PERSPECTIVES OF MARRIAGE AND FAMILY THERAPY PROFESSIONALS IN DIFFERENT PROFESSIONAL ROLES REGARDING DISSEMINATION OF RESEARCH

by

Adrian Weldon

A Thesis

Submitted to the Faculty of Purdue University

In Partial Fulfillment of the Requirements for the degree of

Master of Science

Department of Child Development and Family Studies

Hammond, Indiana

December 2020

THE PURDUE UNIVERSITY GRADUATE SCHOOL
STATEMENT OF COMMITTEE APPROVAL

Dr. Anne B. Edwards, Chair

Department of Behavioral Sciences

Dr. Kevin Hynes

Department of Behavioral Sciences

Dr. Jamila Holcomb

Department of Family and Child Sciences at Florida State University

Approved by:

Dr. Megan Murphy

ACKNOWLEDGMENTS

I would first like to thank my committee members: Dr. Anne Edwards, Dr. Kevin Hynes, and Dr. Jamila Holcomb. Anne, you have gone above and beyond to make yourself available to me and my cohort despite the constant changes and demands of this year. Your encouragement and support has been more helpful than you know. From its conception to completion, you have been such a big part of this project. Kevin, I am really grateful for your guidance and direction throughout my time in this program. By challenging me, encouraging me, and giving me space to have a voice, you have been instrumental in my professional growth. Working with you as a supervisor, professor, and thesis committee member has been an amazing, formative experience. Dr. Holcomb, I truly appreciate your willingness to be on my committee. Your positive attitude and kind words have made it a joy to work with you.

I would also like to thank my cohort who have gone through much of this process with me. Specifically, Lara- I am so glad I had someone to worry, stress, and celebrate with along the way. There are so many others who have also supported me, whether directly or indirectly. Dr. Megan Murphy, Dr. Christopher K. Belous, and Jerry Bercik- your influence can be seen throughout this project because of the impact each and every one of you have had on me.

Finally, I am continuously grateful to my family and fiancé. I am very blessed to have an extensive support system of parents, stepparents, siblings, and extended family who have constant faith in my ability to accomplish anything. To my fiancé, Tyler- you have provided so much joy and peace during a time of stress and uncertainty. I cannot imagine going through this without you all.

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ABSTRACT

The purpose of this study was to examine the values Marriage and Family Therapy (MFT) clinicians and researchers hold regarding effective dissemination strategies. Professional role was measured using self-report. Using Carnine's three gaps in dissemination as a foundation, a questionnaire was created to measure perspectives about dissemination strategies. It was hypothesized that clinicians would value accessibility and usability more highly, whereas researchers would value trustworthiness more highly. Clinicians were also hypothesized to perceive current dissemination strategies as less effective. Subjects were recruited for an online study through social media and online correspondence with MFT programs, yielding 38 subjects. An exploratory factor analysis found that the questionnaire scales did not measure the constructs as originally intended. New constructs were created using the results of the factor analysis. A General Linear Model was used to determine if participants' ratings on these new scales differed based on professional role. No significant results were found, indicating that researchers and clinicians have similar attitudes about effective dissemination strategies. Qualitative questions were also coded in order to find common themes answering why dissemination is important, how dissemination strategies are currently being used, and what barriers are still present in the dissemination process. The implications for clinical work and research are explored. Limitations and future directions are also discussed.

CHAPTER 1: INTRODUCTION

1.1 Statement of the Problem

A growing concern in the field of research in Marriage and Family Therapy (MFT) is the ineffective dissemination of information from researchers and academic institutions to community clinics, social service organizations, and policy makers. As research trickles down into practice, valuable information and time is lost. This process is often referred to as "leakage in a pipeline" (Green et al., 2009, p. 155). Although this process has had significant impact on the credibility and effectiveness of mental health practitioners, it is an issue that is not being given sufficient attention in the MFT field. This is not a challenge unique to the MFT field. In fact, Balas and Boren (2000) reviewed research in the medical field and found that it took an average of 17 years for research to be disseminated to practitioners through journal publications, and even then only a portion of the information was transmitted. The challenge of disseminating research can be attributed to a variety of obstacles, including; lack of interest, cost, professional language barriers, and impracticality of the research (Dattilio et al., 2014; Hertlein et al., 2009; Kosutic et al., 2012).

According to the American Association for Marriage and Family Therapy (AAMFT), there are over 50,000 marriage and family therapists across the United States (AAMFT, n.d.). It is estimated that at any point, these clinicians are treating over 1.8 million people (AAMFT, n.d.). Marriage and family therapists are required to get continuing education credits to maintain licensure, but even these requirements are insufficient in keep clinicians up-to-date due to the volume of research that is continuously being published and presented. It is impossible for researchers to reach every clinician, or for clinicians to be aware of all research produced. However, it is important for researchers and clinicians to be able to connect about important

changes in the field in order to provide quality and effective services for the clients being seen across the nation.

The challenge of disseminating knowledge can prevent practitioners from staying up to date with effective interventions, techniques, and advancements in the field. Additionally, significant amounts of time and money are invested into research. If the research is not effectively disseminated and incorporated into practice, it is an inefficient, or even wasteful, use of these resources (Withers et al., 2017). Sprenkle (2012) comments on the wealth of intervention research available for couple and family clinicians, but notes that research may not be reaching clinicians in a way that is feasible, engaging, or interesting. The author states, "if you build it, they may not come" and recognized that many research-backed treatments are "gathering dust" (Sprenkle et al., 2012, pp. 9-10). For this reason, several national organizations have dedicated goals to specifically address issues of dissemination and implementation, including the National Institutes of Health (NIH), U.S. Department of Health & Human Services (HHS), and the Substance Abuse and Mental Health Services Administration (SAMSHA) (HHS, 2019; NIH, 2017; SAMSHA, 2018).

However, many clinicians depend on their own experiences, personally and professionally, to inform their ideas about best practice instead of research (Dattilio et al., 2014; Orlinsky, 2001; Stewart & Chambless, 2007). Although there is room for this knowledge, it can also open the door for biases that influence treatment. Evidence-based practices and new ideas introduced by outside professionals play an important role in developing guidelines, expectations, and best practices in therapy. With the ever changing society and culture in which we exist, clinicians are constantly being presented with new challenges and situations. Continuous study of these changes are important, rather than relying solely on past experiences.

One of the reasons it is important to stay up to date in the field is to be able to work effectively with a variety of presenting problems, disorders, and populations. Research is continuously finding newer, effective treatments that lead to positive client outcomes. Wittenborn et al. (2019) note the benefits of using empirically based treatments when working with clientele. The authors provide an example of many children with attention-deficit/hyperactivity disorder (ADHD) still relying heavily, or solely, on psychotropic medications when there are evidence-based practices which can be used with the children and their families to manage behavioral symptoms. If clinicians are not receiving these research findings, they may be missing crucial information that could lead to improvement in their clinical skills, and in turn, healthier, more functional lives for their clientele (Spoth et al., 2014). Lack of access to research findings also makes it difficult for clinicians to justify their work to other professions and third party payers (Hertlein et al., 2009). Therefore, this study seeks to determine how both clinicians and researchers in the MFT field view dissemination strategies in order to identify ways to increase the effectiveness of the research dissemination process.

CHAPTER 2: SIGNIFICANCE OF THE PROBLEM

2.1 Dissemination

Evidence-based practices have long been encouraged in the biological and healthcare fields (Woolf et al., 2015). As a result, a strong emphasis has been placed on the dissemination of research, in order for practitioners to be research-informed. Even then, scholars noted that research was slow to reach their audience (Balas & Boren, 2000; Woolf et al., 2015). When the mental health field started to stress the importance of research and empirical evidence, psychology primarily dominated the research (Dattilio et al., 2014). Marriage and Family Therapy is a newer discipline within mental health and depended more on clinical observation during its formation, which persisted among clinicians even after scholars began to promote evidence-based practices (Dattilio et al., 2014). This led to a call for the MFT field to incorporate research into practice, contribute to research, and establish procedures to disseminate research to practicing clinicians (Dattilio et al., 2014; Withers et al., 2017). However, Dattilio et al. (2014) commented that similar challenges of dissemination which other professions face are most likely also at play among MFTs.

Within the mental health field, dissemination practices have been primarily aimed toward clinicians' attitudes about dissemination and utilization of research. Furthermore, the literature has been even more specific about what is being disseminated (i.e. evidence-based practices or randomized clinical trials) and dissemination of research for specific populations (i.e. children, urban communities, etc.). For example, there is a wealth of information on how clinicians learn and use evidence-based practices for youth and adolescents (see Bailey et al., 2016; Cunningham et al., 2018; Garcia et al., 2015; Henderson et al., 2006; Jensen & Foster, 2010; Leadbeater, 2010; Novins et al., 2013). There is less research into how the overall process of dissemination

can be improved from the perspectives of both the researchers and clinicians within mental health, and even fewer studies looking at how this impacts MFTs.

It is important to clarify what is included in the process of dissemination, since professionals tend to conceptualize the process differently. For example, some consider effective dissemination to be research that is clearly targeted to an identified audience and customized to meet their needs. Lomas (1993) defined dissemination in the healthcare field as an active process that "also implies targeting and tailoring the information for the intended audience" (p. 226). Others may consider that solely reaching the audience is not enough, but the research should do so in a way that will lead to clinical use of the findings. For example, Kerner and colleagues (2005) consider effective dissemination within health psychology to foster audience adoption and utilization of the information. Other scholars focus on clinician or researcher self-report regarding their experience with dissemination to determine how well research is being disseminated within the field (Withers et al., 2017). Although these conceptualizations are similar, it demonstrates that multiple processes can be included in dissemination: research development, distribution, ensuring compatibility, promoting adoption/utilization, and customizing information to the intended audience.

To complicate matters further, there are often different terms that are used interchangeably when referring to the same concept. Graham et al. (2006) commented on the variety of terms used to describe the knowledge-to-action (KTA) issue within the healthcare field, which is the term used by the authors when referring to the process of research being shared and utilized. "Some of the more common terms applied to the KTA process are knowledge translation, knowledge transfer, knowledge exchange, research utilization, implementation, dissemination, and diffusion" (Graham et al., 2006, p. 14). Each of these terms

had a different definition that highlighted the previously mentioned perspectives that can be taken when considering this issue (see Graham et al., 2006). The study defines the term dissemination as the process of promoting awareness of the information, rather than the creation or implementation of research. This is in line with the definition of dissemination specific to the MFT field provided by Withers et al. (2017) as "intentional, targeted distribution of empirical knowledge regarding couple and family relationships, and systemic interventions to MFT clinicians and social service agencies" (p. 186). For the purposes of this paper, this definition of dissemination will be used. Although the creation and implementation of clinical research are important and related concepts, they will be considered separate processes which influence, but are distinct from dissemination. Dissemination is the bridge between creation and implementation. Failing to address the role of dissemination diminishes the overall relevance and usefulness of research because the research cannot effectively reach the audience in a way that leads to utilization of the information.

It is important to note that not all academics have defined dissemination as a singular process. In fact, Carnine (1995) explains there are actually three gaps between research and practice: trustworthiness, usability, and accessibility. Trustworthiness is based on the idea that practitioners can implement the research because the research is well-designed, replicable, and of high quality. Usability addresses what is needed from the practitioners in order to use the knowledge, such as resources, training, time, etc. Accessibility considers how easy it is for practitioners to be able to find and obtain the research. All these challenges must be addressed in order for research to be effectively disseminated to practitioners. If trustworthiness, usability, and accessibility are not present, practitioners will be more likely to dismiss the research available, if they are aware of it at all.

2.2 Professional Role

Although the gap in dissemination is an issue which affects the entirety of the field, it affects MFTs differently depending on their professional role. Hatgis et al. (2001) assessed therapists and researchers (in addition to clients and administrators) about their perspectives regarding disseminating research, which is this case was specifically regarding panic disorder. They found that researchers and clinicians reported different values, goals, and obstacles when it comes to research. Research and practice, although complementary and often used in conjunction, are distinct roles. Communication channels between researchers and clinicians need to be open in order to ease the transition of knowledge and evidence based practices from conceptual research to practical use. Unfortunately, Dattilio et al. (2014) found researchers and clinicians often work as separate entities and pay little attention to each other. Many clinicians report research is not integrated into their practice and research is often conducted without input from clinicians, which may be because clinicians and researchers report valuing different types of research (Dattilio et al., 2014). Clinicians tend to value behavioral studies and clinical experience, while researchers value empirical studies of measurable phenomena more highly. It is clear there are barriers to the dissemination process for mental health professionals in both research and clinical roles.

2.3 Barriers to Dissemination

In a commentary regarding bridging the gap between research and practice, Dattilio et al. (2014) conducted a literature review of commonly identified barriers of dissemination in family therapy. The authors recognized the tension which can often be found between researchers and practitioners in the academic community and provided recommendations to reduce the divide between professionals in different roles. The specific barriers each group faces are explored

below, and it demonstrates that there may be a mismatch between what clinicians and researchers value and find useful when it comes to research.

Clinician Identified Barriers

Three common themes regarding barriers for clinicians in the dissemination process were found when Dattilio et al. (2014) conducted a review of the literature. One of the most common barriers identified by clinicians was the practicality and applicability of the studies being produced (Dattilio et al., 2014). In community and private practice, practitioners often do not have the time, resources, training, or environment to conduct treatment consistent with research findings, especially if the treatments are highly manualized. Another factor preventing clinician access to research was the inability to understand the scientific language used within research studies (Dattilio et al., 2014). This is attributed to a variety of factors, such as length of articles, use of jargon, and writing style. Finally, there are different ideas concerning what should inform clinical practice. Clinicians appear to place a high emphasis on past clinical experience and case studies to inform their work with clientele, sometimes more so than evidence-based research or randomized control trials which are idealized in academic writings (Dattilio et al., 2014; Orlinsky et al., 2001; Stewart & Chambless, 2007).

These findings are consistent with a study about the journal reading habits of MFT clinicians conducted by Hertlein and colleagues (2009). Out of 42 practicing clinicians, 81% reported journal articles were helpful and most of them read journal articles at least occasionally. However, the participants also reported the length and language of the articles were challenging. Access was also limited as most of the clinicians did not have peer-reviewed journals available if they were not working in an academic setting or had to pay fees themselves for access. Finally,

some of the participants reported the information in journals were not always applicable to practice.

Kosutic et al. (2012) also wanted to explore how clinicians consume research, clinician characteristics which impact research consumption, and barriers to research consumption. Although the study was specifically looking at clinicians' use of outcome research studies, there are still considerations for how receptive clinicians may be to other types of research as well. They surveyed 313 therapists, identified by AAMFT clinical membership, to better understand therapists' relationship with research and provide recommendations for professional development. The authors found that educational attainment impacted the likelihood of reading outcome research, with therapists with doctoral degrees being more likely to read research than therapists with master's degrees. This could possibly be attributed to clinicians with doctoral degrees having a better understanding of the language and statistics used in research. Other demographic variables, such as age, ethnicity, work setting, years in practice, gender, and discipline, had no effect. Furthermore, they found that clinicians who held a higher value for research were more likely to spend time reading research. Similar to the barriers identified above, clinicians reported that research was not always relevant or useful to their clinical practice and reading the research was difficult because of the length or writing style. Additional barriers identified in this study included little interest, lack of time, and limited access to research.

Researcher Identified Barriers

Fewer studies focus on researcher identified barriers to effective dissemination. Much of this research centers around how researchers can better reach their audience, rather than the barriers which researchers experience as well. One of the few barriers which Dattilio et al. (2014) mentions is the researcher's concern that clinicians do not rely enough on evidence-based

treatments and scientific research to inform their clinical work. As mentioned previously, clinicians often use their clinical experience to inform their practice, which many researchers do not consider to be as valid as empirically tested research. This is a concern for many researchers who value the objectivity and empirical testing of research. Also, clinicians tend to seek out research which confirms the approach they are already using (Dattilio et al., 2014). This could make it difficult for researchers to be able to disseminate scientifically-backed research because it impacts the receptivity of the audience to their research. In fact, Dattilio et al. (2014) remark that research that contradicts the approach already used by the clinician may be ignored.

It is also important to note the professional culture in which researchers operate. The academic community has norms for what constitutes publishable research. For example, the writing style and professional jargon which clinicians report as a barrier to reading research is commonplace, and often expected, within academic writing. Furthermore, researchers are often constrained by limitations in time, funding, and resources which impact the type of research they are able to produce. Oka and Whiting (2013) presented a call to action for MFT researchers to use new research methods more conducive to systemic research, but also noted the barriers that researchers face. The authors stated that government funding may not align with populations of interest to clinicians in MFT, but it can constrain the studies which researchers can conduct. Additionally, commonly used statistical analyses are better suited to individuals, and not systemic dynamics which MFT clinicians most often work with. This is another challenge researchers face in order to produce research that is relevant and useful to the audience. Jacobsen et al. (2003) encourages both researchers and practitioners to be aware of each other's context in order to better open communication between the groups.

2.4 Models of Dissemination

Throughout the dissemination literature across disciplines, there have been a multitude of models created to investigate the dissemination process. Tabak et al. (2012) found 27 different models which have been used to look either solely or primarily at dissemination. These models have mostly been theoretical in nature and less frequently used in empirical research. One theory which has been used in dissemination literature and is particularly suited to MFTs is General Systems Theory.

General Systems Theory

First introduced by von Bertalanffy (1968), General Systems Theory influenced thinking across disciplines. When applying General Systems Theory to social sciences, the theoretical underpinning is that every person is situated in a variety of interdependent systems and cannot be considered in isolation of these systems. One must consider each of the systems, as well as the interactions between them which make up the greater whole. Hecker et al., (2015) defines a system as "a set of elements standing in interaction" (p. 45). Systems are present at the smaller scale of an individual or family to larger systems such as culture or politics. MFTs are uniquely suited to use this framework to guide their dissemination research because of their focus and training in systemic thinking (Withers et al., 2017).

Dissemination has long been thought to be unidirectional (from researchers to practitioners) and linear (Holmes et al., 2012). However, some dissemination literature has recognized the bidirectional relationship, as well as the influence of other systems, such as the social context and the influence of the public (Dattilio et al., 2014; Hatgis et al., 2001; Holmes et al., 2012; Jacobsen et al., 2003; Withers et al., 2017). When looking at the present study, a larger group, such as clinicians, are made up of individuals who influence and are influenced by the

group as a whole. The group itself is a system and exists in the overarching professional, cultural, and societal systems. Clinicians also have interactions with researchers, either directly or indirectly, about the research being discussed or presented. Not only are all of the individuals and each of the groups a system, but the interaction itself between clinicians and researchers can be considered a system. Of course, this is assuming we are looking at clinicians and researchers as distinct entities, which is not always the case. Among all the systems at work, looking solely at the changes which only one group should make to improve dissemination is reductionistic, and does not address the complexity of the interactions present. Hatgis et al. (2009) describe this as "the differences between a monologue and a dialogue" (p. 38). As a dialogue, both parties participate in the interaction and impact each other. The authors state that dissemination research should address changes which both parties involved in the process can make.

Holmes et al. (2012) also noted the complexity of dissemination practices which go beyond the linear conceptualization of researcher to clinician to practice. Rather, clinicians and researchers are just two of the subsystems present in the overarching dissemination process. The view of dissemination as a complex system has several characteristics that are different than a linear conceptualization. One of the characteristics that is particularly relevant of a complex system is interdependence (Holmes et al., 2012). Researchers and clinicians do not operate in isolation of each other, but rather should inform and be informed by each other. They both play key roles in the overall professional system in which they operate. The reciprocal nature of the influence clinicians and researchers have on each other is characteristic of the systemic framework.

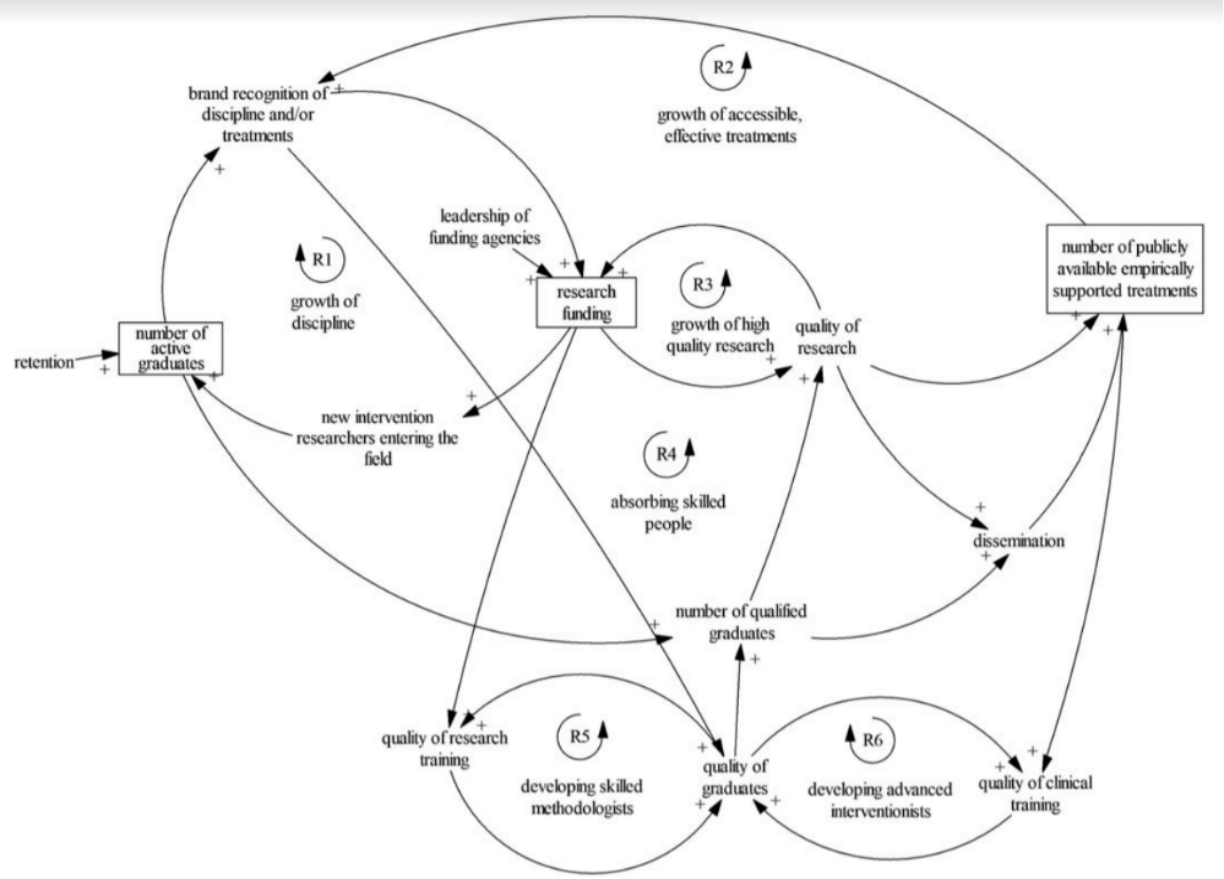

Figure 1. Wittenborn and colleagues (2018, p. 22) causal feedback loop of clinical research in MFT

Wittenborn et al. (2018) acknowledges the systems at play in the larger process of clinical research, with dissemination being one of those pieces. Figure 1shows the causal loop developed to provide a framework for looking at clinical research. As can be seen, the diagram shows dissemination is directly impacted by the number of qualified professionals and quality research, which then impacts the availability of research to the public. What is missing from this diagram is the values, goals, and expectations of researchers and clinicians regarding research and how that impacts the dissemination process.

Using General Systems Theory (von Bertalanffy, 1968), the beliefs that researchers and clinicians hold about research and the dissemination process can be viewed as a negative feedback loop. For example, clinicians recognize the need for research and even report it is helpful, so there is a need for dissemination. As a result, researchers publish research to meet this need. However, the resulting research is inaccessible, unusable, or untrustworthy to clinicians because researchers have different perspectives about what is important in research. This is partially due to external factors, as well as their impact the professional role has on their beliefs regarding research. Therefore, the need for research to promote evidence-based practice is still present, which in turn puts more pressure for scholars in the field to continuously produce research which often ends up going nowhere. The negative feedback loop continues as clinicians and researchers find themselves stuck in the ongoing cycle. Researchers are not producing what clinicians need or desire and clinicians are depending on their own experiences rather than looking to research, perpetuating the research to practice gap. If researchers and clinicians are not in agreement about what is important research, the loop will continue.

Jacobsen et al. (2003) conducted a literature review in order to develop a framework to analyze the process of knowledge translation, which is another term related to dissemination. The authors emphasized the need for researchers and practitioners to understand each other's context in order to improve communication between them. While they focused on understanding the environment and resources of each group, they failed to account for how the values, perceptions, and needs differ between them. The professionals who primarily operate in each of these domains have different perceptions about what is needed and important in research. Although contextual factors, such as work environment, professional systems, and academic settings are equally important, they are outside the scope of this study.

This study will focus not only on the individual factors of MFT professionals and their attitudes towards dissemination strategies, but also the influence their roles have on those attitudes and how it impacts the relationship between the communities of researchers and clinicians. Although it is impossible to address every existing system, such as the social context or impact of the public, the aim is to utilize a systemic view of the relationships and interactions that take place during the process of dissemination. Researchers and practitioners may have different perspectives about which dissemination strategies are more important or should be emphasized, what needs to be improved, and what is necessary in order for research to be well-received. If there is a mismatch present, it could impede researchers' ability to identify and address the needs of their audience in order to improve dissemination. It could also affect practitioners' ability to understand researchers' foci and context in order to locate and recognize quality, helpful research. When considering the three gaps from General Systems Theory (von Bertalanffy, 1968), dissemination research needs to target each group which is contributing to the gaps, as well as the interactions between them.

2.5 Proposed Study

The proposed study seeks to address several holes in the dissemination literature. First, since dissemination research is found more heavily in healthcare fields, this study provides insight into dissemination in the MFT field. This is especially important since the study also aims to apply a systemic lens to research, which is the specialty of those trained in MFT (Withers et al., 2017). Systems research is difficult due to the challenge of accounting for the variety of systems which are interacting with each other to influence the process of research dissemination. However, this study aims to investigate dissemination from the perspective of both clinicians and researchers, as well as the relationship between them. Additionally, this study does not

distinguish between the types of research being disseminated in order to acknowledge the variety of research which contributes to the development of the field. Finally, this study considers dissemination beyond a singular process. Accessibility, usability, and trustworthiness are all considered a part of the research dissemination process.

2.6 Research Questions and Hypotheses

The following research questions and hypotheses will be assessed in the current study:

RQ1: What is the relation between the professional role of MFTs and the perceived effectiveness of dissemination in the MFT field?

H1: Professionals who identify as clinicians will report lower perceived effectiveness of dissemination than researchers.

RQ2: What is the relation between the professional role of MFTs and their beliefs regarding the importance of trustworthiness for effective dissemination practices?

H2: Professionals who identify as clinicians will have weaker beliefs regarding the importance of trustworthiness for effective dissemination than researchers.

RQ3: What is the relation between the professional role of MFTs and their beliefs regarding the importance of accessibility for effective dissemination practices?

H3: Professionals who identify as clinicians will have stronger beliefs regarding the importance of accessibility for effective dissemination than researchers.

RQ4: What is the relation between the professional role of MFTs and their beliefs regarding the importance of usability for effective dissemination practices?

H4: Professionals who identify as clinicians will have stronger beliefs regarding the importance of usability for effective dissemination than researchers.

CHAPTER 3: METHODOLOGY

3.1 Participants and Procedure

Prior to data collection, the Purdue University Institutional Review Board (IRB) approved the study (Purdue IRB #2020-654). Informed consent provided to participants can be found in Appendix A. A survey was created through Qualtrics and distributed electronically. Qualtrics is an online platform that allows users to create surveys and gather data electronically. Subjects were recruited through social media by posting the survey link on relevant pages on Facebook and LinkedIn, including pages for MFTs and MFT programs at universities across the United States (see Appendix B for the announcement posted on social media pages). Moderators of the pages granted permission for the study to be shared prior to posting. Additionally, emails were sent to program directors at accredited MFT programs found through the AAMFT website. Program directors were asked to share the link with other faculty and alumni of the program. The survey was open from May 2020 to September 2020. At this time, the COVID-19 pandemic was prevalent and may have impacted the data collection process.

In order to complete the survey, participants must have completed a graduate degree in Marriage and Family Therapy, an advanced degree with a concentration or emphasis in Marriage and Family Therapy, or be licensed as a Marriage and Family Therapist. Participants must also have been in a professional position in clinical work or research in the field within the past year by identifying as a researcher or clinician and self-reporting at least 20 hours per week on average in a professional capacity. Although past research has used clinical membership of a professional association to define MFTs (see Kosutic et al., 2012), subjects in this study were not required to be either licensed or members of a national organization in order to account for the variety of professional roles one may take in the MFT field. Current students were excluded from

the study because the nature of their academic work may require them to participate in both research and clinical work and influence their perspective about dissemination strategies.

At the end of the survey, participants were given the opportunity to enter a randomized drawing for one of three $20 Amazon gift cards. If the participants chose to enter the drawing, they were redirected to an external survey to enter their email address. Their email address was not connected with their answers.

3.2 Measures

The measures used in this study were developed specifically for this research due to the lack of available measures regarding this topic. The gaps identified by Carnine (1995) were used as the basis for the measures. Participants completed questionnaires about demographic information, professional role, and beliefs about dissemination. See Appendix C for the survey provided to participants.

Demographic Questionnaire

In order to gather demographic information, participants were asked about their age, race and ethnicity, gender, area of study, and educational background. These demographic questions were consistent with the demographics assessed in a previous study (Kosutic et al., 2012). Participants were also asked about the amount of time they have been in the workforce and any licenses they hold.

Professional Role

Professional role was measured by participant self-report. Participants reported all the professional roles they currently hold. They were then asked to identify one professional role as

their primary professional role. Additionally, participants reported the average percentage of their time spent in research and clinical work. Although participants were asked to label themselves in one primary role, they were able to report the amount of time they spend in each capacity in order to account for professionals who participate in both activities.

Beliefs about Dissemination

Due to the nature of dissemination literature, there are few developed measures to assess attitudes about dissemination strategies geared toward both producers and consumers of research. For this reason, a new scale was created to measure the attitudes of mental health professionals towards the effectiveness of dissemination of research. The Evidence-Based Practice Attitude Scale (EBPAS) was used to inform the creation of this new questionnaire (Aarons, 2004). The EBPAS scale was created to measure the attitudes of mental health practitioners towards utilizing evidence-based practices in research. Although the EBPAS asked similar questions, it was created to assess mental health practitioners specifically. Additionally, the scale focused on evidenced-based practices, which only encompasses a portion of research used in the field. Therefore, this scale was not applicable to all mental health professionals and their opinions about dissemination of research, which is the focus of this study. While not used directly for this study, concepts of the EBPAS were used in the development of new questions.

The questionnaire created used Likert scales to assess the participants' beliefs about how well research is being disseminated in the MFT field. The scale ranged from 1, meaning "not at all effectively", to 5, meaning "very effectively." Dissemination was hypothesized to consist of three subsections corresponding to the three gaps identified by Carnine (1995): trustworthiness, usability, and accessibility. Questions were developed for each of the three subsections.

For each subsection, participants rated the importance of addressing usability, accessibility, and trustworthiness in order to promote effective dissemination. Additionally, participants were asked about the importance of specific strategies being used in the research field. Similar strategies were identified from previous literature and grouped together based on how they relate to one of the three identified gaps. Likert scales were provided for the participants to rate their beliefs about the importance of these strategies, from 1 meaning "not at all important" to 5 meaning "very important." Higher scores in each of the three measures indicated a higher importance placed on usability, trustworthiness, or accessibility in order to effectively disseminate research. Sample items about the importance of trustworthiness in research include: *How important is trustworthiness? How important is it for research to be written in a professional style?* When asked about the importance of accessibility, sample items include: *How important is accessibility? How important is it for research to be shared in formal settings (i.e. peer-reviewed journals, conferences, books, etc.)?* Finally, sample items for the importance of usability included: *How important is usability? How important is it for research to produce treatments and/or interventions which require little or no additional training to utilize?*

Finally, open-ended questions were provided. Participants were able to provide a more detailed and thorough response regarding their opinions about dissemination practices and how each of the three gaps of dissemination can be reduced.

3.3 Data Analysis

Data analysis was conducted using IBM SPSS software. Since new measures were being used, there was limited information about reliability and validity. An EFA was run in order to determine whether the items load onto components of accessibility, trustworthiness, and accessibility as hypothesized. Cronbach's alpha was also calculated for each of the measures. In

order to analyze the data, four multiple regressions were originally planned. However, the regression analysis was dependent on the results of the EFA. Professional role and the average amount of time spent participating in the professional activities were the predictor variables. These items were also correlated with each other in order to determine if there is a relationship present. They would be used as the independent variables to predict the overall rating of effectiveness of dissemination practices in the first regression.

The remaining three regressions would only have been run if the EFA revealed the factors related to trustworthiness, usability, and accessibility were present. If the regressions were run, the professional role would be used to predict the ratings of the importance of trustworthiness in the second regression. In the third regression, professional role would be used to predict the importance of usability in dissemination of research. Finally, professional role would be used to predict the importance of accessibility in dissemination. Open-ended questionnaires were coded in order to find common themes using a content analysis. An inductive content analysis was used to develop themes from the data.

CHAPTER 4: RESULTS

4.1 Sample Demographics

A total of 76 participants started the survey. Nine participants dropped out of the survey before completion. Twenty-nine of the participants were screened out due to not meeting the inclusion criteria. Four participants were not working in the MFT field and twelve stated they did not hold a professional position for at least 20 hours per week on average during the past year. Thirteen reported primary professional roles apart from being a clinician or researcher. Some of the other professional roles reported included supervisor, author, administrator, teacher, and business owner. After accounting for inclusion criteria and completion of the survey, 38 participants were included in the sample.

The sample was predominantly of non-Hispanic (86.8%) ethnicity and racially identified as White (81.6%), Native American (5.3%), African American/Black (2.6%), Multiracial (7.9%), or described their race as Other (2.6%) (Table 1). Most participants identified as female (84.2%) (Table 2). The age of participants ranged from 24 to 69 (M = 37.60, SD = 12.57) (Table 3). Participants were from 19 states throughout the United States and outside of the United States (Table 4). Participants reported having either a Master's degree (63.2%) or a Doctorate (36.8%) (Table 5). Most of the sample reported holding degrees from Marriage and Family Therapy programs (60.5%), with 39.5% reporting having degrees in more than one field (Table 6). Most of the participants hold at least one clinical license (94.7%) (Table 7). The average amount of time in the workforce since the completion of their degree was 9.43 years (M = 9.43, SD = 10.60) (Table 8).

Table 1. Ethnicity and Race of Participants

Ethnicity (n = 38)		
	Frequency	Percentage
Hispanic	5	13.2%
Non-Hispanic	33	86.8%
Racial Identity (n = 38)		
	Frequency	Percentage
White	31	81.6%
African American/Black	1	2.6%
Native American	2	5.3%
Other	1	2.6%
Multiracial	3	7.9%

Table 2. Gender Identity of Participants

n = 38	Frequency	Percentage
Male	6	15.8%
Female	32	84.2%

Table 3. Age of Participants

	Mean	Standard Deviation	Minimum	Maximum
Age in Years (n = 37)	37.60	12.57	24	69

Table 4. Geographic Location of Participants

n = 38	Frequency	Percentage
Outside the United States	1	2.6%
Alabama	2	5.3%
Arizona	1	2.6%
California	4	10.5%
Colorado	2	5.3%
Florida	2	5.3%
Georgia	2	5.3%
Illinois	2	5.3%
Indiana	4	10.5%
Iowa	1	2.6%
Kansas	1	2.6%
Minnesota	1	2.6%
New York	1	2.6%
North Carolina	5	13.2%
Ohio	1	2.6%
Oklahoma	1	2.6%
Pennsylvania	2	5.3%
Tennessee	2	5.3%
Texas	2	5.3%
Utah	1	2.6%

Table 5. Highest Degree Completed by Participants

n = 38	Frequency	Percentage
Master’s Degree	24	63.2%
Doctorate Degree	14	36.8%

Table 6. Types of Degrees Completed by Participants

n = 38	Frequency	Percentage
Marriage and Family Therapy and/or Concentration or Emphasis on Marriage and Family Therapy	23	60.5%
Multiple Degrees	15	39.5%

Table 7. Licenses Held by Participants

n = 38	Frequency	Percentage
LMFT	28	73.7%
LCSW	1	2.6%
Other	4	10.5%
Multiple Licenses	2	7.9%
None	3	5.3%

Table 8. Amount of Time in Workforce

	Mean	Standard Deviation	Minimum	Maximum
Years in Workforce Since Completion of Degree (n = 38)	9.43	10.60	.17	39.00

Almost half of participants who originally started the survey reported holding multiple professional roles (44.7%). When asked to identify their primary professional role, participants who identified a role outside of research or clinical as their primary role were screened out. Of the remaining participants, 81.6% of participants identified themselves as primarily a clinician and 18.4% of participants identified as primarily a researcher (Table 9). Of the professionals who identified as researchers, on average they reported spending about half of their time conducting, writing, or publishing research (M = 52.14, SD = 21.11) (Table 10). Of the professionals who

identified as clinicians, on average they reported spending 79.77% of their time providing or supervising mental health services (*M* = 79.77, *SD* = 21.95) (Table 10).

Table 9. Primary Professional Activity of Participants

n = 38	Frequency	Percentage
Research	7	18.4%
Clinical Work	31	81.6%

Table 10. Percentage of Participant's Time in Professional Activities

	Mean	Standard Deviation	Minimum	Maximum
Percent of Professional Time in Research Activities (n = 7)	52.14%	21.11%	20.00%	81.00%
Percent of Professional Time in Clinical Activities (n = 31)	79.77%	21.95%	25.00%	100.00%

4.2 Validation Analysis

Initial data collection included 38 participants who completed the study. Prior to analysis, data was cleaned, relabeled, and re-coded into variables appropriate for analysis (e.g. items were re-coded as needed and multiple options were collapsed into a single variable). Validation analyses were run for the questionnaire created to measure attitudes about dissemination in order to determine if the questionnaire was appropriate to use in the analysis. An exploratory factor analysis (EFA) was chosen for the validation analysis. During initial analysis, it was determined that one item would be excluded from analysis. The question in the subscale for accessibility regarding the importance of MFTs being required to receive continuing education credits did not

load with the other items. After reviewing the question and face validity of the subscale, it was determined that this question did not measure the same construct as the other items and should not be included in the subscale. The rest of the items from the three subscales were run together.

Three of the participants were missing at least one answer to the items in the subscales. These three cases were evaluated in order to determine if they were systematically different than other cases. After reviewing the participants' other answers in the survey, it was determined that these participants did not systematically differ from other participants based on observed variables. Therefore, the missing data is missing at random.

First, a Bartlett's test was used to see if the items are correlated. The Bartlett's test was significant (χ 2 (66) = 115.654, $p < 0.001$), indicating a principle component analysis (PCA) could be conducted on the items in the questionnaire. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy indicated the strength of the relationship among the variables was adequate (KMO = .609) (Kaiser, 1974). The PCA was run with no rotation and a scree plot (Figure 2) was created. Missing values were adjusted with mean replacement, which is the method suggested for data that is missing at random (Field, 2017). The correlational matrix was reviewed to determine if the identified correlations are showing up in the matrix. The results of the scree plot and eigenvalues of the components indicated there should be 4 components retained that accounted for 66.68% of the variance.

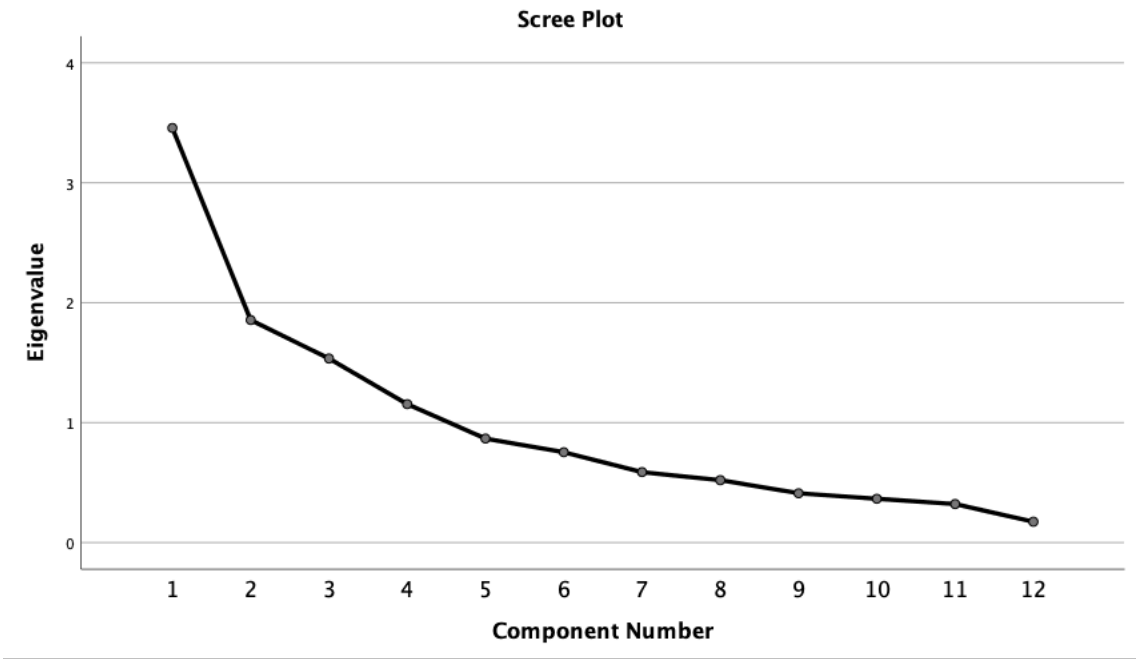

Figure 2. Scree plot for Principle Component Analysis

The PCA was run again and constrained to 4 components. When choosing a rotational method, it was originally assumed the components are not necessarily correlated. The three subsections all play a part in dissemination, but are distinct constructs. For this reason, an orthogonal rotational method was initially chosen (Brown, 2009). However, the researcher also ran the PCA with an oblique rotation and compared to the orthogonal rotation in order to account for any correlation that may have been present between the items. After reviewing the loadings with each rotation, different items loaded onto the factors. The correlational matrix was referenced to determine how the items within each factor correlated with each other and with items in other factors. Factors resulting from the orthogonal rotation (Table 11) had stronger correlations among items within the factor than the factors resulting from the oblique rotation (Table 12). Therefore, the orthogonal rotation was used.

Table 11. Estimation of Item Loadings for Orthogonal Rotation

	Factor Number			
Subscale Names and Items	1	2	3	4
Accessibility				
How important is accessibility?	**.674**	.260	-.094	-.165
How important is it for research to be shared in formal settings (i.e. peer-reviewed journals, conferences, books, etc.)?	.210	**.793**	.042	.071
How important is it for research to be shared in informal settings (i.e. online blogs or websites, magazines, podcasts, etc.)?	**.598**	.455	.173	-.162
Usability				
How important is usability?	**.795**	.060	.357	.021
How important is it for research to be directly applicable to clinical practice?	**.666**	.203	.323	.034
How important is it for clinicians to use treatments and/or interventions exactly as defined in research (e.g. following manualized treatments)?	.012	.477	.486	.315
How important is it for research to produce treatments and/or interventions which require little or no additional training to utilize?	.106	-.148	**.863**	.036
How important is it for research to produce treatments and/or interventions which require few resources to utilize (i.e. time, supplies, space, money)?	.251	.102	**.777**	.073
Trustworthiness				
How important is trustworthiness?	.567	-.234	-.058	**.672**
How important is it for research to be written in a professional style?	-.049	.085	.050	**.826**
How important is it for people who conduct and publish research to have advanced degrees in relevant fields?	.169	**.790**	-.085	.058
How much more important is clinical experience than academic research when treating clients?	-.305	.195	.189	**.640**

Table 12. Estimation of Item Loadings for Oblique Rotation

	Factor Number			
Subscale Names and Items	1	2	3	4
Accessibility				
How important is accessibility?	-.050	-.388	.389	**.406**
How important is it for research to be shared in formal settings (i.e. peer-reviewed journals, conferences, books, etc.)?	-.017	.097	**.837**	-.057
How important is it for research to be shared in informal settings (i.e. online blogs or websites, magazines, podcasts, etc.)?	.201	-.307	**.543**	.221
Usability				
How important is usability?	.425	-.261	.139	**.559**
How important is it for research to be directly applicable to clinical practice?	.365	-.180	.269	**.422**
How important is it for clinicians to use treatments and/or interventions exactly as defined in research (e.g. following manualized treatments)?	**.430**	.386	.417	-.097
How important is it for research to produce treatments and/or interventions which require little or no additional training to utilize?	**.910**	.035	-.245	-.049
How important is it for research to produce treatments and/or interventions which require few resources to utilize (i.e. time, supplies, space, money)?	**.807**	.040	.043	.029
Trustworthiness				
How important is trustworthiness?	-.058	.347	-.170	**.897**
How important is it for research to be written in a professional style?	-.039	**.785**	.041	.344
How important is it for people who conduct and publish research to have advanced degrees in relevant fields?	-.150	.092	**.843**	-.066
How much more important is clinical experience than academic research when treating clients?	-.092	**.744**	.103	-.030

Items were analyzed to determine how they load on each factor. Following the guidelines by Hair et al. (2014), items must load at a minimum of ±.3. When items loaded onto multiple components, the strength of the correlation and cohesiveness with other items was used to determine which factor to load the item onto. One item was removed due to loading above .3 on three different components. This item was, *How important is it for clinicians to use treatments and/or interventions exactly as defined in research (e.g. following manualized treatments)?* Using these four factors, the items were averaged to create four new variables. As can be seen in Table 11, the factors did not correspond with the three constructs used to create the scale as originally predicted.

Factor 1 included items about the importance of accessibility, importance of usability, importance of research being directly applicable to clinical practice, and importance of research being shared in informal settings. These items are all related to the concept of clinical use, meaning the research fits well in the users' context by being usable and accessible. It is easy to find the research in the users' environment and then incorporate it into their environment. Hertlein and colleagues (2009) found similar issues in their study when clinicians reported research in peer-reviewed journals were not always relevant to their professional practice. Clinicians stated research was difficult to find and use in a relatable and understandable format (Dattilio et al., 2014). Making the research articles too long or using technical jargon makes it difficult to apply the research clinically. The qualitative data also showed that the content of research needs to be suited to clinical use. Clinicians need to be able to read it and apply it to their practice. Furthermore, distribution needs to be more geared to clinical use by presenting it in a way that clinicians can relate to (i.e. blogs, websites, magazines, etc.). These themes will be expanded upon in another section.

Factor 2 included the importance of research being shared in formal settings and produced by professionals who have advanced degrees. These items are related to the academic culture. As mentioned above, researchers were found to place more of an emphasis on evidence-based treatments, the scientific practice, and the academic backing of research (Dattilio et al., 2014). The importance of the academic culture and the norms, expectations, and standards associated with it was a theme that emerged in participants' open-ended questions as well. Participants expressed frustration with the restrictions that the academic culture places on how research is produced and shared, while still recognizing the importance of having those standards in the scientific community. This theme will be explored in analyses of the qualitative data.

Factor 3 included items about research requiring little additional training and few resources to utilize. These items are related to the scarcity of resources. This is consistent with findings by Dattilio et al. (2014) and Kosutic et al. (2012) that found that lack of training, time, and resources was a common complaint by clinicians. The literature shows how the scarcity of resources impacts how research is consumed and translated to clinical settings. Factor 3 is also consistent with some of the participants' answers to the open-ended questions. The theme of practicality emerged from the qualitative questions when participants expressed frustration about many professionals in the field not having the resources, particularly financial resources, to be able to consume up-to-date research. This theme will be explored further in a later section.

Finally, factor 4 included items about the importance of trustworthiness, using professional writing, and valuing clinical experience rather than academic research when treating clients. These items originally were all included in the trustworthiness scale. The other item in the subscale regarding having advanced degrees was the only item in the subscale to load onto another factor. The items in this factor still appear to be measuring trustworthiness by valuing

professional experience and presenting oneself in a professional way in order to be more trustworthy in the field. The literature suggested that professional presentation was sometimes a barrier because it made the research more difficult understand or uninteresting (Dattilio et al., 2014). The qualitative data was consistent with these findings, but also brought up the need for these professional standards in order to maintain the quality of the research and produce trustworthy research.

After the factor analysis, the four new variables of trustworthiness, clinical use, academic culture, and scarcity of resources were created by calculating the mean score for the items contained in each of the variables. Table 13 includes the descriptive statistics for these variables, as well as for the dependent variable of the overall rating of perceived effectiveness of dissemination. Cronbach's alphas were calculated for the newly formed scales in order to assess reliability.

Table 13. Descriptive Statistics for Response Variables

	Perceived Effectiveness of Dissemination	Trustworthiness	Clinical Use	Academic Culture	Scarcity of Resources
N	38	36	36	36	38
Possible Minimum	1.00	1.00	1.00	1.00	1.00
Possible Maximum	5.00	5.00	5.00	5.00	5.00
Observed Minimum	2.00	1.00	1.00	1.00	1.00
Observed Maximum	5.00	3.67	3.25	4.50	5.00
α	N/A	.56	.77	.67	.74
Mean	3.68	1.90	1.46	2.07	2.59
Standard Deviation	.90	.61	.47	.79	.96

After the results of the PCA, research questions 3 and 4 were altered. New research questions were developed based on the variables that were developed from the new scales. Only research question 1 regarding perceived effectiveness of dissemination and research question 2 regarding the importance of trustworthiness remained. After reviewing the literature and its relationship to the items included in the new scales, hypotheses were also generated for the new research questions. The new research questions and hypotheses are as follows:

RQ3: What is the relation between the professional role of MFTs and their beliefs regarding the importance of clinical use for effective dissemination practices?

H3: Professionals who identify as clinicians will have stronger beliefs regarding the importance of clinical use for effective dissemination than researchers.

RQ4: What is the relation between the professional role of MFTs and their beliefs regarding the importance of the academic culture for effective dissemination practices?

H4: Professionals who identify as clinicians will have weaker beliefs regarding the importance of academic culture for effective dissemination than researchers.

RQ5: What is the relation between the professional role of MFTs and their beliefs regarding the importance of addressing scarcity of resources for effective dissemination practices?

H5: Professionals who identify as clinicians will have stronger beliefs regarding the importance of addressing scarcity of resources for effective dissemination than researchers.

4.3 Data Screening

Predictor variables for the regressions included participants' self-report of their primary professional role (researcher or clinician) and the percentage of time they reported in each professional capacity. In order to determine if these predictor variables are distinct and should all

be included as predictor variables, the relationship between the predictor variables was analyzed. Percentage of time spent in clinical activities and in research activities were correlated and found to have a significant negative relationship, r (34) = -.76, $p < .05$. Two participants were excluded for analysis due to not reporting their percentage of time in one of the professional roles.

In order to determine if there is a significant difference between self-reported researchers and clinicians in their time spent in each professional role, t-tests were conducted. The percentage of time spent in clinical activities for researchers (M = 26.67, SD = 9.16) was lower than clinicians (M = 79.78, SD = 21.95). Levene's test was significant, $F(35) = 4.41$, $p < .05$, so equal variances were not assumed. The difference was significant, $t(35) = -9.78$, $p < .05$. The percentage of time spent in research activities for researchers (M = 52.14, SD = 21.11) was higher than clinicians (M = 5.40, SD = 7.50). Levene's test was significant, $F(35) = 13.17$, $p < .05$, so equal variances were not assumed. The difference was significant, $t(35) = 5.77$, $p < .05$.

Since the relationship between the predictor variables is significant, they are not independent from each other. Therefore, they will not all be carried into the regression model. According to the research questions, the self-report of the professional role is the most salient variable and will act as the predictor variable for the model. Since the self-report variables are nominal, no further data screening procedures are required.

Gender, ethnicity, racial identity, educational degree, and years of professional experience were also analyzed to determine whether they should be controlled for in the regression. A t-test was conducted to test the relationship between professional role and years of professional experience; it indicated that there was not a significant difference in years of professional experience between clinicians (M = 9.94, SD = 11.18) and researchers (M = 7.13, SD = 7.73). Levene's test was not significant, $F(36) = 1.05$, $p > .05$, so equal variances were

assumed, $t(36) = -.63$, $p > .05$. Chi-square tests were initially planned to test the nominal demographic variables, but a Fisher's exact test for independence is more appropriate due to the small sample size. Racial identity, χ^2 (4, $N = 38$) = 11.49, $p < .05$, and educational degree, χ^2 (1, $N = 38$) = 8.81, $p < .05$, were significant and should be controlled for in the regression. Gender identity, χ^2 (1, $N = 38$) = 1.05, $p > .05$, and ethnicity, χ^2 (1, $N = 38$) = .01, $p > .05$, were not significant.

All continuous variables were analyzed for correct data entry, missing data, and normality. Missing data was found for 3 of the variables: clinical use, academic culture, and trustworthiness. Each variable had 2 missing cases. Missing data resulted from partial completion of the scales. Participants with missing items for the variables will be removed from the regression analysis of those variables. Due to the low number of questions in each scale after finding four factors in the EFA and removing items, there are not enough questions in each of the new scales to use mean replacement if data is missing. Therefore, participants with missing scores for a scale were removed from analysis of that scale. The other variables had no missing data.

Standardized scores were found for the cases in each variable in order to check for extreme scores with a standardized score above 3. The variables of academic culture and clinical use each had one case that was an outlier. In order to check for normality, skewness and kurtosis were measured. Only the variable of clinical use had a skew diagnostic above 3, indicating significant skew. No significant kurtosis was found. After reviewing the cases, it was determined that the outlier was within a reasonable range for the question. The cases did not appear to differ from other cases in the participant's answers. For this reason, the cases were kept in the analysis.

4.4 Testing of Hypotheses

The data analysis plan originally included a regression analysis. After data screening, it was found that the predictor and control variables were all nominal variables. For this reason, a linear regression is no longer the best fit for analysis of the research questions. A general linear model was chosen to analyze the data. The predictor variables and the control variables of highest educational degree and racial identity were included in the models.

Hypothesis 1

Hypothesis 1 tested how professional role is related to the rating of perceived effectiveness of dissemination. Professional role acted as the predictor variable and racial identity and highest educational degree acted as control variables. Participants' rating of perceived effectiveness of dissemination on a Likert scale was included as the dependent variable. The general linear model was not significant, $F(6, 31) = 1.29$, $p > .05$, $R^2 = .20$, adjusted $R^2 = .05$. The model only explained 5% of the variance in the response variable. Table 14 shows the main effects present in the model. The main effect of professional role was not significant, $F(1, 31) = .18$, $p > .05$, indicating there is not a significant difference among the professional roles on the rating of perceived effectiveness of dissemination. Thus, hypothesis 1 was not supported.

Table 14. Hypothesis 1 Summary of Main Effects

	Type III Sum of Square	df	Mean Square	F
Intercept	98.38	1.00	98.38	126.13
Racial Identity	2.48	4.00	.62	.80
Highest Educational Degree	2.32	1.00	2.32	2.97
Professional Role	.14	1.00	.14	.18

Hypothesis 2

Hypothesis 2 tested how professional role is related to the average score on the trustworthiness scale. Professional role acted as the predictor variable and racial identity and highest educational degree acted as control variables. Participants' average rating across the items included in the trustworthiness scale acted as the dependent variable. The general linear model was not significant, $F(6, 29) = .75$, $p > .05$, $R^2 = .14$, adjusted $R^2 = -.04$. The model did not explain the data. Table 15 shows the main effects present in the model. The main effect of professional role was not significant, $F(1, 29) = .63$, $p > .05$, indicating there is not a significant difference among the professional roles on the rating of the importance of trustworthiness. Thus, hypothesis 2 was not supported.

Table 15. Hypothesis 2 Summary of Main Effects

	Type III Sum of Square	df	Mean Square	F
Intercept	19.83	1.00	19.83	50.84
Racial Identity	1.70	4.00	.43	1.09
Highest Educational Degree	.00	1.00	.00	.00
Professional Role	.25	1.00	.25	.63

Hypothesis 3

Hypothesis 3 tested how professional role is related to the average score on the clinical use scale. Professional role acted as the predictor variable and racial identity and highest educational degree acted as control variables. Participants' average rating across the items included in the clinical use scale acted as the dependent variable. The general linear model was not significant, $F(6, 29) = .53$, $p > .05$, $R^2 = .10$, adjusted $R^2 = -.09$. The model did not explain the data. Table 16 shows the main effects present in the model. The main effect of professional role was not significant, $F(1, 29) = .06$, $p > .05$, indicating there is not a significant difference among the professional roles on the rating of importance of the clinical use of research. Thus, hypothesis 3 was not supported.

Table 16. Hypothesis 3 Summary of Main Effects

	Type III Sum of Square	df	Mean Square	F
Intercept	14.49	1.00	14.49	59.67
Racial Identity	.29	4.00	.07	.30
Highest Educational Degree	.13	1.00	.13	.52
Professional Role	.02	1.00	.02	.06

Hypothesis 4

Hypothesis 4 tested how professional role is related to the average score on the academic culture scale. Professional role acted as the predictor variable and racial identity and highest educational degree acted as control variables. Participants' average rating across the items included in the academic culture scale acted as the dependent variable. The general linear model was not significant, $F(6, 29) = .97$, $p > .05$, $R^2 = .17$, adjusted $R^2 = -.01$. The model did not explain the data. Table 17 shows the main effects present in the model. The main effect of professional role was not significant, $F(1, 29) = .22$, $p > .05$, indicating there is not a significant difference among the professional roles on the rating of the importance of the academic culture in the dissemination process. Thus, hypothesis 4 was not supported.

Table 17. Hypothesis 4 Summary of Main Effects

	Type III Sum of Square	df	Mean Square	F
Intercept	24.11	1.00	24.11	38.88
Racial Identity	1.26	4.00	.32	.51
Highest Educational Degree	.38	1.00	.38	.62
Professional Role	.14	1.00	.14	.22

Hypothesis 5

Hypothesis 5 tested how professional role is related to the average score on the scarcity of resources scale. Professional role acted as the predictor variable and racial identity and highest educational degree acted as control variables. Participants' average rating across the items included in the scarcity of resources scale acted as the dependent variable. The general linear model was not significant, $F(6, 31) = 1.76$, $p > .05$, $R^2 = .25$, adjusted $R^2 = .11$. The model explained 11% of the variance in the response variables. Table 18 shows the main effects present in the model. The main effect of professional role was not significant, $F(1, 31) = 1.09$, $p > .05$, indicating there is not a significant difference among the professional roles on the rating of the importance of addressing the scarcity of resources. Thus, hypothesis 5 was not supported.

Table 18. Hypothesis 5 Summary of Main Effects

	Type III Sum of Square	df	Mean Square	F
Intercept	27.81	1.00	27.81	34.06
Racial Identity	5.90	4.00	1.47	1.81
Highest Educational Degree	2.30	1.00	2.30	2.81
Professional Role	.89	1.00	.89	1.09

The hypotheses were not supported by the quantitative analyses for this study. Limitations such as small sample size, bias toward clinicians, and few items in the scales may have impacted the outcomes of the analyses. Although the ratings on the scales did not differ based on professional role, the exploratory factor analysis did contribute to new ways to measure attitudes about dissemination strategies and provide insight into how MFTs are thinking about

dissemination in the field. The qualitative analyses provide additional insight to the issues of concern stated by MFTs regarding the dissemination process.

4.5 Analysis of Qualitative Questions

Open-ended questionnaires were coded in order to find common themes using an inductive content analysis (Mayring, 2000/2004). No defined categories were created in advance in order to allow for the data to inform the creation of themes. Since the questions are exploratory in nature, a conventional approach to a content analysis will be used to develop themes from the data itself (Hsieh & Shannon, 2005).

During coding, the researcher used journaling to document thought processes. These notes were reviewed at different points in time to ensure coherence of analytical thought over time. The researcher participated in reflexivity exercises to determine how previous knowledge of the literature and self-of-the-coder issues was impacting the development of themes. Furthermore, when self-of-the-coder issues were identified, peer consult was used in order to reduce bias. Prior to coding participants' answers in the final data set, the researcher coded a small sample and provided notes to a colleague to review the researcher's process and identify bias that may be resulting from the researcher's positionality.

After initially reviewing the answers to the open-ended questions, themes were created for each question. The answers were then reviewed again to code participants' answers into related themes represented in the text. Some responses contained multiple themes and were double-coded. Throughout the process, themes were revised as necessary to best fit the data. An outside auditor was used to ensure the codes were a good fit to the participants' answers. The auditor was provided with a brief description of the codes and the coded answers. Using these codes as guidance, the auditor also coded the answers and noted when differences emerged from

the auditor's codes and the researcher's codes. When discrepancies between the initial coding and the auditor were found, a discussion was held to determine how to best code the data. Due to the interrelatedness of the concepts and the participants' answers, several questions were combined and coded under the same themes. These combined questions answer key issues about dissemination of research and are explored further below.

Why it Matters

Participants were asked to provide the reasons why dissemination was important, as well as usability, accessibility, and trustworthiness in the process of dissemination. Questions included were: *Why is dissemination important? Why is usability important? Why is trustworthiness important? Why is accessibility important?* Six common themes were found across the 4 questions. A total of 123 responses were gathered. Of those responses, one was not coded due to the participant's answer being unclear in connection to the prompt.

Professional Development

The most common theme reported was the importance of usable, trustworthy, and accessible research in order to promote professional development. This theme was included in 74 responses from 32 participants. Participants emphasized the role research plays in increasing the clinical skills of MFTs and keeping them up to date on best practices. For example, some participants stated dissemination is important because it helps professionals *further develop clinical skills* (Participant 9) and …*keeps people informed on best practices and new trends in the field* (Participant 36).

Return on Investment

A second theme was found regarding the need for effective dissemination to make it worth the time, energy, effort, and funding that goes into research. If research is not disseminated, then it often fulfills little purpose. When asked about usability, one participant responded with, *If something isn't usable then what's the point of devoting limited time and energy to it* (Participant 25). This theme was coded in 21 responses by 16 participants.

Advance the Field

Another theme emerged regarding the use of effective dissemination in order advance the profession of Marriage and Family Therapy. This theme was expressed in 17 responses from 14 participants. This theme was stated in two ways: research and clinical skills. By advancing the field in research, dissemination helps establish credibility as a field. When asked about the importance of usability in dissemination, one participant stated usable information is important *to validate MFT practice in the greater scientific community* (Participant 11). Another participant stated dissemination as a whole is important because, *It will be one of the things that allows our field to survive and thrive* (Participant 8). Effective dissemination can also advance the profession clinically by informing practice. By using evidence-based treatment, it also contributes to the credibility to the practice of MFT. Emphasis was given on the need for dissemination of usable, accessible, and trustworthy research to gain funding as a field, remain relevant as a profession, and increase attention to MFT research in conferences and publication.

Build Knowledge Base

Additionally, participants expressed a need for dissemination in order to accumulate knowledge. Participants' answers that were coded with this theme represented a desire for the

accumulation and sharing of knowledge itself, rather than the application of it. Participants valued the knowledge for future research to continue to build upon. For example, answers in this theme stated dissemination was important *to increase knowledge and currency* (Participant 29). This theme was represented in 13 responses by 12 participants.

Ethical Obligation

Another theme expressed in 12 responses from 11 participants was a sense of ethical obligation and personal responsibility when it comes to producing and consuming research. For example, participants found trustworthiness to be important because researchers have an ethical obligation to accurately and ethically conduct research and report results. A lack of trust in the ethical practices of research is a detriment to effective dissemination because it decreases the readers' willingness to search for research and destroys their trust in research results. As one participant stated, *Misleading information is worse than no information* (Participant 19).

There was also an emphasis on the ethical obligation that MFT professionals have to stay up to date in the research field because of their responsibility to provide quality care to clients. Many participants explained there is a need for effective dissemination practices, usability in research, and accessibility of research in order to provide mental health services and prevent harm in clinical practice. For example, *We don't want clients being traumatized by bad therapy or outdated interventions as it taints their experience of asking for help and support* (Participant 25).

Inform the Public

Some participants considered how research impacts the public directly and stressed the importance of effective dissemination to provide good information to the public. Rather than

previous themes where the participants considered MFT clinicians as intermediaries in assisting the public, this theme represents the idea that the research also needs to be disseminated directly for public use. One participant stated, *The research impacts the public. We are a land-grant university and need to reach the citizens* (Participant 1). This theme was represented in 5 responses by 4 participants.

Current State of Dissemination

Participants were asked how usability, accessibility, and trustworthiness are currently demonstrated in the field. Questions included: *How is usability currently demonstrated in MFT research? How is trustworthiness currently demonstrated in MFT research? How is accessibility currently demonstrated in MFT research?* Participants' answers were reviewed to determine what current strategies are being used in the process of disseminating research. The effectiveness of these methods appeared mixed in the participants' answers and will be further discussed in the next section. A total of 84 answers were gathered across the 3 questions and 68 were coded into 6 themes. Sixteen answers were not coded because they were unclear, irrelevant, or stated they did not know.

Distribution

The most common theme focused on how information is presented and the various methods of distribution. Twenty-four responses from 20 participants were coded with this theme. When asked how usability, trustworthiness, and accessibility are currently being demonstrated, conference presentations, workshops, books, journal articles from peer-reviewed journals, and magazines were all mentioned. Less formal methods were also mentioned (mostly concerning usability and accessibility), including YouTube channels, blogs, podcasts, and websites.

Content

The content of the research itself was mentioned in 17 responses by 15 participants when identifying ways that usability and trustworthiness are currently demonstrated in research. For example, citations and limitation sections increased some participants' view of the trustworthiness of research. Specific instruments, manuals, and models included within publications were highlighted as ways to increase the usability of research. Other participants stated clinical implication sections and step-by-step guides are useful ways to create usable research.

Personal

Several participants mentioned individual factors a professional possesses that contributes to their ability to produce or consume research. Thirteen responses from 12 participants were included in this theme. When asked how trustworthiness is currently demonstrated in the dissemination process, many participants pointed to credentials. Advanced degrees, credentials, licenses, research experience, and education were indicated as markers of developing credible and trustworthy research.

When asked about accessibility, some participants noted that certain people are better able to access research than others. One participant noted, *There is a level of privilege that comes with access and accessibility to participating in administering research as well as accessibility to published studies* (Participant 17). Having the financial means to pay for access was pointed out as a way to increase accessibility. Other participants stated one's own initiative to access research and interest in doing so promotes dissemination.

Organizational

At a more macro-level, organizations can impact the production and consumption of research. Graduate programs and academic institutions were frequently pointed to as a way to promote effective dissemination by increasing access to research, providing information about research to students and faculty, and improving the trustworthiness of research through research classes and institutional review boards. MFT specific organizations, such as AAMFT, were also listed as an organization that attempts to provide resources to promote dissemination of research. Eleven responses from eight participants contained this theme.

Academic Culture

The academic culture can also be useful to the dissemination process. Academic culture was used to code nine responses from eight participants when their answers referred to the norms, expectations, and standards set by the larger academic community. Peer review was mentioned seven times by seven participants as a way to increase the trustworthiness of research. For example, *Review processes are usually quite thorough resulting in trustworthy and reliable research publications* (Participant 16).

Deficit Focused

Several participants were unable to identify ways that usability, accessibility, and trustworthiness are currently being demonstrated in research. Others were intentional about pointing out the lack of usability, accessibility, and trustworthiness in research and focused on how the field is currently failing in those areas. These latter answers were found in 20 responses from 15 participants and were coded as deficit-focused. Examples include, *To be quite honest, when seeking out usable research, MFT work is rarely found accessibly* (Participant 3) and *The*

research tries but there are a lot of garbage papers coming out of research institutions (Participant 27).

Barriers to Overcome

Themes that emerged in this section were similar to the previous themes. Participants were asked about the barriers to dissemination and how to improve accessibility, usability, and trustworthiness. Questions included: *What do you believe are barriers to effective dissemination? How can usability be improved? How can trustworthiness be improved? How can accessibility be improved?* Six themes were found across the 109 responses to the 4 questions. Eleven responses were not coded due to being unclear or the participants stating they were uncertain.

Personal

Similar to theme listed in the previous section, several personal factors within the individual were described in 20 answers by 18 participants. This time, they were identified as barriers to the process of dissemination. Having little interest in reading research, choosing not to participate in conducting research, and finding it tedious were all identified as barriers. Another identified barrier was the lack of accountability that many professionals have when it comes to staying up to date in research. Although there was at least one comment about the personal responsibility for researchers to promote dissemination of research within the field, most of the personal factors listed were geared towards clinicians. For example, *My bias is that most clinicians are primarily clinicians and not reading or conducting their own research. I think some of the barriers are personal (i.e., clinicians do not like doing research) and some are practical (i.e., cost, time)* (Participant 14).

Practical

As mentioned in the quote above, practical barriers were also identified in 54 responses from 27 participants. The most common barriers were access and cost. Many participants explained that losing access to research databases after completing academic work was the biggest barrier to dissemination. According to participants, it greatly impacted accessibility by restricting the ability to obtain the research, usability by preventing MFTs from gaining the full information to correctly utilize research, and trustworthiness by limiting exposure to research that contributes to the discomfort and unfamiliarity with reading research. Related to the barrier of access was also the cost of research. Professionals that no longer have access to free research outside of academic settings found the financial cost of gaining access too high. Suggestions made to overcome these barriers included lowering the cost of trainings and peer-reviewed journals, allow continued access to research through universities beyond graduation, and providing free trainings and other resources to keep MFTs up to date with the research.

Time was also a common response since many professionals reported feeling too busy to participate in or read research. One response suggested that reviewers who participate in the peer review process should be compensated for their time. Other responses described unrealistic expectations being put on clinicians to see clients that prevents them from having time to engage with new research.

Finally, a few participants expressed the desire for advertising of research to be improved since many professionals do not know where to find publications, workshops, trainings, and resources. One participant suggested a centralized location to make it easier to find relevant research.

Organizational

Another theme that emerged in 14 responses from 10 participants was the role that organizations play in the dissemination process and how they can improve dissemination efforts. AAMFT was referenced multiple times. Participants stated AAMFT could help by promoting research, providing research in understandable and relatable ways, and providing cost-effective access to research. Although some of the current efforts of AAMFT, such as their website and extensive network, were recognized, there was also suggestions for AAMFT to do more for dissemination of research.

Graduate programs were also mentioned as having a responsibility to increase education and training in research. Not only would this contribute to the production of research, but also increase comfort and understanding when reading research. Additionally, one participant suggested graduate schools partner with agencies to continue to provide trainings to practicing professionals.

Finally, how organizations fund research and mental health services were mentioned. Increasing caseloads and expectations on clinicians make it difficult to find time to pursue research and only certain types of research studies are likely to get funding. This limits both the production and consumption of research.

Distribution

There were also barriers mentioned in the process of distributing research among 20 responses from 15 participants. Some of these barriers included the ineffective marketing of research, politics of publications, not enough publications, and restricting publications to peer-reviewed journals. The main suggestion to overcome this barrier was to use other methods of distribution and simplify the research being shared. Examples of suggested distribution methods

include email, websites, social media, blogs, mail, and magazines. One participant stated, *Simplify, Simplify, Simplify! Send out research in usable form directly to subscribers, social media, email, etc.* (Participant 25).

Academic Culture

The academic culture was also mentioned as creating barriers to the dissemination process. Suggestions to improve trustworthiness of research including creating more space for a wider variety of professionals to participate in research, including Master's level MFTs, practicing clinicians, and professionals not affiliated with a university. The "gold standards" of scientific research being peer review and judging the success of academics by peer-reviewed publications was described as a challenge. Although some participants recognized the merits of peer-review, others felt it led to research that is inaccessible and unusable.

Furthermore, the types of research being prioritized were questioned. In order to improve trustworthiness, it was suggested that more attention should be given non-significant results. *I think MFT journals can be more trustworthy by starting to publish studies that had non-significant results. This show transparency and is key to establishing trustworthiness. Show both the successes and failures highlight the positive intent behind the work and not just the polished efforts that make the researchers look good* (Participant 10). This theme was coded in 15 responses from 12 participants.

Content

This theme emerged when participants mentioned factors related to how the research is written and its subject matter. Twenty-three responses from 22 participants contained this theme. Participants described research as difficult to comprehend, dry, and not truly representative of

different populations. For example, *Not enough research on the value and role of cultural variables within individuals, couples, and families. Lack of research in non-dominant societal norms that influence individuals, couples, and families* (Participant 22). Less technical jargon and engaging writing was listed as ways to improve usability and accessibility. Additionally, including implication sections, focus on process, and visuals were all suggestions to improve research and make it more usable to clinicians. Focusing more on theory, was suggested to increase trustworthiness of research.

4.6 Qualitative and Quantitative Results

There were several similarities found between the qualitative and quantitative data. The themes that emerged from the qualitative data overlap with the factors that emerged during the exploratory factor analysis and provided more specific and detailed information about participants' attitudes and beliefs about dissemination. Additionally, the results of the quantitative data can be better understood and interpreted with the context provided by the qualitative data. The patterns within the data and implications of the results will be explored further.

CHAPTER 5: DISCUSSION

The study set out to determine how to best measure attitudes about dissemination in the MFT field and determine whether those attitudes differed based on professional role. The purpose of exploring whether differences between the professional roles exist was to better understand the bi-directional impact that MFT clinicians and researchers have on the dissemination process. By developing a deeper understanding of the systems at play, efforts can be made to bridge this gap and improve dissemination within the field.

5.1 Development of a Scale

A scale was developed in order to quantitatively measure beliefs about dissemination from the perspective of both researchers and clinicians, which is currently missing from the literature. Carnine (1995) described usability, accessibility, and trustworthiness as three gaps between research and practice that contributes to the gap in dissemination. Through exploratory factor analysis, it was determined that the items originally used to measure attitudes about dissemination processes were not consistent with the constructs of usability, trustworthiness, and accessibility. As a result, new scales were created that better represented the constructs which the items appeared to be measuring. The descriptives for the new scales show low average ratings. Even with the new scales, the average rating by participants showed they found these constructs to be only slightly important or they were indifferent about their importance. These low ratings can be further explained by the qualitative data. Although the scales included items that were similar to some of the responses to the open-ended questions, the scales were limited to only a few items. The qualitative data represented a wider range of issues that influence the attitudes

MFTs hold regarding dissemination of research and could be used as considerations for additional items in the scales going forward.

Items concerning trustworthiness mostly loaded together, except for one item. Items included in the trustworthiness scale included the important of trustworthiness, valuing clinical experience, and the importance of professional writing. These items represent the traits MFTs value in the producers of research and expect from trustworthy sources. These items were similar to themes from the qualitative data. Some participants' recognized the value that clinical experience can bring to research and called for more room for clinicians in the research sphere. The attitudes about professional writing measured in the scale was also seen in the participants' statements about the content of the articles that can be long, difficult to understand, irrelevant, or uninteresting. Writing style can impact how research is received by an audience. These are themes also seen in the literature (Dattilio et al., 2014).

Academic culture was also a theme that emerged from both the scales and the qualitative data. Having advanced degrees and presenting research in formal settings were included in the scale. Distribution of research was also a concern in the qualitative data and suggestions were made for more of a variety of formal and informal methods of distribution. However, the qualitative data represented several additional concerns about the academic culture that was not measured by the scales.

Items in the accessibility and usability scales did not load together but rather were used to create scales for new constructs. This is consistent with the results of the qualitative questions. When asked about usability and accessibility separately, many participants' answers referenced the other construct. A few participants explained that it is difficult to consider usability without accessibility (and vice versa). For this reason, accessibility and usability could not be measured

entirely separately. Rather, items from each scale were combined to measure attitudes about the scarcity of resources and clinical use of research within the professionals' environment.

The clinical use scale included valuing usability, clinical application, accessibility, and informal presentation of research. All of these items represent the importance of research being useful and accessible to clinicians. A few of the qualitative themes addressed these issues as well. Informal methods was a common suggestion in the theme of distribution. Research being relevant and having practical suggestions that the audience can use was represented in the content theme.

The scarcity of resources scale was also similar to the qualitative themes, particularly the practicality theme. The scarcity of resources items included the importance of having research that requires little training or resources to be used. The item referred to resources as a whole, which included cost, time, and materials. A lack of these resources were also found to be an issue in the literature (Dattilio et al., 2014; Hertlein et al., 2009; Kosutic et al., 2012). However, the qualitative data showed cost as one of the most common concerns. Time was another limited resource mentioned. Items in the scarcity of resources scale may better measure attitudes if they were expanded to address each of the resources separately to determine what is most important to MFTs.

5.2 Implications of Hypotheses Tests

The analysis of all of the hypotheses were not significant. This indicates there was not a significant difference between researchers and clinicians regarding their attitudes about effective dissemination strategies and the effectiveness of current dissemination practices in the field. One of the reasons the test failed to reach significance could be due to the makeup of the sample. Having a small sample size was a significant limitation that impacted the power of the models

and, therefore, reduced the likelihood of reaching significance even if differences between the groups do exist.

The sample was also mostly made up of clinicians and there were few researchers sampled. This may be due to the nature of the recruitment that reached more clinicians in the field. On the other hand, it could also be the nature of the study that attracts more clinicians than researchers to responding. With such a small number of researchers, it is questionable whether the study was able to truly obtain and represent the perspectives of those professionals. As a result, clinicians held more weight in the construction of scales and the analyses. The small size of one of the groups also lowered the power of the model and impacted the ability of the general linear model to detect any differences between researchers and clinicians that may have existed. It is also possible that categorizing participants as researchers or clinicians did not represent the reality of the profession. Participants reported a variety of professional roles that make up the MFT field. The challenge of categorizing participants into one of these groups contributed to the small sample size. The number of items per scale was also limited. Only 2-4 items were used for each scale, which could have influenced the averages for the scales. It also impacted how well the attitudes about the constructs were measured since there were so few items to truly assess the construct.

Although there are limitations to the study that may have impacted these results, this study indicates that MFT professionals in different professional roles share similar ideas about what is important for dissemination. However, the literature continues to show that there is a significant gap between research and clinical practice in the dissemination process (Dattilio et al., 2014; Sprenkle, 2012; Withers et al., 2017; Wittenborn et al., 2019). Additionally, the qualitative data also shows that most participants had complaints about how research is

disseminated. So if researchers and clinicians have similar ideas about what is important in the dissemination process, the question remains as to why this gap persists.

It is also possible that there is no true difference between the beliefs of the groups. Like mentioned above, there is little information about how researchers view the dissemination process. The gap between research and clinical settings has been explored (e.g. Dattilio et al., 2014; Hertlein et al., 2009; Kosutic et al., 2012), but not quantitatively measured from the perspectives of professionals in each setting. Much of the literature was geared towards clinicians rather than researchers, so the beliefs of researchers may not have been represented in the literature. Hatgis et al. (2001) did find a difference between professionals in different roles regarding their perspectives about dissemination, but it was in reference to treating panic disorder. This same difference may not appear when looking at the larger concept of dissemination. Although the present study assumed there was a difference between the two professional roles, the true difference may not lie between the professional roles but rather between all MFT professionals and other systems at play in the dissemination process.

5.3 Qualitative Themes

Importance of Dissemination

Looking at the qualitative data provides more information about the deficits in the dissemination process. Overall, participants reported dissemination was important for a variety of reasons. The themes found in the qualitative data are consistent with the reasons provided in the literature of the importance of effective dissemination.

Wittenborn et al. (2019) explained how efficient dissemination is needed for clinicians to be up to date on evidence-based practices and be able to provide effective services to clients.

Similarly, participants described the desire for dissemination strategies to be improved for their own professional development. MFTs recognize the important role that research plays in the growth of clinical skills. This is also related to the ethical obligation that participants described. Some participants explained the ethical obligation clinicians have to develop their clinical skills and provide proper mental health services to the public. Without research being disseminated, it could impact the quality of services that clinicians can provide and, therefore, impact the mental health of clients (Spoth et al., 2014).

Another theme that emerged was the return on investment. Participants stated that usable, accessible research needs to be disseminated or the research is pointless. Sprenkle (2012) and Withers et al. (2017) shared the concern that resources are being wasted in the production of research that is going nowhere and results in underutilized treatment recommendations. Some participants emphasized the need for dissemination in order to build a knowledge base. Research advances by building off previous research in order to move towards a deeper understanding of our world. This expectation is prevalent within scientific communities. If research is not being shared, then it inhibits the growth of the knowledge base by decreasing the opportunity of MFTs to access and build upon each other's work.

In order to justify the place that MFTs have in the scientific community, effective dissemination is also needed. This was stated in the theme of advancing the field. Hertlein et al. (2009) stated that research is needed to be able to justify the work of MFTs to other professions and insurance companies. Participants also expressed this idea, as well as the need for research to be shared so it provides credibility to MFTs in academic presentations and publications.

One of the themes that emerged that was unexpected was the concern for effective dissemination in order to inform the public. Much of the research on dissemination to clinical

professionals is distinct from research on dissemination directly to the public. There are different systems at play and purposes for dissemination in these different contexts. However, the qualitative data shows there is a need and desire to ensure research is also reaching the public directly in ways that are useful and beneficial to the public. Future research might be needed to determine how dissemination processes among professionals in the MFT field interact with dissemination processes to the public.

Improving Dissemination

When asked about the current state of dissemination in the field, some participants painted a bleak picture by focusing more on the shortcomings of the dissemination process. This deficit-focused theme highlights the frustration MFTs often feel when it comes to dissemination of research. However, many suggestions were offered for ways to improve dissemination in the field.

Few participants pointed to personal factors that influence how research is shared and consumed. This theme looked more at the interest individuals had in consuming research and the effort they were willing to put in. Kosutic et al. (2012) did find that interest in research and time limitations impact the reading habits of clinicians. In order to improve dissemination, it is important for individuals to value research enough to personally invest their time and energy into promoting the use of research in the MFT field.

However, this could be difficult because of the practical barriers that many people experience, such as cost and time limitations that emerged from the practical theme. The demands on professionals in the field make it hard to find time to look for research. Furthermore, research is very costly outside of academic settings and several studies have found this to be a barrier to dissemination (Dattilio et al., 2014; Hertlein et al., 2009; Kosutic et al., 2012). These

issues were also represented in the scarcity of resources scale developed above. It is crucial that research become more accessible to professionals in a variety of professional roles, not just academic settings. If research is only affordable to academics, then research is only useful to academics.

This is related to the theme of distribution. There were mixed reviews about peer-reviewed journals, but many participants expressed an appreciation for variety in the way research is shared. With advances in technology and more reliance on online information, participants suggest that cheaper methods can be used to disseminate research. Magazines, podcasts, social media, and websites can all be methods of distribution that can make research easy to find, engaging, and more cost-effective. Promoting usability and accessibility by sharing research in more informal ways and making it applicable to clinical use is also represented in the clinical use scale developed above.

Organizations play a role in this process as well, which is why professional organizations also emerged as a theme in the participants' answers. National organizations (i.e. AAMFT) and academic institutions are often the middleman between the production and consumption of research. They can contribute to or inhibit the dissemination process. For example, putting on conferences and having their own publications (e.g. emails, blogs, magazines) are all ways that organizations get involved in the dissemination process. Additionally, organizations can promote the dissemination of research by incorporating up-to-date research in continuing education opportunities provided for clinicians. Participants recognize that organizations can be resources to promote affordable, accessible, and quality research.

This is also closely linked to the theme of academic culture, which also emerged in one of the scales developed from this study. The academic culture sets standards that research must

meet to ensure it is scientific and ethical. Not all participants agreed these standards result in quality research, but there was an overarching recognition of the purpose of having these standards. However, these standards also contribute to some of the barriers mentioned in the research, such as articles being long or complicated, high cost associated with peer-reviewed journals (Dattilio et al., 2014; Hertlein et al., 2009; Kosutic et al., 2012), and fewer clinicians being actively involved in producing research. Some participants called for a change in the academic culture if dissemination is ever going to change.

Finally, the content of the research itself was also a theme. There were multiple suggestions of what research can include to improve the accessibility, engagement, and understanding of professionals who consume the research. Some suggestions included representation of different populations, implication sections, simpler writing style, and visuals. Of course, meeting all of these suggestions is not always possible or reasonable for every study, but producers of research should be more mindful of integrating these elements when possible.

Need for Change in MFT

Although personal factors were mentioned, a larger portion of the themes referred to macro-levels factors, such as work environment, academic culture, and academic or professional organizations. This could also explain why the average ratings for the new scales were low. Participants seem to put less emphasis on how they personally find and use research, but rather focused on the larger contextual factors that play a role in how research is shared. The importance of addressing these contextual factors is not a new concept in the literature. It is consistent with General Systems Theory (von Bertalanffy, 1968) when looking at the process of dissemination. Although MFT professionals and the relationship between them are a part of the feedback loop that contributes to ineffective dissemination, there are also other systems that

impact this relationship. The larger systems in which the MFT professionals exist and must operate within greatly influence the dissemination process.

However, this study implies that these contextual factors are impacting MFT professionals in different roles similarly. Change in these contextual factors is more difficult to bring about and would require larger, systemic adjustments, even though MFT professionals are overwhelmingly saying this change needs to be made. Instead of looking at the researcher-clinician divide in dissemination, it may be more important to consider the divide between the people working in the field (regardless of professional role) and the larger systems at play that are perpetuating ineffective dissemination of research.

One reason systemic change can be difficult to make can be found in the participants' answers to qualitative questions. Many answers presented a contradiction between what the participants thought was currently working and what they wanted to see changed. This was most evident in the answers that contained references to the peer-review process. When asked what was working in the dissemination process, peer-review was mentioned several times as a way to ensure quality and trustworthy research was being produced. On the other hand, peer-review was also listed as a barrier because it limited the type of publications produced and way research is distributed. There was also a desire expressed for sharing research in more informal methods, even though it would mean less rigorous academic peer-review.

Dattilio et al. (2014) and Kosutic et al. (2012) also found that clinicians felt it was challenging to find relevant research, costly to access it, and difficult to understand the jargon and writing style. However, the cost of the research is associated with access to the very journals the require the peer-review process. In order to get through the peer-review process, academic writing and technical jargon is often expected. It poses a challenge to the MFT field to balance

the need for regulation of ethical and responsible academic research while still making it useful and accessible to the professionals working in the field. This is just one of the examples of discrepancies between how these same dissemination processes that serve an important purpose can also be a hindrance.

The fact remains that ineffective dissemination processes are having wide-reaching effects on the MFT field. This study shows that MFT professionals in both academic and clinical settings are acknowledging there have been some attempts to improve the dissemination process, but more work still needs to be done. MFT professionals recognize the need for change, but it requires the participation of academic institutions, research publications, and national organizations in working toward a systemic change in how we share research within the field.

5.4 Clinical and Research Implications

It is important to note that participants' average ratings on the scales were not high, suggesting the true issues they were concerned about when it comes to dissemination were not well represented in the scales. Rather, these issues came out in the qualitative data. There was an overarching concern and frustration with the current state of dissemination of research. Many MFT professionals agree they have an ethical responsibility to provide effective treatment to their clients. They recognize the need for quality research to be shared and distributed in order to keep the field up to date with evidence-based, research-backed practices. It also contributes to the professional development of MFTs. It appears that MFTs want to use research to promote the practice of family therapy and grow in their professional skills. However, they are finding it difficult to do so, especially outside of academic settings. The qualitative data revealed that the gap in dissemination is viewed as more than a simple inconvenience or a unfortunate side effect

of the research process. Rather, it has significant repercussions on the growth of the profession, professional development of clinicians, and well-being of the public.

The biggest issue shared was cost of accessing research outside of a university. Paywalls and high costs of journals was a concern mentioned across the qualitative questions. Clinicians expressed the frustration that they were not able to stay up to date with research, even if they wanted to, after completing their degree due to the high cost of research. Researchers are also finding their research staying solely in academic circles because these privileged few were the ones who were able to access it. In order to improve the dissemination process, research needs to be made available at little or no cost to the clinician and in a variety of methods (i.e. online, email, podcasts, etc.). Furthermore, promoting the inclusion of more clinicians in authorship of academic writings and peer-reviewed journals would expand research outside of academia and better represent the interests of a variety of professionals in the field.

However, researchers may find it difficult to make these changes because of the emphasis in academia to publish in peer-reviewed journals and present at conferences. Their careers are often evaluated by this standard. Furthermore, funding agencies influence the type of studies being performed and content being produced (Oak & Whiting, 2013). As mentioned before, it would require a change in the academic culture in order to effectively share research in ways that are realistic for researchers and useful for clinicians. Academic institutions can also play an important role in contributing to affordable access of research for those in the field and the public overall. Although it is important to also consider the cost of producing these journals and regulating quality research, it seems like the current system is sacrificing the ability to share the research across the field in their efforts to maintain these standards. It leads to the question of what the purpose of research truly is and who it is meant to serve.

5.5 Strengths and Limitations

One of the most significant limitations of this study is the small sample size. As mentioned, the sample was collected during the COVID-19 pandemic. The pandemic may have created additional demands on time and an overall change in personal and professional environments, which may have contributed to the small response rate. When considering the sample size needed in order to conduct the EFA to determine the validity of the measure, there is no agreed upon requirement for the size of the sample needed (Williams et al., 2012). A commonly used rule is the N:p ratio, with N representing the number of participants and p representing the number of items. However, there are different ratios recommended in the literature and Hogarty et al. (2005) found that there was no required minimum needed to be able to sufficiently run an EFA. Based on the current sample size, this study had a N:p ratio of 3.17:1. This is on the lower side, but is still within the range of ratios recommended in the literature (Williams et al., 2012). However, during hypothesis testing, the small sample size may have affected the power of the model. This would impact the ability for the tests to truly detect any differences among the groups.

Furthermore, the sample was biased towards clinicians and had few researchers represented in the study. This would have biased the construction of the scales from the EFA and the hypothesis tests towards the clinician perspective. Additionally, it was challenging to identify MFTs in primarily research or clinical roles due to the variety of professional roles that MFTs hold. The small number of items in the scales also limited the ability to truly measure the construct. Going forward, including additional items that measure the construct would be useful in increasing the validity of the scale.

Another consideration is the process used to collect data. For this study, data was collected electronically. There are several advantages and disadvantages of using an online

survey (Wright, 2005). Advantages include less time required to gather data and it is relatively inexpensive and convenient. Additionally, it is possible to reach groups of people across a wide geographic area. Since this study is specifically aimed toward MFT professionals, online methods make it easier to reach this specific population. However, there are some limitations to online surveys (Wright, 2005). First, it affects the sampling frame. Once the survey link is published, it is difficult to track who has access to or sees the survey. Therefore, it is impossible to accurately determine the population size or non-response rate. Furthermore, the activity on social media may change, which affects access to the online survey. Second, there is self-selection bias present. There may be systematic differences between those who choose to invest the time and effort to take the survey compared to those who choose not to. Finally, online methods inherently have challenges, such as multiple or invalid email addresses. There could also be systematic differences between internet users and non-internet users, which excludes a group of people from participation. These characteristics of online surveys must be taken into consideration when generalizing results.

Additionally, the survey was distributed through social media, so a convenience sampling method was used. Convenience sampling are nonrandom and nonprobability sampling methods (Etikan et al., 2016). Since participants were being recruited online through access to relevant social media pages, it is not a random sample. Additionally, another type of convenience sampling method called the snowball sampling method is being used. A snowball sampling method occurs when participants reach out to others to share the survey and more participants are reached that way (Coleman, 1958). Since program directors were contacted to share the survey with their professional network, the method indicates a snowball sample. These sampling methods increase access to certain populations which are normally difficult to reach, such as the

specific population of MFTs that is being targeted for this study. Convenience sampling methods are also easier and cheaper to use (Coleman, 1958; Etikan et al., 2016). However, since it is not a random sampling mechanism, it affects the generalizability of the study.

Finally, there are limitations when interpreting the qualitative data. In order to gather a wide array of information, the questions asked about broad topics such as dissemination, usability, accessibility, and trustworthiness. Some participants found it difficult to provide specific answers about these broad topics.

Despite the limitations of the study, the findings contribute to developing a better understanding of why the research-to-practice gap exists. Particularly, this is one of the first studies that has attempted to quantify the attitudes held by MFT professionals regarding dissemination of research. Although there is still much work to be done to better understand the complex dissemination process, this study can act as a starting point for future research in this area.

5.6 Future Directions

Future research can continue to determine what constructs best represent the attitudes of professionals in the field. Constructs found in the factor analysis of this study can be expanded and additional items can be included to better measure these constructs. There are few studies in the literature that attempt to quantitatively measure perspectives and attitudes about dissemination methods, possibly due to the difficult nature of quantifying these concepts. However, quantitative and qualitative data are both needed to determine where differences and relationships exist and get a more thorough understanding of this complex process.

Furthermore, gathering more participants would allow future studies to better answer these questions and generalize the results to the MFT profession. The small sample size

significantly limited the current study and impacted the ability to detect any differences among the groups. In order to better determine whether clinicians and researchers do share attitudes about dissemination, a larger sample size would be needed. Additionally, allowing for more of a variety of professional roles to be represented in the sample may better represent MFTs.

Finally, this study focused more on the personal differences between researchers and clinicians regarding dissemination strategies. However, the participants' answers referenced more macro-level factors that impacts their views and opinions. In order to continue the systemic perspective when evaluating the dissemination process, future research can attempt to incorporate the role academia and professional organizations play in the dissemination process into the study.

5.7 Conclusion

In conclusion, dissemination of research is a complex process that is impacted by both micro- and macro-level factors. The MFT field is not immune to the challenges that come with dissemination efforts, but it is uniquely suited to understanding and studying the complex systems factors that are at play. In order to better understand the dissemination process, more accurate scales need to be developed in order to assess how professionals in the field view dissemination and participate in dissemination techniques. Improving dissemination efforts would have a far-reaching impact to all professionals within the MFT by promoting more ethical and skillful practice and advancing our credibility as a field.

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APPENDIX A. INFORMED CONSENT

RESEARCH PARTICIPANT CONSENT FORM

Perspectives of Marriage and Family Professionals in Different Professional Roles Regarding Dissemination of Research

Dr. Anne Edwards, PhD, CFLE
Department of Behavioral Sciences
Purdue University

Key Information

Please take time to review this information carefully. This is a research study. Your participation in this study is voluntary which means that you may choose not to participate at any time without penalty or loss of benefits to which you are otherwise entitled. You may ask questions to the researchers about the study whenever you would like. If you decide to take part in the study, you will be asked to sign this form, be sure you understand what you will do and any possible risks or benefits. We are conducting this study to learn more about the beliefs about dissemination within the Marriage and Family Therapy field. It is expected for this research project to be completed by Fall 2020.

What is the purpose of this study?

You are being asked to participate in a study designed by Dr. Anne B. Edwards and Adrian Weldon of Purdue University Northwest. We want to learn about your perspective of how research is shared and distributed among Marriage and Family Therapy professionals. We would like to enroll 100 people in this study.

What will I do if I choose to be in this study?

If you choose to participate, you acknowledge you are currently working in a professional capacity within the Marriage and Family Therapy field. You will be asked to complete a survey about your beliefs about what is important for research to be shared. You are free not to answer any particular questions if they make you feel uncomfortable, or withdraw your participation any time without penalty.

How long will I be in the study?

This survey should take approximately 15-20 minutes to complete.

What are the possible risks or discomforts?

Participants are at no greater risk than the participant would encounter in daily life or during the performance of routine physical or psychological exams or tests. Breach of confidentiality is always a risk with data, but we will take precautions to minimize this risk as described in the confidentiality section.

Are there any potential benefits?

You will not directly benefit from this study. You will have the chance to take part in research and contribute to the scientific literature. Your participation may contribute to a better understanding and improvement of dissemination strategies.

Will I receive payment or other incentive?

You will have the opportunity to enter your email for a randomized drawing to receive one of three $20 Amazon gift cards. At the end of the survey, you will be redirected to an external survey where you may enter your email address. Your answers to the survey will not be connected to your email.

Are there costs to me for participation?

There are no anticipated costs to participate in this research.

If you feel you have been injured due to participation in this study, please contact:

Anne Edwards, PhD, CFLE
(219) 989 – 8439
abedward@pnw.edu

Purdue University will not provide medical treatment or financial compensation if you are injured or become ill as a result of participating in this research project. This does not waive any of your legal rights nor release any claim you might have based on negligence.

Will information about me and my participation be kept confidential?

There is no personally identifying information in this survey. All responses will remain anonymous and only used in combination of other participants. IP addresses will not be linked to identifying information. All data gathered from this study will be accessed by the researchers. The project's research records may be reviewed by the study sponsor/funding agency, Food and Drug Administration (if FDA regulated), US DHHS Office for Human Research Protections, and by departments at Purdue University responsible for regulatory and research oversight.

What are my rights if I take part in this study?

You do not have to participate in this research project. If you agree to participate, you may withdraw your participation at any time before the data is gathered without penalty or loss of benefits to which you are otherwise entitled.

Who can I contact if I have questions about the study?

If you have questions, comments or concerns about this research project, you can talk to one of the researchers. Please contact Dr. Anne Edwards at abedward@pnw.edu or Adrian Weldon at weldon8@pnw.edu.

To report anonymously via Purdue's Hotline see www.purdue.edu/hotline

If you have questions about your rights while taking part in the study or have concerns about the treatment of research participants, please call the Human Research Protection Program at (765) 494-5942, email (irb@purdue.edu) or write to:

Human Research Protection Program - Purdue University
Ernest C. Young Hall, Room 1032
155 S. Grant St.
West Lafayette, IN 47907-2114

Documentation of Informed Consent

I have had the opportunity to read this consent form and have the research study explained. I have had the opportunity to ask questions about the research study, and my questions have been answered. I am prepared to participate in the research study described above.

APPENDIX B. SOCIAL MEDIA ANNOUNCEMENT

Hello! My name is Adrian Weldon and I am currently a Master's student at Purdue University Northwest. I am working on a thesis about professionals in the MFT field and their beliefs regarding dissemination of research (Purdue IRB #2020-654). I am seeking out professionals currently working in the MFT field in a variety of professional roles. If you are interested, you can follow the link below to the survey. It should take about 10-15 minutes to complete. After completion, you also have the opportunity to enter a drawing for one of three $20 Amazon gift cards. Your answers will not be connected to your entry for the drawing. Thank you in advance!

If you have any questions, please reach out to the Principal Investigator of this project, Dr. Anne B. Edwards, Associate Professor of Human Development and Family Studies at Purdue University Northwest via email at abedward@pnw.edu or phone at 219-989-8439.

https://purdue.ca1.qualtrics.com/jfe/form/SV_79ag3qA4YHh6AQZ

APPENDIX C. SURVEY

We're conducting research on how research is shared and distributed within the Marriage and Family Therapy (MFT) field. We are interested in your input and experiences as an MFT professional. The survey should only take 10-15 minutes and your responses are anonymous.

Demographics

Please answer the following questions.

1. How did you find out about this survey?
2. What is your age?
3. Do you identify as Hispanic or Latinx?
   - Yes
   - No
4. What is your racial identity?
   Please check all that apply.
   - White
   - African American/Black
   - Asian
   - Native American
   - Pacific Islander
   - Other _____
5. What is your gender identity?
   - Male
   - Female
   - Non-binary
   - Other _____
6. Where do you currently work?
   - Outside the United States
   - U.S. Territory
   - Alabama
   - Alaska
   - Arizona
   - Arkansas
   - California
   - Colorado
   - Connecticut
   - Delaware
   - Florida
   - Georgia
   - Hawaii
   - Idaho
   - Illinois

Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
Nebraska
Nevada
New Hampshire
New Jersey
New Mexico
New York
North Carolina
North Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
Rhode Island
South Carolina
South Dakota
Tennessee
Texas
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming

7. What is your highest degree completed?
   Less than High School
   High School Graduate
   Some College
   2 Year Degree
   Bachelor's Degree
   Master's Degree
   Doctorate Degree
   Other _____

8. Do you currently hold a license as a LMFT/LMFTA?
    Yes
    No
9. Have you received a degree in Marriage and Family Therapy or with a concentration/emphasis on Marriage and Family Therapy?
    Yes
    No
10. Which fields do you hold degrees in?
    Please check all that apply.
    Marriage and Family Therapy and/or Concentration or Emphasis on Marriage and Family Therapy
    Psychology
    Counseling
    Social Work
    Other_____
    Prefer not to answer
11. How long have you been in the workforce since the completion of your degree? Please answer in years and months.
12. Over the past year, have you held a professional position in the mental health field with an average of at least 20 work hours per week?
    Yes
    No
13. What licenses do you currently hold?
    Please check all that apply.
    LMFT
    LCSW
    HSPP
    LMHC
    LPC
    Other _____
    None
14. If you have any specializations, please list them here.

Professional Role

15. Which professional roles do you currently hold?
    Please check all that apply.
    Researcher
    Clinician
    Instructor/Teaching Faculty
    Administration
    Other _____
16. Which of these activities play the largest part of your professional work?
    Research
    Clinical Work
    Other _____

17. What percentage of your professional time is spent conducting, writing, and/or publishing research?
18. What percentage of your professional time is spent providing mental health services as a clinician or supervising clinicians?
19. How often do you read research?
    - Every Week
    - Once to twice a month
    - Several Times a Year
    - Rarely/Never

Beliefs about Dissemination

Now we are going to ask about your thoughts and experiences about the current state of research in the MFT field. For the following questions, please read the definitions of terms provided. Then, choose the answer which best represents your thoughts on the questions. Open-ended questions are also provided to allow you to share more information about your thoughts on research.

The next few questions ask about your thoughts about dissemination.

Dissemination is defined as "intentional, targeted distribution of empirical knowledge regarding couple and family relationships, and systemic interventions to MFT clinicians and social service agencies" (Withers, Reynolds, Reed, & Holtrop, 2017, p. 186).

Withers, M. C., Reynolds, J. E., Reed, K., & Holtrop, K. (2017). Dissemination and implementation research in marriage and family therapy: An introduction and call to the field. *Journal of Marital and Family Therapy, 43*(2), 183-197. doi:10.1111/jmft.12196

20. How effectively do you believe research is being disseminated in the MFT field?
    - Not at all effectively
    - Somewhat effectively
    - Neither effectively nor ineffectively
    - Effectively
    - Extremely effectively
21. What do you believe are barriers to effective dissemination?
22. Why is dissemination important?

The next few questions ask about your thoughts about usability of research.

Usability requires that the knowledge, resources, training, time, and other necessary elements needed to utilize the research are present.

23. On average, how usable would you consider research in the MFT field?
    - Not at all usable
    - Slightly usable
    - Somewhat usable
    - Usable
    - Very usable

In order to effectively disseminate research…

24. How important is usability?
    - Not at all important
    - Somewhat important
    - Neither important or unimportant
    - Important
    - Very Important
25. How important is it for research to be directly applicable to clinical practice?
    - Not at all important
    - Somewhat important
    - Neither important or unimportant
    - Important
    - Very Important
26. How important is it for clinicians to use treatments and/or interventions exactly as defined in research (e.g. following manualized treatments)?
    - Not at all important
    - Somewhat important
    - Neither important or unimportant
    - Important
    - Very Important
27. How important is it for research to produce treatments and/or interventions which require little or no additional training to utilize?
    - Not at all important
    - Somewhat important
    - Neither important or unimportant
    - Important
    - Very Important
28. How important is it for research to produce treatments and/or interventions which require few resources to utilize (i.e. time, supplies, space, money)?
    - Not at all important
    - Somewhat important
    - Neither important or unimportant
    - Important
    - Very Important

29. How is usability currently demonstrated in MFT research?
30. How can usability be improved?
31. Why is usability important?

The next few questions ask about your thoughts regarding the trustworthiness of research.

Trustworthiness requires quality research from trusted professionals and the confidence that practitioners can implement the research because the studies are well-designed.

32. On average, how trustworthy would you consider research in the MFT field?

Not at all trustworthy
Slightly trustworthy
Somewhat trustworthy
Trustworthy
Very trustworthy

In order to effectively disseminate research…

33. How important is trustworthiness?
    Not at all important
    Somewhat important
    Neither important or unimportant
    Important
    Very Important
34. How important is it for research to be written in a professional style?
    Not at all important
    Somewhat important
    Neither important or unimportant
    Important
    Very Important
35. How important is it for people who conduct and publish research to have advanced degrees in relevant fields?
    Not at all important
    Somewhat important
    Neither important or unimportant
    Important
    Very Important
36. How much more important is clinical experience than academic research when treating clients?
    Not at all important
    Somewhat important
    Neither important or unimportant
    Important
    Very Important

37. How is trustworthiness currently demonstrated in MFT research?
38. How can trustworthiness be improved?
39. Why is trustworthiness important?

The next few questions ask about your thoughts about the accessibility of research.

Accessibility considers how easy it is for research to be found and obtained.

40. On average, how accessible would you consider research in the MFT field?
    Not at all accessible

Slightly accessible
Somewhat accessible
Accessible
Very Accessible

In order to effectively disseminate research…

41. How important is accessibility?
    Not at all important
    Somewhat important
    Neither important or unimportant
    Important
    Very Important
42. How important is it for research to be shared in formal settings (i.e. peer-reviewed journals, conferences, books, etc.)?
    Not at all important
    Somewhat important
    Neither important or unimportant
    Important
    Very Important
43. How important is it for research to be shared in informal settings (i.e. online blogs or websites, magazines, podcasts, etc.)?
    Not at all important
    Somewhat important
    Neither important or unimportant
    Important
    Very Important
44. How important is it for MFT professionals to be required to regularly participate in continuing education?
    Not at all important
    Somewhat important
    Neither important or unimportant
    Important
    Very Important

45. How is accessibility currently demonstrated in MFT research?
46. How can accessibility be improved?
47. Why is accessibility important?

48. Were any parts of this survey confusing? If so, please explain below.

Thank you for completing the survey! For your participation, you are eligible to enter a drawing for one of three $20 Amazon gift cards. If you would like to enter, please copy the link below and paste into your browser. You will be taken to a separate survey to enter your email. Your answers will not be connected to your entry.

https://purdue.ca1.qualtrics.com/jfe/form/SV_5syhdKnRfSTH2OF