested are MHCs in receiving training in DBT?

Research Hypotheses

The 25-item survey instrument developed by the researcher elicited descriptive data that allowed the researcher to compare responses and construct inferences regarding responses to test several exploratory research hypotheses. The first research hypothesis is: MHCs who report higher number of years in practice will report lower levels of training, knowledge, and use of EBP than MHCs who report lower number of years in practice. The researcher will be able to

address this question through correlations based on years in practice and scale scores on knowledge, level of training, and utilization of EBP.

The second research hypothesis is: MHCs who report higher levels of training, knowledge, and use of EBPs will also report significantly higher levels of training, knowledge, and use of DBT than those MHCs who report lower levels of training, knowledge, and use of EBPs. The final research hypothesis is: MHCs who report higher levels of employment training in DBT will also report higher levels of interest in receiving additional training in DBT compared to MHCs who report lower levels of employment training in DBT.

The Internet and Use of a Web-Based Survey

The use of the internet to disseminate surveys has been shown to be very effective in mental health research, as it allows the researcher to gain access to many more potential respondents than typical phone or paper surveys. However, the use of web-based surveys in social science research is a relatively new concept showing mixed reviews regarding accuracy of sample as representative of the mean, confounded by the fact that those who receive these surveys share qualities that may separate them from the general population (Hertlein, 2004). Web-based surveys can simplify getting a large sample, disseminating information to professionals, and providing relatively quick responses. The overall accuracy of information gathered, and the validity of results, no matter the manner of solicitation, relies heavily on how accurately the survey is designed (Lyness & Sprenkle, 1996).

Other than the constraints found in sending out many solicitations at once, the use of the internet to disseminate surveys proved very useful and efficient. The use of the web based survey instrument was also very productive, as it allowed the researcher to log in and see how

the data was distributed throughout the collection process. The researcher was notified with each completed survey, which provided a sense of encouragement and continuance to the project.

The researcher had specific interests in both DBT and training background that lent to creating a survey that could include these aspects properly, thus a self-developed survey was used. This logistical choice provides some limitations, as there is an inherent limited ability to establish standards by which the survey can be tested and this can affect all levels of reliability and validity (Snyder & Rice, 1996). The researcher attempted to control for these confounds by carefully constructing the survey based on research design literature and previously published surveys and also attempted to ensure that the survey followed principles reported in the literature shown to improve survey design and research. These aspects include: survey organization, ease of answering, providing information about time necessary to complete the survey, and providing questions in a formatted or collective pattern to allow for ease of responding (Rea & Parker, 1997). The survey was developed using principles shown to improve respondents' understanding of the questions and purpose, and increase probability of responding.

Operationally defining variables is also necessary to ensure reliability of the instrument (Rea & Parker, 1997). This exploratory study and survey was designed with minimal need to operationally define variables due to the construction of the survey being clear, understandable, and with recognizable differences in the choices provided in items using the Likert scale. Pilot testing and instrument review also improved measures of reliability, content and construct validity, design and use, as the researcher requested feedback on these specific issues (Pedhazur & Schmelkin, 1991).

Survey Instrument

Upon receiving exempt status and approval from the Institutional Review Board at Virginia Tech (see Appendix A), the survey was uploaded onto the Virginia Tech's web survey application located on the website at www.vtsurvey.edu. The researcher followed an organizational pattern to the sections of questions, and kept questions related and simple to follow to ensure ease of completion. Then the initial 27-item instrument was pilot-tested with a convenience sample of ten mental health clinicians. Individuals who participated in the pilot test indicated that the survey was easy to understand, took little time to complete, and that the format of the Likert-type items was easily followed. One respondent did note that it was really a 25-item survey since the other two responses are for informed consent and the possibility of entering an email address for entry into the drawing, so the numbering of the survey based on what was listed in the initial proposal was changed. No other changes were noted, recommended by respondents, or made by the researcher. Upon receipt of all responses from pilot testing, the web-based version of the survey was prepared to be open and available to potential respondents. See Appendix B for a copy of the web-based survey.

The survey included a brief explanation of the study and information regarding informed consent that respondents were asked to answer "yes" or "no" to regarding their understanding of the process and to give informed consent to participate. All respondents were also notified that failing to answer "yes" or "no" to the informed consent but completing the survey was considered implied consent and their completed survey would be used. Only one respondent answered "no" to informed consent, and 36 did not answer, however, these respondents completed the survey, so their responses were used, and consent was implied.

The first section of the survey includes 15 demographic questions requesting information on age, race, gender, years in practice, type of current work setting and length of employment in

that work setting, type of licensure, degrees attained, student status and intention to get licensed. This was important, as it is the hypothesis of the researcher that the demographic issues of years in practice, type of practice setting, and type of theoretical background in training directly affect respondents' perceptions, use, and level of training in EBPs and DBT.

The data collected by these questions were coded by the researcher accordingly to response with an associated number (1- *n*) assigned to all responses for each question. For example, for ethnic background, "American Indian/Alaskan Native" was coded "1" and "Asian" was coded as "2" for ease of transferring data into SPSS for analysis. All variables in each question were labeled uniquely to be represented in the data set in SPSS. Questions 6, 8, 11, 12, 13 and 15 included "Other" as a possible response. This response was also given an associated number for use in data analyses. Specific responses that respondents included in the available text box after an "other" response were recorded but not coded for analysis due to limitations to categorize the varying responses. Items that were not answered were coded with a specific numeric value for "no response given".

Section two includes seven questions with several subparts pertaining to educational training and level of focus on EBP, work setting focus on EBP, and personal awareness, knowledge, and utilization of EBP. Respondents' level of interest in receiving more EBP training was also elicited. The seven Likert scale items include a range of statements in each question to which respondents rated their level of agreement or disagreement on a scale of 1-5 for each item within each question, where 5 equals "strongly agree", 4 equals "somewhat agree", 3 equals "neither agree or disagree", 2 equals "somewhat disagree", and 1 equals "strongly disagree." Each of the variables was uniquely labeled to be represented in the data set to which the responses of 1-5 from the Likert scale were attributed for purposes of statistical tests.

Questions 16, 21, and 22 included "Other" as a possible response. Specific responses recorded in the available textbox by those who selected this option were not coded independently, so if "Other" was selected it was coded as such for use in the data analysis. Items in each question that were not answered were attributed a specific value for "no response given."

Section three included five questions regarding clinicians' level of training, knowledge, perception and use of DBT. Questions 23-25 ask for a specific numerical response. This interval data was coded in SPSS as listed, with the measured variable (i.e. number of classes focused on DBT) given a unique label to represent that variable. The other two Likert items were coded with unique labels for each variable and the associated responses were coded as numbered ranging from 5 (strongly agree) to 1 (strongly disagree), as reported above. Items in each question that were not answered were attributed a specific value for "no response given".

Incentive to Participate

To encourage participation in the study the researcher then provided a monetary incentive to all participants who submitted or attempted to submit a completed survey. Any participant who entered their email address at the end of the survey, regardless of completion of the survey was entered into the drawing that will be held at the completion of the dissertation project. Only one respondent submitted an email address with no survey responses. All participants were notified about the incentive during the initial solicitation email, and were also reminded during the subsequent solicitation.

The researcher will be providing ten $25.00 gift cards to Target to be randomly distributed to 10 participants upon approval of the final project. Institutional Review Board (IRB) standards require that all participants be informed of the statistical probability of winning

the incentive (S. Perkins, personal communication, October 19, 2008). The 10 winners of incentives will be selected by using the unique identifiable number given to each email address upon sample selection. A random number table will be used to select the 10 incentive winners. This will be managed upon completion of the dissertation project.

Additional Coding Methods

Appropriate coding methods were completed to ensure that variables and demographic data results were labeled and coded accordingly for analysis. All independent and dependent variables were given unique labels to represent each one in the data set. All data that could be coded as nominal data such as age, race, sex, type of degree were coded numerically with a corresponding value (1-"*n*") based on respondents' selections. Nominal data such as level of membership in AAMFT, and level of education were coded accordingly by attributing values (1-"*n*") for each possible response. For example, level of education was coded as 1 for "Bachelor of Arts", 2 for "Bachelor of Science", 3 for "Master of Arts", 4 for "Master of Science", and so on. If the "Other" option was selected on any question, the researcher coded "other" accordingly, continuing the numerical pattern, and though individual responses were often provided, the researcher chose not to code individual responses for use in this project. If no response was given for a particular question, that question was coded as such, and for use in analyses, was excluded to maintain integrity of the entire research question.

All scale data such as years in practice and years licensed was coded according to the number provided ranging from 0-100. Since most data collected used the same Likert scaling, these items were coded according to the number attributed to the response level. For purposes of analysis, often coding was scaled or converted into scores, however, more detailed descriptions of data and coding will be provided as necessary in the results chapter.

Sample Selection

The researcher attained the sample by accessing publicly posted listservs located on the internet from various clinical and organizational sites, as well as some public social networking sites. The researcher followed all site protocols and AAMFT guidelines to ensure that no user agreements were violated in accessing the email addresses for use in the study. The dissemination phase of the study limited the researcher's ability to access potential respondents, as the option to use Therapist Locator or other mental health web pages have user restrictions and do not allow for soliciting members.

Due to difficulty accessing email addresses within the mental health field, the researcher chose to use non-probability sampling due to the limited number of people in the population the researcher was interested in and the limitations on accessing these email addresses of potential participants. With this type of collection, the researcher attained a total of 2120 email addresses that would assist in soliciting participants that would most likely meet inclusion criteria. Criteria for inclusion in the study were limited to having had training and some career experience in the mental health field, being a resident of the United States, being able to read and understand English, and have access to a computer enabled with internet access and have a valid email address. The researcher was hopeful to attain a sample of professionals with varying years of experience and differing training and clinical backgrounds. The researcher aimed at collecting data from psychiatrists, licensed clinical social workers, licensed professional counselors, licensed marriage and family therapists, educators, medical professionals with mental health backgrounds, and professionals working toward licensure in the mental health field. Therefore, when compiling email addresses, the researcher attempted to gather a wide range of professional

listings to ensure some variance in these demographic factors, even though exact nature of the randomness of the sample could not be inferred before data collection and review.

Sampling Procedures

The researcher ensured that the original solicitation email (see Appendix C) included the following:

1) Introduction to the study
2) Contact information for the researcher
3) Importance of participation and incentives
4) Informed Consent-consent was implied by participation in the study and was fully explained.
5) Link to the 25-item survey

This initial part of the project proved difficult, as the search engine used to email the address, "yahoo" was particular about how many emails any one certain email address could send out during one twenty-four hour period. After the researcher's email account was placed on hold to protect other yahoo users from receiving spam, the researcher had to develop several email addresses to allow for sending out as many emails as possible per twenty-four hour period. A total of seven email accounts were created specifically for this project and the researcher sent out email solicitations until yahoo blocked a particular address. This allowed the researcher to send out approximately 50 to 100 emails per day per email address. During the first solicitation period of two days in November 2009 the researcher was able to email 329 surveys.

The researcher then received an urgent email from the committee chair requiring the researcher to stop sending emails immediately. Upon contacting the chair the researcher was informed that using "VT survey" in the subject line of the email solicitations was misleading to

participants, and that the solicitation letter was also missing some information that was necessary to explain to participants how their email addresses were obtained, how the addresses and survey responses would be used, and reasons that particular group was being solicited for purposes of the project. Upon making the required changes, a revised solicitation and clarification letter (see Appendix D) was created and submitted to IRB for approval. After receiving approval, this revision letter was sent to the original group of potential participants to explain the information that was lacking in the first letter and was intended as a re-solicitation letter. This was done after approval in December 2009. This stalled the dissemination process by several weeks, as the revision letter had to be created, approved by the committee chair, and approved by the IRB and resubmitted to the original recipients of the first solicitation letter.

A revised solicitation letter was also created to send to the rest of the potential participants (see Appendix E). This revised solicitation letter was sent out to potential respondents over a period of four weeks. Due to the solicitation period falling during the winter holiday season, the researcher made a logistical decision to hold off sending out solicitations until January 2010. After the completion of the holiday season, the researcher sent out email solicitations to the remaining 1791 email addresses. During this period that the researcher was waiting to complete dissemination of the solicitation emails, the researcher made sure to check each of the email address inboxes weekly to be able to respond to any emails and collect any relevant feedback.

Upon review of other research conducted with the use of web-based surveys, results showed approximately 20%-25% response rates (Schonlau, Fricker, & Elliott; Gray, et al., 2007), however, other studies have shown it to be as high as 57% when an increase in contacts with participants were made (Schaeffer & Dillman, 1998; Sills & Song, 2002; Northey, 2005). The

most powerful predictor of increased response rates has been shown to be the number of contacts with solicited participants (Dillman, Tortora, & Bowker, 1998).

After a period of two weeks, the same solicitation letter was again sent to the group of respondents that did not receive the initial solicitation letter (*n* =1785), excluding those who requested not to be solicited again or requested to not participate (*n* =6), which eventually was a total of 11 respondents. The researcher received a total of 210 returned emails for invalid addresses, and received 11 emails from possible subjects declining to participate, changing the total projected sample of the population to 1899 MHCs upon completion of all solicitations and responses.

A total of 194 surveys were returned for use in the analyses. This represents a 10.2% response rate. The researcher had hoped for a higher response rate, intending to attain at least 300 completed surveys. After consultation with the statistics lab staff, the researcher found that issues of power and higher response rates were not necessary, as this was an initial data gathering survey and the preliminary results showed some interesting statistical significances in spite of the lower response rate (Shaughnessy, Zechmeister, & Zechmeister, 2006).

Referring to previous information read during the survey creation, the researcher was reminded that at least 100 survey responses seems adequate for preliminary dissertation studies. During the dissertation proposal, the researcher had been told to aim for approximately 200 responses, so the researcher felt this number would prove adequate for this project. The survey link was closed officially on February 11, 2010 and the process of cleaning and analyzing the data began.

Measures

Upon development of the research questions and hypotheses, it became clear to the researcher that the use of one- way ANOVA, Chi-Square testing and correlations, as well as basic frequencies and descriptive statistics would suffice in answering the research questions and providing useful data to begin to build the literature available on this topic (Howell, 2002). Using the appropriate levels of measurement has important implications for the types of statistical measures that can be performed (Snyder & Mangram, 1996). Upon receiving consultation from the LISA statistics lab on the campus of Virginia Tech, additional Kappa testing and other fit tests were also added to the spectrum of possible analyses to be used to properly analyze and interpret the data. SPSS and JMP statistical programs were used to analyze the data collected and to create all charts and graphs. Results and findings are presented in the next chapters.

Chapter IV: Results

Demographics

A total of 2120 solicitation emails were emailed to potential respondents. Of the total 2120 surveys emailed, I received a total of 210 returned emails for invalid email addresses, and received 11 emails from possible respondents declining to participate, changing the total projected sample of the population to 1899 Mental Health Clinicians (MHCs) upon completion of all solicitations and responses. However, it is difficult to predict how many actual emails reached inboxes of potential respondents and how many were filtered out, deleted, or were sent to unused email addresses that may show as active, but are unused.

A total of 194 surveys were completed, and of those 194, 2 entries were deleted from the data set, one for no responses to any questions, and one for duplication. Respondents were predominantly female (n = 123, 63%) though three respondents did not answer or chose "*prefer not to answer*". Respondents ranged in age from twenty four to 85, with a mean age of 52, however two respondents did not respond to this question. Caucasian (81%) was the most highly represented ethnic background in the sample with the total sample being composed of 4% multiracial, 3% Hispanic/Latino, 2% African-American, and 1% Asian. Five percent identified as "other" and listed Jewish, White Hispanic, Middle Eastern, and Canadian as their ethnic backgrounds. Two percent preferred not to answer, and 2% did not answer this question. Fifty two percent of respondents (n = 102) had completed Master's level training and eight (4%) reported not having received a Master's degree. Seventy six respondents (39%) had completed doctoral level training. Three respondents (1.5%) identified as medical doctors, and 4 respondents (2.1%) listed "other" for type of doctoral degree attained. These included degrees in

human development, social sciences, human sexuality, and one respondent was completing a Juris Doctorate. Only two respondents (1%) did not answer this question.

Twenty seven respondents (14%) reported they were currently enrolled in higher education programs with the majority seeking a Doctor of Philosophy degree (*n* = 17) or a Master's degree (*n* = 6). An astonishing 73.8 % of respondents reported completing an accredited Master's or Doctoral level training program, with only 8.7% reporting non-accredited program completion. Thirty four respondents (17.4%) were unsure of accreditation status.

The majority of respondents (*n* = 57) were trained as clinical psychologists, followed by training in marriage and family therapy (*n* = 53), counseling (*n* = 47), and social work (*n* = 31), and four respondents chose "*other*". The majority of respondents were licensed as marriage and family therapists (*n* = 90), followed by licensed psychologists (*n* = 32), licensed social workers (*n* = 28), licensed professional counselors (*n* = 27), and licensed psychiatrists (*n* = 3). Seventeen respondents reported being licensed as "*other*" and reported medical and mental health field licenses. Twenty three respondents reported not being licensed.

Respondents reported years in practice ranging from less than one year to 50 years, with the average years in practice being 20.57, though three respondents did not respond to this question. The majority of respondents reported working in private practices (*n* = 101, 51.8%) followed by educational settings (*n* = 32, 16.4%), outpatient settings (*n* = 30, 15.4%), residential settings (*n* = 14, 7.2%), group practices (*n* = 5, 2.6%), inpatient settings (*n* = 2, 1%), hospital and community service board settings (*n* = 1, .5%) for each. Seven respondents (3.6%) were no longer in practice.

Research Questions Examined

Question 1

Research question one aimed to answer how important the use of EBP is to MHCs. In order to achieve this statistical analysis, three questions from the survey that together answered this question fully were combined, scaled, and scored. A respondent could score from 3-15 based on the collective score of all three question responses. The third question from the survey used to answer the research question was reworded to match the tense of the other questions, and the response originally given was reverse coded, so that the focus of each question led to a total answer of 5 for very important or 1 for not very important. The survey questions used to create the scaled score were:

1) The use of EBP is important in my clinical work
2) Clinical trial research results are important to me when implementing a particular treatment method
3) The use of EBP deters focus from other more important aspects of clinical work.

Survey item three was reformed so that the question was scaled as "the use of EBP does not deter focus from other more important aspects of clinical work". The respondents' answers were converted to scores and then frequencies and descriptive information was elicited, with results showing the majority of respondents scored higher on the combination of three questions designed to report importance of EBP. Table 1 displays the frequencies of score, demonstrating the skew of scores (-.332) toward EBP being important based on the collective scores of respondents, with a mode score of 12. The mean of scores (10.06) and SD of 3.10359 shows that EBP is scoring more strongly important than we would expect, as an average mean for score would be nine, representing an average score of three for each of the three questions.

Table 1.

Summary of Frequencies of Score for Importance of EBPs.

Score	Frequency	Valid Percent	Cumulative Percent
3	3	1.6	1.6
4	7	3.8	5.5
5	8	4.4	9.8
6	9	4.9	14.8
7	16	8.7	23.5
8	12	6.6	30.1
9	21	11.5	41.5
10	14	7.7	49.2
11	24	13.1	62.3
12	29	15.8	78.1
13	14	7.7	85.8
14	12	6.6	92.3
15	14	7.7	100.0
Total	183	100.0	

Question 2

Research question two aimed to find how much training MHCs have received in EBP. After running frequencies and descriptive analyses, it was clear that most MHCs felt they had received some moderate level of training in EBP, with only 35.4% (n = 67) of respondents having reported disagreeing or strongly disagreeing that their educational training and background had provided EBP training. And 71 (37.6%) respondents selected *4* or *5* on the Likert scale for that item, establishing their high level of agreement with the statement that educational training and coursework focused on EBP. There was significant negative correlation between level of training in EBP and age (r = -.312), years in practice (r = -.318), and importance of use of EBP scaled score (r = -.340) all significant at $p < .05$.

Question 3

To establish which EBPs that MHCs identify as most used in their clinical practice, the survey question that asked specifically which EBPs clinicians use most frequently was examined

to rank each response to find the top three utilized approaches. The comparison of mean responses, as shown in Table 2, shows which EBPs are most utilized by respondents.

Table 2.

Respondents' Uses of EBPs

Survey Item	Mean Response	Standard Deviation	Sample Size
I use CBT often	3.8383097	1.2927266	186
I use DBT often	2.2880435	1.2230342	184
I use EFT often	3.1693989	1.4482817	183
I use FFT often	2.2802198	1.3517102	182
I use MST often	2.3425414	1.371865	181
I use MET often	2.7103825	1.4818504	183

We can infer from the mean response from each question that the three most used EBPs are CBT, with an average response of 3.8383097; EFT, with an average response of 3.1693989; and MET, with an average response of 2.7103825. If these were ranked as equal importance they would have a mean response of 2.5 (H_o: $\mu = 2.5$, and H_a: $\mu > 2.5$). After computing t scores for each of the top 3 rated EBPs, probability was determined, showing that $P (t > 14.12) < 0.0001$, $P (t > 6.25) < 0.0001$, and $P (t > 1.92) = 0.028$, thus the probability of seeing a mean response at least this extreme above a mean response of 2.5 is extremely small for CBT, EFT, and MET, meaning that each of these are used more often than would be expected if they were ranked with equal importance.

Question 4

To see if there were significant differences in the level of training MHCs have received in educational settings in comparison to employment settings, general descriptive and frequency information was gathered for the two survey items that answered this survey question, including "*I gained adequate knowledge of EBP in my educational training*", and "*I gained adequate knowledge of EBP in my career training*". Kappa Testing was conducted to find level of

agreement between the two modes of training to see if there were any significant differences between the two types of training and to measure whether the outcome is different than what could be expected by chance. The kappa test revealed a kappa value of 0.430311 with a standard error of 0.044383. The 95% confidence interval for kappa was approximately (0.34, 0.52). Landis and Koch (1977) reported ranges for agreements, and show that Kappa of 0.21- 0.40 represents fair agreement, and 0.41- 0.60 represents moderate agreement, thus this kappa confidence interval reveals fair to moderate agreement.

Running Bowker's test for symmetry revealed a p-value < 0.0001 from which it can be concluded that respondents receive more career training in EBP than educational training in EBP, and the null hypothesis that there is agreement between the two types of training is rejected, since the significance level of the agreement test was .0000. Analyzing mean responses showed that training received in school (*M=2.6524*) was not as significant as training received in career settings (*M=3.1958*).

Question 5

To report how much training MHCs have received in DBT, the survey item asking "*how many classes focused on DBT in your educational training*?" was used to analyze number of classes and establish frequencies of classes respondents have taken. Results were scored from *0-2*, where "*0"* was the score for those respondents who had not taken any DBT specific classes, "*1"* was the score for those who have had one or two classes, and "*2"* if the respondent had taken more than two DBT classes. The researcher decided to rescore responses, since after looking at the results, it was clear that not all answers (1-5 on the Likert scale) were necessary or significant, and the distribution of the scores to three numbers helped classify the number of classes as none, some, or more, which allowed for reporting the number of classes respondents

had received in a more meaningful way. Results showed that 44.8% of respondents (n = 82) have had no training in DBT, 33.3% (*n = 61*) of respondents had one or two classes in DBT, and only 21.9% of respondents (*n = 40)* reported having taken more than two DBT classes.

Question 6

General analysis of the data showing interest in receiving more training in DBT shows that the majority of respondents are interested in receiving more training, as evidenced by a response of "*4*" or "*5*" to the survey item, "*I am interested in receiving more training in DBT*". A total of 91 respondents (38%) showed interest in receiving more training, and 55 respondents (23%) reported no interest in receiving more training, as evidenced by responses of "*1*" or "*2*" to the survey item, showing disagreement with the statement. A total of 40 respondents (16.7%) reported neutral stance on receiving more training. When the data is examined by professional training, it is clear that a majority of respondents, regardless of professional training, desire continued DBT training. Table 3 displays these totals and provides comparisons of interest in wanting more DBT training for each type of professional background.

Table 3.

Level of Interest in Receiving More DBT Training by Profession

	Survey Response					
Professional Training	1	2	3	4	5	Total "*n*"
LMFT	18	7	22	28	14	89
LPC	4	1	7	7	7	26
LCSW	9	3	3	9	3	27
LPSYCHOLOGIST	5	3	8	10	6	32
LPSYCHIATRIST	1	0	0	1	0	2
Cumulative Totals	37	14	40	55	30	176

Research Hypotheses

Several research hypotheses were developed at the start of the research project based on the literature review and my own personal conceptions about EBP and DBT. The first hypothesis that those who report a higher number of years in practice will report lower levels of training, knowledge, and use of EBP than those who have been practicing less was based on information gathered during literature review. Due to EBPs relatively recent emergence it seems that those who are more recently trained may have had more exposure, training, interest and personal stake in understanding and using EBPs.

Table 4 presents correlation coefficients for the variables, and displays the relationship between years in practice and the other independent variables.

Table 4.

Correlations Between Years in Practice and Training, Knowledge and Use of EBP

Variable	Analysis	Correlation With Years in Practice
Education Training	Pearson's r	-3.18**
	Sig. (2-tailed)	.000
	N	184
Career Training	Pearson's r	-.053
	Significance	.470
	N	186
Knowledge of DBT	Pearson's r	.011
	Significance	.441
	N	189
Use in Practice	Pearson's r	-1.22**
	Significance	.048
	N	186

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

As seen in Table 4, there are significant negative correlations between years in practice and extent of educational training (r = -318), and respondents' use of EBP in clinical practice (r

= -1.22). This shows that the more years respondents had been in practice, the lower the level of training in EBP and use of EBP in clinical practice. Minimal correlations were found between years in practice and level of career training (r =-.053) and personal knowledge of EBP (r = .011), respectively and showed no statistical significance. One-way ANOVA looking at years in practice and level of educational training in EBP showed that MHCs that have less experience tend to have more educational training and coursework in EBP, F (4, 176) = 2.638, p = .036. Therefore, it can be concluded that years in practice does correlate negatively with educational training and clinical use of EBP and also shows statistically significant differences in groups based on years in practice.

Hypothesizing that higher levels of training, knowledge, and utilization of EBPs will highly correlate with levels of training, knowledge, and utilization of DBT is based on the fact that DBT is a widely known, empirically based treatment, and exposure to the study of EBPs will certainly bring about knowledge and clinical impressions of DBT. Table 5 displays the correlations between varying aspects of the variable of EBP with the aspects of DBT.

Table 5.

Correlation of Aspects of EBP and Aspects of DBT

Variable	Analysis	Education Training DBT	Career Training DBT	Knowledge of DBT	Use of DBT
Education Training EBP	Pearson's r	.343**	.209**	.235**	.249**
	Sig. (2-tailed)	.000	.005	.001	.001
	N	189	187	186	187
Career Training EBP	Pearson's r	.329**	.232**	.336**	.315**
	Significance	.000	.002	.000	.000
	N	186	189	188	183
Knowledge of	Pearson's r	.244**	.195**	.302**	.222**

EBP	Significance	.001	.008	.000	.002
	N	189	183	190	184
Use of EBP	Pearson's r	.365**	.316**	.330**	.331**
	Significance	.000	.000	.0000	.000
	N	186	181	187	187

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

Though it was predicted that there would be clinical and statistical significance to some of the correlations, to find all relationships to be statistically significant was not expected. However, as hypothesized, these variables are all statistically correlated, and there is a relationship between one's level of training, knowledge, and utilization of EBP and those same aspects of DBT.

The final hypothesis tested was that MHCs who reported higher levels of employment training in DBT will also report higher levels of interest in receiving more training in DBT. This hypothesis was derived from the thorough literature review which revealed a growing trend in mental health to encourage the use of EBPs to increase funding, improve results from therapeutic interactions, and decrease treatment times. This financial focused shift in the treatment paradigm of mental health has directly affected the use of EBPs in public mental health.

By completing a contingency analysis of the variables of level of career training and focus with level of interest in receiving more training in DBT, it was clear there was no distinct agreement between answers on the two scales "*I gained adequate knowledge of EBP in my career training*" and "*I am interested in receiving more training in DBT*". Results showed no significant agreement between choices on either survey item, showing that there was no likelihood that high agreement with one statement would mean high agreement with the other, and the same for low levels of agreement or neutral responses. Bowker's test for agreement (B = 25.21, p = .0005) was significant, therefore the idea of there being some symmetry between responses was void, and it can be concluded that there is no agreement between responses on the

two survey items. The observation that there was no agreement between the response was also further supported by the Kappa value (k =.096) which shows there is an extremely low level of agreement with responses. Chi square testing (X =24.25, p = .084) shows that there is no significant dependence between the value responses, therefore it is concluded that level of employment based training does not predict, correlate, or affect level of interest in receiving more DBT training, thus the null hypothesis is rejected.

Other Results

Even though other DBT specific analyses were not examined for purposes of answering the research questions and hypotheses, it seemed important to examine the results regarding some aspects of the DBT data gathered. Because of the researcher's own personal interest and investment in the field of marriage and family therapy (MFT), several MFT analyses were run to display MFT specific results. There was also a major focus on MFTs in the literature review, and due to this, it seemed important to include relevant MFT specific results to show how this may correlate with hypotheses and previous literature regarding MFTs and their training, knowledge, and use of EBP. Due to personal curiosity regarding certain outcomes as well as results that seemed significant to understanding this topic more quantitatively, I chose to run other analyses not discussed in the original proposed project to help tie in all the research regarding MFTs specifically, all of which is threaded through the results and discussion sections.

An aspect of DBT specific results that was of interest was respondents' perceptions regarding importance of implementing DBT in education and career settings. Almost half of respondents (48.9%) reported believing that DBT was a model that was useful for clients diagnosed with BPD. And 47.7% of respondents reported that training programs should implement DBT specific training, and 45.6% of respondents felt that DBT should be

implemented in clinical settings. There was also a strong correlation between those respondents that thought DBT should be taught in educational programs and belief that DBT is a good model for clients with BPD (r = .609, p = .000). Also, MFTs reported having stronger belief in the idea that DBT is good for clients with BPD (r = .169, p = .024) than other-trained respondents. Finally it seems that those respondents who find DBT a useful model in clinical practice also reported they consider themselves DBT therapists (r = .553, p = .000). This provides useful information to be examined more fully in the discussion section.

Chapter V: Discussion

The purpose of this research was to gather data regarding MHCs levels of training, knowledge and utilization of EBPs with a specific focus on DBT. Because of the lack of quantitative data in the literature, I felt it was necessary to establish a preliminary collection of data that could be used to analyze need for further investigation, and gather some information about EBP in the field of mental health. I used a quantitative methodology to gather data to help create a collection of data from a nonpurposive sample that was able to be solicited through emailing them a web-based survey. A total of 194 surveys were completed and returned for analysis. The data was examined through use of simple descriptive analyses, correlations, ANOVA, and tests of independence. The following discussion will examine implications of the results, the limitations to the study, and explain the impact they have had on the research, the literature, and the field of mental health.

Examination of Research Questions and Hypotheses

The research questions that were examined during this research are,

1) How important to MHCs is the use of EBP?
2) How much training have MHCs received in EBP?
3) What EBPs do MHCs identify as most effective in their clinical practice?
4) Are there significant differences in the level of training MHCs received in educational settings in comparison to employment settings?
5) How much training have MHCs received in DBT?
6) How interested are MHCs in receiving training in DBT?

Looking at how important to MHCs the use of EBP was proved more complex than originally considered. A closer look at the survey questions would show that the researcher could have

easily used the one survey item "*The use of EBP is important in my clinical work*" and established the statistics from that one item. However, it was the researcher's intention to show more complex interest in EBP, covering use in practice, importance of empiricism, and establish that there has been some shift in the initial school of thought at the evolution of EBP; that it deters from more important aspects of clinical work such as the therapeutic relationship. Therefore, the other two survey items that covered these aspects, "*Clinical trial research results are important to me when implementing a particular treatment method*" and "*The use of EBP deters focus from other more important aspects of clinical work*" were included to provide more depth of results. This also proved more difficult to analyze, for several inferences had to be established in order to assume that these questions answered the item intended.

One survey item had to be rescaled so that it matched the tense of the other two items so that scoring would make sense. After scoring all three questions for each respondent, frequencies were analyzed showing that there was a higher percentage of above average scores, allowing the researcher to infer that there were some clinically significant results showing that use of EBP was highly important to 58.5% of respondents. No significant correlations were found between demographic information and score for level of importance of EBP.

Future inspections of this data and research process would benefit from ensuring that there is a more consistent survey item or items that specifically meet criteria for answering the question of how important EBPs are to clinicians. For this research study a logistical decision was made based on the research and clinical assumption of the survey items that best fit the research question and answered it more completely. However there is no significant means of knowing that those items fully answered the question intended, other than by clinical assumption.

Some of the statistical analyses used in this research were very minimal and simply established a baseline of information on which future research can build, project their own findings against, or replicate as necessary to monitor any changes in the era of EBP. Though it often proved difficult just to report numbers and not have more significant analyses of responses, the researcher found that the proposed idea of the project was an initial attempt to gather information on which this researcher or others interested in the evolution of EBP could signify any changes in the field. So research questions like how much training have MHCs had in EBP seemed simple, but useful, as there was no similar data available in the literature.

As expected, there was some range in the amount of training MHCs have had in EBP, with approximately equal percentages reporting no training, moderate or neutral responses, or reporting high level of agreement with the statement that EBP training had been a focus in education. There were statistically significant correlations between training in EBP and age (r = -.312), years in practice (r = -.318), and importance of use of EBP scaled score (r = .340) which were significant at the .05 level. The negative correlation of training in EBP with age and years in practice was an initial hypothesis based on the introduction of EBP as a fairly recent shift in the field of mental health (Rosenthal, 2004).

As described in the literature review, introducing EBP study and empirical importance into training programs has also been a fairly recent phenomenon, with an increasing growth of EBP in training programs of MFTS, social workers, counselors, and psychologists. It was interesting to see the positive correlation between EBP importance score and training in EBP, which showed that as clinicians are introduced to EBPs, their interests and recognition of importance of its use in clinical settings increases. This was useful for helping to establish that the use of EBP in training programs may assist in improving the use of EBP models in clinical

practice which could increase both therapeutic and financial benefits as reported by Anthony, Rogers, and Farkas (2003).

Results regarding those EBPs most used in clinical practice were not surprising, as reported in the literature review, the EBPs most often used in community mental health settings have been shown to be CBT for severe mental illness and individual and group treatments, MET for substance abuse treatment, and EFT for couples treatment (Johnson, 2004; Stratton, 2005; Tarrier, Taylor, & Gooding, 2008). Though all models showed some range of use in respondents' clinical practice (M = 2.28 - 3.83), 66% of respondents reported high levels of agreement with using CBT in clinical practice, 40.5% reported high levels of agreement with using EFT in clinical practice, and 18.9% reported high levels of agreement with using MET in clinical practice.

Interestingly, only 15% (n = 36) reported using DBT often in clinical practice. Due to the specific focus on DBT as an evolving important EBP model, it was interesting to see that not many respondents are utilizing it in clinical practice, yet later results discussions will show how there is great interest in receiving more training than represented by this aspect of the data. The growing trend to provide cost-efficient, therapeutically brief treatment has led to the surge in use of EBPs in mental health settings, and has encouraged the increase of the use of these models, regardless of clinicians' training, backgrounds, or work setting. However, it is clinicians' awareness and attitude toward these models that will affect the ability of mental health agencies to implement these models and encourage continued training, use or development of such practices (Aarons, 2006).

Looking at the training that MHCs have received in both educational and career training showed that respondents are receiving more training in career settings in comparison to

educational settings, as established by comparing the mean responses for each question. The decision to use kappa to test these two methods of training was decided upon since this type of kappa testing allows for assessing the reliability of agreement on several items for more than two raters. Though kappa testing showed some fair agreement between the two types of training (k = 0.43), Bowker's test for agreement, which measures symmetry of the disagreement in the data, showed statistical significance (p <0.0001), thus showing that the null hypothesis that both types of training are equal could be rejected and it could be assumed that there are significant differences in the level of training provided in the two settings.

Finding that career training provided more education on EBP than educational training followed the data reported in the literature review, as it seems that the push for using EBP has its roots in establishing cost-effective, clinically tested, effective treatments to improve funding, minimize costs, and improve numbers of clients that can be assisted (Harvey, Camasso, & Jagannathan, 2004). With the strong burden on MHCs to provide quality services and continue receiving funding from state and federal levels, it is clear that there would be pressure from employers to learn, utilize, and implement EBPs in order to maintain clinical and financial gains (Savin & Soldivera-Kiesling, 2000)

Also, educational programs have just recently begun to include EBP training courses or aspects into programs. Since Pinsoff and Wynne's 1995 publication showing research in the field of MFT, there has been a significant increase in the focus on EBP in training programs and research, however, it is still clear that continued improvement of models and ability to implement them, as well as increases in effectiveness research and training is still necessary (Sprenkle, 2002).

The hypothesis that those MHCs who report higher levels of career training in EBP will also report higher levels of interest in receiving DBT training was also examined using a contingency table and analyzing kappa and Chi Square statistics. However, this hypothesis was ultimately rejected due to results showing that there was low agreement (k =.096), low dependency (X = 24.25, p = .084), and low level of symmetry across the contingency table (B = 25.21, p =.0005). With Bowker's test, probability that the same number of people would respond "*1*" on one question and a "*5"* on the other as they would respond "*5"* on one question and "*1"* on the other was examined. Since the p-value was low, it implies the expectation of more responses on one side of the table than the other, thus no symmetry of responses.

The amount of training MHCs have had in DBT was of specific focus due to the researcher's own current use and interest in this model for treating suicidal and parasuicidal adolescents. Being part of a community mental health agency that has encouraged training in DBT and utilized the model to start an adolescent DBT girls group has encouraged the researcher's involvement with DBT and has increased knowledge of and respect for the model. I was curious about whether other MHCs have received similar levels of training in DBT, and how this training has been attained, whether through personal interest, educational training, or career training.

After categorizing all respondents' individual answers to scores for amount of classes taken, 0 for no classes, 1 for either one or two classes, and 2 for those who had more than two classes, the results showed the lack of training most respondents had. To find that 44.8% of respondents had no formal training in DBT was surprising, but it still showed that the majority of respondents had still had at least one class in DBT in their educational training, which was surprising since there was such a wide range of age of respondents and years in practice.

However, there were no statistically significant correlations between level of educational training in DBT and age (r = -.071) or years in practice (r = -.116). It was originally hypothesized that respondents who had been practicing in the field longer would have significant differences in level of education showing that there was a negative correlation between years in practice and level of DBT education, however the statistical analyses disproved this assumption. There were also no statistically significant correlations between level of career training in DBT and age (r = -.029), or years in practice (r = -.048).

Approximately 50% of respondents were over the age of 55, though the range of ages was 24-85 years, which is interesting considering that there was no significant relationship between age and level of education in DBT. Since DBT was only established in the early nineties and was just in the past decade really established as an EBP used in mental health settings, it is surprising that the majority of respondents had still had some educational coursework in the model. However, recognizing that only approximately 22% of respondents had taken more than two classes in DBT seemed to fit with the more hypothesized view that DBT has not been offered frequently in educational courses. There was also no significant relationship between years in practice and level of DBT education, which was unanticipated, as there were significant negative correlations between years in practice and educational training in EBP (r = -3.18, p = .000). Therefore it became a rational hypothesis that perhaps years in practice may also correlate negatively with level of DBT education, however, the results proved that incorrect.

As far as clinical background and the relationship with educational training in DBT, only the counseling field (r = -.274, p <.001) seemed to have significantly less training in educational settings in comparison to other types of training, including MFT, psychiatry and social work, as

established by the negative relationship. Correlations between employment training in DBT was significant with psychiatrists (r = .149) and there was a strong negative correlation again with those licensed as counselors (r = -.161), both significant at the .05 level, showing that of all training backgrounds, those with counseling education backgrounds had less exposure to DBT training than other schools of training. Psychiatry respondents reported their DBT training has been from employment settings primarily. Type of training and background had a significant impact on level of interest in getting more DBT training, however, and the results of that analysis proved interesting.

Overall, the majority of respondents had a strong interest in receiving more training in DBT, with approximately 50% of respondents represented by the five types of training reporting strong interest in more training, as evidenced by responses of "*4*" or "*5*" to the survey item, "*I am interested in receiving more training in DBT*". Age was the only demographic variable that showed any relationship with level of interest in receiving more DBT training (r = -.184, p = .012). This made sense due to the comparatively recent evolution of EBP and DBT within the scope of the development of the field of mental health, therefore a negative correlation with age makes sense.

As reported in the literature review, and supported by many other researchers, the reluctance to adhere to EBPs is often related to the belief that other more important aspects of clinical practice will be minimized for sake of the model (Patterson et. al, 2004; Rosenthal, 2004). However, there is a clear move toward wanting more understanding of EBPs and how best to implement them while maintaining the integrity of common factors that make therapy work, regardless of the model of treatment (Wilson, Armoutliev, Werth, & Yakunina, 2009).

DBT Specific Results

Analysis of DBT specific data was useful for the researcher to make use of the wealth of data that was collected through the use of the web-based survey. Future examination of this data would yield more interesting data, correlations, and other results from more aggressive analyses that may prove beneficial, however, for purposes of this dissertation project, only a few DBT specific results are discussed.

Almost half of respondents (48.9%) reported believing that DBT was a model that was useful for clients diagnosed with BPD. And 47.7% of respondents reported that training programs should implement DBT specific training, while 45.6% of respondents felt that DBT should be implemented in clinical settings. These results provide great support for the hypothesis that DBT is a model that is becoming more popular, showing more evidence of being successful and useful in clinical practice, and that clinicians are interested in learning more about how to use and implement it, irrespective of training background.

There was also a strong correlation between those respondents that thought DBT should be taught in educational programs and belief that DBT is a good model for clients with BPD (r = .609, p = .000). Also, MFT specific results showed that MFTs have a stronger belief in the idea that DBT is good for clients with BPD (r = .169, p = .024), which is remarkable, as DBT remains to be very distinct from systems theory tenets, yet MFTs showed greater interest in utilizing this model for the therapeutic benefit of clients. Finally it seems that those respondents who find DBT a useful model in clinical practice also consider themselves DBT therapists (r = .553, p = .000). Perhaps the issue of training, clinicians' level of eclecticism with models, or the implication of strict adherence to one's core therapeutic tenets affects this result, and explains how only those strictly tied to the model are those that utilize it often enough to witness its clinical benefits.

Implications

This was not a grandiose or complex analysis of data. Having made that limitation overt, there are many implications that this study reveals that are useful to the field of mental health, and the field of MFT specifically. The most prominent implication is that there is a need to gather more data on a larger scale to examine the role of EBP in the field of mental health. And now that this study established an initial collection of data, it now becomes imperative that clinicians establish a means of providing this training, education or access to knowledge regarding EBP or the use of DBT specifically.

The results of this study led to a transforming understanding of the ability of a study of this nature to guide changes in the educational quality of MHCs. The requirements of training programs are regulated by organizations such as APA, CACREP, and COAMFTE, and to be able to report MHCs desire for more EBP training, or to at least report which MHCs are receiving the most EBP training could be useful in examining or altering training program protocols. To have established an initial collection of data regarding MHCs and their level of training, knowledge, and utilization of EBP supports the development of the literature available on this topic, and may contribute to the growing interest in EBPs and how development of these models may affect mental health services.

Offering specific EBP trainings at professional organization meetings on both state and national levels would allow for clinicians to have ease of access to training that has been established in this study as important to the majority of clinicians. Organizations such as AAMFT or APA or their state level organizations have the means to provide current research, training, and trends in EBP and provide an appropriate professional environment for interested clinicians to be able to gain access to this type of training. The ability for such organizations to

offer literary support or conference focus could provide an awareness that would allow clinicians to decide if these types of trainings would be beneficial.

Recommendations for Future Research

Results of this study show that there is fervor for learning about EBP, but there are hindrances to implementing, utilizing, or adopting certain EBPs Figuring out the aspects that create those hindrances would be useful for the field, and help effectively organize the EBP movement. Future research could minimize the limitations, improve measures of reliability and validity, and perhaps narrow the scope of examination to hone the focus of the survey. Standardization or use of a more tested survey instrument would also improve data gathering and ease of examination or interpretation of that data.

One particular aspect of carrying out the study proved quite difficult. Sending out the email solicitations to the sample was complicated by "spam" rules of the server, so one recommendation would be to purchase an email address that is not regulated by those types of filters. This would also cut down on the time utilized to respond to emails, monitor numbers of rejected, filtered, or incorrect email addresses, and improve the overall organization of this phase of the study.

Another aspect that would improve this study upon replication, would be to develop a more complex means of analysis of data. For purposes of gathering this data, complex analyses were not planned or necessary, however, the wealth of information that was gathered through the complex survey could provide much more useful data, and give more meaning to the general findings in future examinations. Establishing even more meaningful research questions and hypotheses would be useful in examining the wealth of data that is available regarding MHCs and levels of utilization of EBP. Other important questions could be examined in future studies,

such as “Does the level of financial stake MHCs have in their clinical work affect which models they use?”, and “What aspects of other EBPs make them more often utilized than others?” Perhaps narrowing the focus of intent of questioning could provide even more useful information to help establish the need for training, education, or awareness in EBP.

Strengths of the Study

The manner in which this study was conducted is an inherent strength of the study. The use of web-based surveys and the internet to disseminate and gather data is a growing trend in the field of research, and to show evidence of a study successfully utilizing this mode to conduct research improves the stance of MFT research (Nelson, 1996). This study also provides a baseline of important data regarding MHCs and EBP. There was also a specific focus on MFTs and the DBT as well, so there were several layers of data that was examined. The size, composition, and variances in the demographic characteristics of the sample established the sample as highly representative of the general population. This allows for generalization of the findings to the larger population, thus allowing the researcher to make inferences about the entire population of MHCs.

Limitations of the Study

There were several limitations recognized in the development and completion of this research study. There are inherent weaknesses in using a self-developed survey that has not been standardized, however this was accounted for as much as possible through the use of pilot testing, and analyzing independent survey items (Fowler, 2002). During the analysis phase of the study, it was clear that there were some limitations to the survey instrument that, if accounted for, may have improved participation rates. There were several questions that were asked in a

manner that could have easily been simplified, or excluded, however, it was not apparent until the coding phase of the project.

It also became clear upon review of the final product that the information that the researcher intended to gather on some questions could have been misread or misunderstood by respondents. For example, when the researcher asked about course focus on DBT, it was not explicit whether respondents were reporting a singular class that focused on DBT or were referencing a course that focused on DBT for a specified part of the course. Therefore it is hard to establish if respondents had particular training courses only discussing DBT, if there were EBP courses that focused on DBT as well as other EBPs, or if they were referring to a conference or specific training. This confound also applies to questions regarding career-level training, as it becomes unclear if respondents were reporting on a day long training, a weekend conference, or a general training that mentioned DBT. Clarification of the intended meaning of the researcher may have improved this understanding and controlled for this possible confound of the study.

Though the use of a web-based survey and the internet added vigor to this study, it also proved to be a limitation. Use of the internet to disseminate the survey was not easily controlled. Even though invalid email addresses automatically returned a notice to the sender, there was still no way of fully knowing which emails arrived correctly, how many were actually viewed before being filtered or deleted, and how to control for aspects of the internet that were not within the scope of the researcher's abilities. Accessing respondents through the internet is a complex process of utilizing correct timing to limit bombardment of respondents and potential for the email to be overlooked. Ensuring appropriate contact information, and following through with monitoring emails for filtering software that requires response from the sender to ensure it is not

spam are time consuming aspects of using the internet. This contributed some to the limitations with the sample.

The means for accessing the sample of respondents was severely limiting, as there are so many restrictions for the use of contact information for MHCs on publicly listed websites or listservs. For this reason, the type of sampling had to be reworked to elicit the most benefit of the contact information attained. Perhaps utilizing some type of stratified sampling or other type of randomized sampling would have improved generalizability of results. This may have affected the type of respondent, and may have affected what portion of the population was truly accessed. The restrictions placed on accessing MHCs was also limiting, so perhaps purchasing a contact list for future studies would be much more useful for accessing more potential respondents.

The most visible limitation to this study, as was presented by several respondents, was the lack of a general response area where respondents could express their personal perceptions of the study, the topic, or add interesting facets to the survey items. I received several emails from invested participants who provided this information via email, however, there was no specific survey item that allowed for this within the study. Having provided the means for respondents to provide valuable concerns, feedback, corrections, or anecdotes would have more fully developed this quantitative study, as mixed methods studies can provide the data and the background information that enriches the meaning of the simple numbers.

Closing

Some of the most significant strengths of the study were intrinsic to the nature of developing, carrying out, and presenting a self developed study. Learning to maneuver through the process that is dissertating provided the researcher a level of complex education that a

doctoral program education could not provide. Developing the hypotheses and research questions that would best be examined through this process provided not only an avenue for completing this project, but also opened up other aspects of this topic that would be imperative to address in future research.

The intended scope of this study was to provide a baseline of information on which future research can build, based on results and implications from this exploratory project. Having met that objective has proven useful, yet it provides many more ideas and hypothesized avenues for questioning MHCs and their perceptions of EBPs to make sense of what the field offers to clinicians and clients, what it could provide with some alterations, and what it should be providing based on the core value of doing the greatest good for our clients. Regardless of training background, demographics or personal theoretical scope, to be able to utilize methods that provide the best treatment for clients is the common goal between practitioners and this inherent search for the means to do the greatest good for clients remains a consistent bridge between disciplines.

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Appendix A

Office of Research Compliance
1880 Pratt Drive (0497)
Blacksburg, Virginia 24061
540/231-4358 Fax: 540/231-0959
E-mail: ctgreen@vt.edu
www.irb.vt.edu

DATE: November 24, 2009

MEMORANDUM
TO: Scott W. Johnson
Robyn Nunley
Alison Galway
FROM: Carmen Green

IRB Amendment 1 Approval: "Marriage and Family Therapists' Perceptions, Knowledge, Level of Training, and Utilization of Evidence Based Practices with a Specific Focus on Dialectical Behavior Therapy" , IRB # 09-737

This memo is regarding the above referenced protocol which was previously granted approval by the IRB on October 15, 2009. You subsequently requested permission to amend your IRB application. Approval has been granted for the requested protocol amendment, effective as of November 24, 2009.

As an investigator of human subjects, your responsibilities include the following:

1. Report promptly proposed changes in the research proposal. The proposed changes must not be initiated without IRB review and approval, except where necessary to eliminate apparent immediate hazards to the subjects.
2. Report promptly to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

Office of Research Compliance
Institutional Review Board
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Blacksburg, Virginia 24061
540/231-4991 Fax 540/231-0959
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Appendix B

The following survey is designed to get your perceptions of, use of, knowledge of, and interest in Evidence Based Practices (EBP), with a specific focus on Dialectical Behavior Therapy (DBT). It will take you approximately 10 minutes to complete. After completing the survey you will have the ability to enter a drawing for one of ten $25.00 gift cards!

The title of my dissertation study is "Mental Health Clinicians' Perceptions, Knowledge, Level of Training, and Utilization of Evidence Based Practices with Specific Focus on Dialectical Behavior Therapy." Whew! That's a lot to say!! Much easier to say it will help me know what you think of Evidence Based Practices!

If you agree to participate in the study, please mark yes in the next question. If you forget to choose, completion of the survey will be implied consent and I will use your responses in the final data!

Thank you so much for your time!

I have read the title of the study and understand the general concept of the study. I consent to participate in this study and permit the researcher to use my responses in the final data collection. I agree that I have also been given the researcher's name and contact information in the solicitation email I received and understand I can contact her if I have any questions, concerns, or comments about the study or my participation in the study.

- ○ Yes
- ○ No

Please answer the following demographic questions.

What is your age?

What is your ethnic background?

- ○ American Indian/Alaskan Native
- ○ Asian
- ○ African American / Black
- ○ Hispanic/Latino
- ○ Multiracial
- ○ Caucasian/White
- ○ Prefer not to answer
- ◉ Other

What is your gender?

- Male
- Female
- Transgender
- Prefer Not To Answer

How many years have you been practicing in the field of mental health (including internship experiences).

Which of the following represents the appropriate type of membership you hold in the American Association for Marriage and Family Therapy (AAMFT)?

- Student Member
- Associate Member
- Clinical Member
- Affiliate Member
- I am not currently a member of AAMFT.

Which of the following best describes the type of work setting in which you are currently practicing? (If working in more than one setting, please mark the one in which you spend the most time.)

- Outpatient Setting
- Inpatient Setting
- Hospital Setting
- Community Service Board
- Private Practice
- Group Practice
- Educational Setting
- Residential Treatment
- I am not currently in practice
- Other:

How long have you been employed in this current type of work setting?

What type of licensure do you currently hold? Please mark all that apply.

- Licensed Professional Counselor

- [ ] Licensed Marriage and Family Therapist
- [ ] Licensed Clinical Social Worker
- [ ] Licensed Psychologist
- [ ] Licensed Psychiatrist
- [ ] I am not currently licensed

Other:

How many years have you been licensed in a mental health profession?

In what state(s) are you currently licensed?

Which of the following degrees have you attained?

- [ ] Bachelor of Arts
- [ ] Bachelor of Science
- [ ] Master of Arts
- [ ] Master of Science
- [ ] Master of Divinity
- [ ] Doctor of Philosophy
- [ ] Doctor of Osteopathy
- [ ] Doctor of Medicine

Other:

Please select below the appropriate type of degree and program you completed in your MASTERS LEVEL TRAINING.

- ○ I have not attained a Master's Degree
- ○ Master of Clinical Psychology, Accredited
- ○ Master of Clinical Psychology, Non-Accredited
- ○ Master of Counseling, Accredited
- ○ Master of Counseling, Non-Accredited
- ○ Master of Marriage and Family Therapy, Accredited
- ○ Master of Marriage and Family Therapy, Non-Accredited
- ○ Master of Social Work, Accredited

- Master of Social Work, Non-Accredited
- Other: _____

Please select below the appropriate type of degree and program you completed in your DOCTORAL LEVEL TRAINING.

- I have not attained a Doctoral Degree
- Ph.D. in Clinical Psychology, Accredited
- Ph.D. in Clinical Psychology, Non-Accredited
- Ph.D. in Counseling, Accredited
- Ph.D. in Counseling, Non-Accredited
- Ph.D. in Marriage and Family Therapy, Accredited
- Ph.D. in Marriage and Family Therapy, Non-Accredited
- Ph.D. in Social Work, Accredited
- Ph.D. in Social Work, Non-Accredited
- M.D.
- D.O.
- Other: _____

Are you currently enrolled as a student in a mental health education program?

- Yes
- No

Please select the appropriate degree toward which you are currently working.

- Bachelor of Arts
- Bachelor of Science
- Master of Arts
- Master of Science
- Doctor of Philosophy
- Doctor of Osteopathy
- Doctor of Medicine
- Other: _____

The following section pertains to your educational training, career training, and perceptions, knowledge and use of evidence based practices.

Please rate your level of agreement or disagreement that your COMPLETE EDUCATIONAL TRAINING AND COURSEWORK focused on the following treatment modes. Please use the following scale: 5=STRONGLY AGREE; 4=SOMEWHAT AGREE; 3=NEITHER AGREE OR DISAGREE; 2=SOMEWHAT DISAGREE; 1=STRONGLY DISAGREE.

My educational training and coursework focused on Theory.

5 4 3 2 1

My educational training and coursework focused on Clinical Interventions.

5 4 3 2 1

My educational training and coursework focused on Community Counseling.

5 4 3 2 1

My educational training and coursework focused on Marriage and Family Therapy.

5 4 3 2 1

My educational training and coursework focused on Social Work.

5 4 3 2 1

My educational training and coursework focused on School Counseling.

5 4 3 2 1

My educational training and coursework focused on Industrial/Organizational Counseling.

5 4 3 2 1

My educational training and coursework focused on Diagnosis and Assessment.

5 4 3 2 1

My educational training and coursework focused on Evidence Based Practices

5 4 3 2 1

My educational training and coursework focused on the Recovery Model of Treatment

5 4 3 2 1

My educational training and coursework focused on Medical/Hospital Based Treatment

5 4 3 2 1

My educational training and coursework focused on Inpatient Treatment Methods

5 4 3 2 1

My educational training and coursework focused on Outpatient Treatment Methods

5 4 3 2 1

My educational training and coursework focused on Residential Treatment Methods

5 4 3 2 1

My educational training and coursework focused on Solution Focused Methods

5 4 3 2 1

My educational training and coursework focused on Strategic Treatment Methods

5 4 3 2 1

My educational training and coursework focused on Structural Treatment Methods

5 4 3 2 1

My educational training and coursework focused on Cognitive Behavioral Treatment Methods

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Experiential Treatment Methods

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Feminist Treatment Methods

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Narrative Treatment Methods

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Constructivist/Constructionist Treatment Methods.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Psychodynamic Treatment Methods

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Object Relations Treatment Methods

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Systemic Treatment Methods

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Other Methods Not Listed.

Please Specify. _____

Please rate your level of agreement or disagreement that your COMPLETE EDUCATIONAL TRAINING AND COURSEWORK focused on the following evidence based practices. Please use the following scale: 5=STRONGLY AGREE; 4=SOMEWHAT AGREE; 3=NEITHER AGREE OR DISAGREE; 2=SOMEWHAT DISAGREE; 1=STRONGLY DISAGREE.

My educational training and coursework focused on Cognitive Behavioral Therapy (CBT).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Dialectical Behavior Therapy (DBT).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Emotionally Focused Therapy.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Functional Family Therapy (FFT).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Motivational Enhancement Therapy (MET).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

My educational training and coursework focused on Multisystemic Therapy (MST).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Please rate your level of agreement or disagreement with each of the following statements regarding your BELIEFS ABOUT THE FOCUS ON THE USE OF EVIDENCE BASED PRACTICE (EBP) IN YOUR CURRENT WORK SETTING. Please use the following scale: 5=STRONGLY AGREE; 4=SOMEWHAT AGREE; 3=NEITHER AGREE OR DISAGREE; 2=SOMEWHAT DISAGREE; 1=STRONGLY DISAGREE.

Employees are encouraged to use EBPs.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Employees are required to use EBPs.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Employees discuss EBPs in staff meetings.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Trainings on EBPs are provided in-house.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Employees are encouraged to attend external trainings on EBPs.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Employees are required to attend external trainings on EBPs.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

The use of EBP is necessary in my current work setting.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Please rate your level of agreement or disagreement with the following statements regarding your PERCEPTIONS AND KNOWLEDGE OF EVIDENCE BASED PRACTICE (EBP). Please use the following scale: 5=STRONGLY AGREE; 4=SOMEWHAT AGREE; 3=NEITHER AGREE OR DISAGREE; 2=SOMEWHAT DISAGREE; 1=STRONGLY DISAGREE.

I have a general understanding of the definition of EBP.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

The use of EBP is important in my clinical work.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Clinical trial research results are important to me when implementing a particular treatment intervention.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

The use of EBP deters focus from other more important aspects of clinical work.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Educational training programs provide adequate focus on EBP.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I gained adequate knowledge of EBP in my educational training.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I gained adequate knowledge of EBP in my career training.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I know about EBP because of my own personal research.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

The current trend in mental health is to implement EBP.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

The use of EBP improves funding capabilities for clinicians.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Research studies are increasingly focusing on EBP

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Please rate your level of agreement or disagreement with the following statements regarding KNOWLEDGE YOU GAINED OF SPECIFIC EVIDENCE BASED PRACTICES IN YOUR CURRENT WORK SETTING AND ASSOCIATED TRAININGS. Please use the following scale: 5=STRONGLY AGREE; 4=SOMEWHAT AGREE; 3=NEITHER AGREE OR DISAGREE; 2=SOMEWHAT DISAGREE; 1=STRONGLY DISAGREE.

Training in my work setting increased my knowledge of Cognitive Behavior Therapy (CBT).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Training in my work setting increased my knowledge of Dialectical Behavior Therapy (DBT).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Training in my work setting increased my knowledge of Emotionally Focused Therapy (EFT).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Training in my work setting increased my knowledge of Functional Family Therapy (FFT).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Training in my work setting increased my knowledge of Motivational Enhancement Therapy (MET).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Training in my work setting increased my knowledge of Multisystemic Therapy (MST).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Please rate your level of agreement or disagreement with the following statements regarding HOW OFTEN THE FOLLOWING EBP MODELS ARE USED IN YOUR CLINICAL WORK. Please use the following scale: 5=STRONGLY AGREE; 4=SOMEWHAT AGREE; 3=NEITHER AGREE OR DISAGREE; 2=SOMEWHAT DISAGREE; 1=STRONGLY DISAGREE.

I use Cognitive Behavior Therapy (CBT) often.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I use Dialectical Behavior Therapy (DBT) often.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I use Emotionally Focused Therapy (EFT) often.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I use Functional Family Therapy (FFT) often.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I use Motivational Enhancement Therapy (MET) often.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I use Multisystemic Therapy (MST) often.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I use Other Models not listed often.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1 ◉ Please Specify: [ ]

Please rate your level of agreement or disagreement with the following statements regarding your PERSONAL INTEREST in RECEIVING MORE TRAINING IN THESE SPECIFIC EVIDENCE BASED PRACTICES. Please use the following scale: 5=STRONGLY AGREE; 4=SOMEWHAT AGREE; 3=NEITHER AGREE OR DISAGREE; 2=SOMEWHAT DISAGREE; 1=STRONGLY DISAGREE.

I am interested in receiving more training in Cognitive Behavior Therapy (CBT).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I am interested in receiving more training in Dialectical Behavior Therapy (DBT).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I am interested in receiving more training in Emotionally Focused Therapy (EFT).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I am interested in receiving more training in Functional Family Therapy (FFT).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I am interested in receiving more training in Motivational Enhancement Therapy (MET).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I am interested in receiving more training in Multisystemic Therapy (MST).

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I am interested in receiving more training in Other Models not listed.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1 ◉ Please Specify: [ ]

The last section of the survey focuses specifically on the evidence based practice

DIALECTICAL BEHAVIOR THERAPY (DBT). Please select the appropriate number for each question.

How many classes focused on DBT in your educational training?

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 or more

How many DBT-Specific trainings have you been required to attend in your career?

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 or more

How many DBT-Specific trainings have you attended because of your personal interest in becoming proficient in the use of the DBT model?

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 or more

Please rate your level of agreement or disagreement with the following statements regarding your PERCEPTIONS AND KNOWLEDGE OF DIALECTICAL BEHAVIOR THERAPY (DBT). Please use the following scale: 5=STRONGLY AGREE; 4=SOMEWHAT AGREE; 3=NEITHER AGREE OR DISAGREE; 2=SOMEWHAT DISAGREE; 1=STRONGLY DISAGREE.

I have a general understanding of the DBT model.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I think the DBT model is easy to understand.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

DBT is clinically more useful than other EBPs.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I have clients whom would benefit from DBT.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

I would refer a client to a DBT trained clinician if it was more clinically useful than other traditional models of treatment.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

There is an increasing trend to use DBT in my current work setting.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

It would be simple to implement DBT in my current work setting.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

DBT is a model that should be examined in educational training courses.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

DBT is a model that should be examined in clinical work settings.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

DBT is a model that should be examined in my current work setting.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

DBT is a model mentioned frequently in professional publications.

○ 5 ○ 4 ○ 3 ○ 2 ○ 1

Seeing DBT articles in the literature make me interested in the model.

5 4 3 2 1

Clinical trial research results are important to me in considering using DBT in my clinical work.

5 4 3 2 1

Please rate your level of agreement or disagreement with the following statements regarding your USE OF DIALECTICAL BEHAVIOR THERAPY (DBT). Please use the following scale: 5=STRONGLY AGREE; 4=SOMEWHAT AGREE; 3=NEITHER AGREE OR DISAGREE; 2=SOMEWHAT DISAGREE; 1=STRONGLY DISAGREE.

I consider myself a DBT therapist.

5 4 3 2 1

DBT is useful in my clinical practice.

5 4 3 2 1

I would be interested in using DBT in my clinical work if the DBT practice guidelines were clear.

5 4 3 2 1

I would be interested in using DBT if the DBT model had a stronger family focus.

5 4 3 2 1

I would use DBT often if I was adequately trained.

5 4 3 2 1

I am a clinician who uses DBT concepts in my clinical practice.

5 4 3 2 1

DBT is a useful model for treating clients seen in my current work setting.

5 4 3 2 1

DBT is an effective model for treating suicidal and parasuicidal adults.

5 4 3 2 1

DBT is an effective model for treating suicidal and parasuicidal adolescents.

5 4 3 2 1

DBT is an effective model for treating clients diagnosed with Borderline Personality Disorder.

5 4 3 2 1

Thank you for your time and commitment to furthering this research. You now have the opportunity to enter the drawing for one of ten $25.00 gift cards to Target. If you would like to be entered into the drawing, please enter your email address in the space below. Your email address will not be linked to your survey responses. Thank you for your participation, and Good Luck!

Please enter your email address if you would like to be entered into the drawing for one of

ten $25.00 gift cards to Target.

Appendix C

Hello Fellow Mental Health Clinician!

My name is Robyn Nunley and I am attaining my Ph.D. in Marriage and Family Therapy from Virginia Tech. For my dissertation, I am sending out a link to a web survey to marriage and family therapists across the country to find out their perceptions, use, knowledge of, and interest in Evidence Based Practice. You have been selected as a potential participant!

Please follow the link below to the survey. It will take you approximately 10 minutes to complete and if you consent, you will be asked to enter your email address at the end of the survey to be entered into a drawing for one of ten $25.00 gift cards! Don't worry- your email address will not be connected to your survey responses.

https://survey.vt.edu/survey/entry.jsp?id=1227036999319

By participating in this research, not only are you allowing me to finish this dissertation ☺, you are providing valuable information to the field of therapy, and hopefully moving the field forward in the era of evidence based practices!

I hope you will agree to participate and see how valuable this will be to the field. If you have any questions, concerns, or want to know

more information about my research, please do not hesitate to contact me at the email address below.

Thank you in advance for your time. I need your help to get this completed! Good luck to you in the drawing if you choose to participate!!

Sincerely,

Robyn Nunley, M.A., L.P.C
rnunley@vt.edu

Appendix D

Dear Fellow Mental Health Clinician,

I am a doctoral candidate in the Marriage and Family Therapy program at Virginia Tech and I sent you a several weeks ago requesting your participation in my dissertation project designed to find out your perceptions, use, knowledge of, and interest in Evidence Based Practice with a specific focus on Dialectical Behavior Therapy.

I want to clarify several points regarding my study. Regarding the manner in which you were contacted, I want to make clear that no particular professional group or organization is being solicited for this project. It is a survey of licensed mental health clinicians across several disciplines, not a survey of members of a particular organization or field. Also, please be assured that your email address was attained by accessing publicly listed professional contact information, and not through "phishing" or the misuse of any online listing service such as Therapist Locator.

I will not publish, sell or give your email address to anyone else, and will delete your information when the study is complete. In addition, my initial solicitation letter was sent with the subject

line “Virginia Tech Survey”, which may have misled you into thinking my work was an official University study rather than my personal doctoral research.

I hope these clarifications are useful to you and apologize for not including them in the initial solicitation. If you have already completed the survey, please know I am very appreciative of your support of my research and can be contacted at the addresses below if you have any further questions.

If you have not yet gotten a chance to take the survey, below is the link. I do hope you will choose to participate. Also, don’t forget-if you choose, you may enter the drawing for one of ten $25.00 gift cards for your participation!

https://survey.vt.edu/survey/entry.jsp?id=1227036999319

Thank you again for your time, and I apologize for having to burden your email inbox again, but felt it was important to make these clarifications.

Sincerely,

Robyn Nunley, M.A., L.P.C.
phdmft@yahoo.com
P.O Box 682
Newbern, VA 24126

Appendix E

Dear Fellow Mental Health Clinician,

My name is Robyn Nunley and I am seeking my Ph.D. in Marriage and Family Therapy from Virginia Tech. For my dissertation, I am sending out a link to a web survey to a sample of clinicians across the country to find out their perceptions, use, knowledge of, and interest in Evidence Based Practice. No particular professional group or organization is being solicited for this project. Your email address was attained by accessing publicly listed professional contact information and all user agreements on available sites were adhered to. Further, I will not publish, sell or give your email address to anyone else, and will delete your information when the study is complete. I am hopeful you will choose to participate!

Please follow the link below to the survey. It will take you approximately 10 minutes to complete and if you consent, you will be asked to enter your email address at the end of the survey to be entered into a drawing for one of ten $25.00 gift cards! Please be assured that your email address will not be connected to your survey responses.

https://survey.vt.edu/survey/entry.jsp?id=1227036999319

By participating in this research, not only are you allowing me to finish this dissertation, you are providing valuable information to the field of therapy, and hopefully moving the field forward in the realm of evidence based practices.

I hope you will agree to participate and see this work as valuable to clinical practice. If you have any questions, concerns, or want to know more information about my research, please do not hesitate to contact me at one of the addresses below.

Thank you in advance for your time. Good luck to you in the drawing if you choose to participate!

Sincerely,

Robyn Nunley, M.A., L.P.C
PhDMFT@yahoo.com
P.O. Box 682
Newbern, VA 24126