TRAINING IN INTERPRETATION OF CULTURAL DATA: UNDERSTANDING ITS EFFECT ON MULTICULTURAL CASE CONCEPTUALIZATIONS

A Dissertation

by

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ABSTRACT

Multicultural counseling competence is an expected competency for counseling trainees and professionals and considerable research and scholarship has been devoted to analyzing multicultural counseling competencies and its relation to clinical skills such as case conceptualizations, providing culturally sensitive treatments, and diagnosis. While as a field we recognize the importance of understanding psychological presentations within a cultural context, there is great ambiguity and variability in attention paid to and incorporation of cultural factors in counseling. This study aimed to address this ambiguity by training counselor trainees how to interpret cultural data and create a comprehensive understanding of clients. This was achieved by training students in the interpretation of cultural data and analyzing their subsequent case conceptualizations for multicultural sensitivity. Using a single case research design no functional relationship was identified between training in interpretation of cultural data and multicultural case conceptualization skills. The results of the study indicated weak effects for two of the seven participants involved in the training intervention. Implications for research and training is suggested.

Keywords: multicultural training, case conceptualization skills, cultural data, multicultural sensitivity, graduate training

DEDICATION

This dissertation is dedicated to my parents, Arabinda Kumar Sahu and Rina Sahu, and my brother Ari Sahu for their unwavering support, encouragement, and compassion. If not for the foundation that you build, I would have never dreamed of reaching such heights. My heartfelt gratitude for providing me with the life that you did.

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CHAPTER I

INTRODUCTION

The importance of accounting for the cultural context within clinical practice has taken center stage since Sue's (1982; 2001) conceptualization of knowledge, awareness, and skills in multiculturalism. Multicultural competency is considered a necessary skill "for psychologists working in all domains: practice, research, consultation, and education" (APA, 2018). While we recognize the importance of this competency and various training models have been created to increase counselor trainee's knowledge, awareness and skills in these domains, there remains a lack of clarity on how culture should be meaningfully incorporated into therapy. The inclusion and attention of cultural variables in the therapeutic context have been heavily researched, often taking the form of treatment considerations for various sub-cultural groups (Hall, et al., 2011; Chen & Davenport, 2005; Shibusawa & Chung, 2009; Sperry, 2010). Similarly, we have seen a growth in the literature on a variety of conceptual models pertaining to the teaching, practice, and supervision under the multicultural framework (D'Andrea, & Daniels, 1997; Hays, 1996; Pieterse, et al., 2009; Sagun, 2014; Smith & Trimble, 2016). While these models emphasize the importance of paying attention to cultural factors, there lacks a prescriptive component in teaching trainees and mental health professionals to incorporate cultural data in their practice. There is also a lack of consensus and clarity on how cultural data should be identified, interpreted, and meaningfully incorporated in counseling. Graduate trainees are trained in paying attention to various multicultural factors but lack a framework of understanding how these factors interact to inform the client's current psychological presentation.

Likewise, we lack a deeper understanding on how cultural data informs the clinical decision-making process. The goal of decision-making is to evaluate the available solutions and

select the most effective alternative for implementation (Nezu & Nezu, 1989, p. 49). But given the ambiguous and complex nature of interpreting cultural data, clinicians may be prone to apply non-analytical and unreflective reasoning in decision making. This reliance on self-reflective reasoning is susceptible to errors if it is based on heuristics. When clinicians encounter information presented by clients that do not fit with existing normative categories, their resulting diagnosis can rely on judgment heuristic (reliance on prior knowledge and belief), which can be problematic (Adenpole, et al., 2015). When we emphasize the importance of cultural awareness, we are trying to combat these heuristics by expanding our knowledge and definition of what constitutes "normative categories." However, a simple awareness does not indicate the strategic application of these concepts.

The lack of a conceptual framework (road map) that guides how cultural data can be meaningfully interpreted and incorporated into clinical decision-making warrants our attention. Furthermore, in order to expand our theoretical and conceptual understanding of cultural work in counseling, we need to move beyond addressing issues with specific sub-cultural groups and create an overarching framework of defining, interpreting and making inferences from cultural data presented in counseling. Furthermore, the new APA multicultural guidelines state that "psychologists strive to move beyond conceptualizations rooted in categorical assumptions, biases, and/or formulated based on limited knowledge about individuals and communities" (APA, 2018). Ridley & Kelly (2007) presented five steps that help counselors interpret cultural data and arrive at case formulation that is multiculturally sensitive. Many of our clinical decisions, such as the form of intervention and treatment, duration of treatment, and assessment of therapeutic outcomes are guided by our understanding, i.e. conceptualizations of our client. Given the current state in which there is a lack of clarity and inadequate guidance on the

interpretation of cultural data, it remains questionable that clinicians have the tools to formulate multiculturally sensitive case conceptualizations. This study aims to address this problem through training counseling psychology students in the five steps of interpretation of cultural data and analyzing their subsequent case conceptualizations.

Purpose of the Study

The purpose of this study is to test the effects of a framework to improve clinicians' interpretation of cultural data and formulate comprehensive, deep, and rich case conceptualizations of their clients. This is an important area of study since there lacks clear methods of deriving meaning from cultural factors present in therapy. The framework is based upon the five steps Ridley & Kelly (2007) proposed for interpreting cultural data in psychological assessments. The case conceptualizations serve as our unit of analysis as they provide insight into what cultural factors are considered and what inferences are drawn from them. The multidimensional analysis of trainee's case conceptualization includes the inclusion of cultural data, integration of cultural data, and levels of complexity of multicultural factors present in the clinical picture of the client.

Research Questions

The research questions (RQ) underlying this study are as follows:

1. Is there a functional relation between training in interpretation of cultural data (training intervention) and multicultural case conceptualization skills for trainees? (primary research question)
2. What are the effects of training on trainees' level of multicultural differentiation (mentioning a variety of cultural factors)?

3. What are the effects of training in the interpretation of cultural data on trainee's level of multicultural inferences (various cultural factors integrated into clinical hypothesis and deepened understanding of client)?
4. Do trainees consider client's culture (e.g. race, ethnicity, gender, sexual orientation, acculturation status etc.) in the client's presenting problem?
5. What is the pattern of growth in the multicultural case conceptualization skills following training?
6. Does growth in multicultural inference mirror growth in multicultural differentiation and integration?

Definition of Terms

To understand the key tenets of this study, it is important to define the central concepts of the research study. These variables are the key components and guide the research framework. A list of each term is defined below:

1. *Interpretation of cultural data* – It "is to give psychological meaning to the data, using this insight to conceptualize clients as unique individuals link their functioning to its consequences" (Ridley et al., in press, p. 26). The explanation and understanding that we determine from the given data help us pay attention to client's cultural values, experiences, and personal meaning assigned to them, and its role in contributing to client function or dysfunction.
2. *Cultural data* – constitutes "what would be expected of any person from the client's culture and usually reflect that client's cultural norms" (Ridley & Kelly, 2007, p. 47). Here culture refers to a shared set of values, beliefs, expectations, norms, practices, and

attitudes which influence an individual's expressions and behaviors (Pedersen, 1991; Triandis, 1980).

3. *Case conceptualization* – is a formulation that shows the conceptual understanding of client's psychological presentation with "a hypothesis about the causes, precipitants, and maintaining influences of a person's psychological, interpersonal, and behavior problems" (Eells, et al., 1998, p. 146).
4. *Multiculturalism* - in "an absolute sense, recognizes the broad scope of dimensions of race, ethnicity, language, sexual orientation, gender, age, disability, class status, education, religious/spiritual orientation, and other cultural dimensions. All of these are critical aspects of an individual's ethnic/racial and personal identity" (APA, 2002, p. 10).
5. *Multicultural case conceptualization* – is a formulation that explicitly takes into account salient sociocultural factors in client's presenting concerns and provides an explanation on how these cultural factors may contribute to client's psychological presentation (Constantine & Ladany, 2000; Sperry, 2005).

CHAPTER II

LITERATURE REVIEW

Issues with Multicultural Training

Multiculturalism has now become integral in the training of counseling psychology, and there has been a plethora of research focusing on the effects of multicultural training (Abreu, et al., 2000; Anuar, et al., 2016; Sagun, 2014; Smith & Trimble, 2016). Most multicultural training, competency definitions, and evaluative instruments have been based on Sue's (2001) model that defined multicultural counseling competencies as the knowledge of diverse cultures understanding the worldviews of culturally different individuals, attitudes and beliefs of one's own and other cultural groups, and skills of utilizing culturally appropriate interventions. Sue has made various revisions to refine the operational definition and components that constitute what he calls "cultural competence" (2001). However, there is variability through which multiculturalism is taught, understood, researched and practiced.

Multicultural training typically has taken the form of multicultural counseling as one or more separate courses, didactic training, clinical supervision highlighting principles and theories of multiculturalism, and workshops (Abreu, et al., 2000; Pieterse, et al., 2009). While there is an overall acceptance and appreciation of multiculturalism, there exists great variability in the training practices with most programs lacking a complete integrative model of training (Rogers & O'Bryon, 2014; White, 2014). Over the past few years, there has been a greater investigation in understanding the experiences of trainees of color with multicultural training materials (Pieterse, et al., 2016) and multicultural conceptualization skills (Bromley, 2004; Lee, et al., 2013).

Worthington, et al. (2007) did a systematic content analysis of multicultural counseling competencies research for empirical research published between 1986 and 2005. They found a lack of research on the impact of training on multicultural counseling competencies, and "the impact of specific training interventions on observer-rated multicultural counseling competencies" (p. 357). The self-reported nature of measuring multicultural competencies, however, has been critiqued for its inherent bias (Worthington, et al., 2000; 2007). Although there have been various multicultural models and research that highlight effective training practices with sub-cultural groups, there lacks a deeper understanding and guidance in multicultural literature for interpretation of cultural data. There is a need for a movement from descriptive to prescriptive models of multicultural counseling competence that have the ability to relay skills that can be trained (Sehgal, et al., 2011).

In their review of multicultural literature, Abreu, et al. (2000) state that Arredondo et al.'s (1996) model of multicultural counseling competence "is perhaps the one most relevant to MCT (multicultural training) because it specifies the training objectives needed to achieve multicultural competence in counseling" (p. 647). In Arredondo and colleagues work (1996), these competencies are described as the ability to discuss current research related to multicultural literature such as racism and be able to describe various cultural identity development models (knowledge domain). The competencies also include being able to identify one's own sociocultural influences on one's thoughts and interpretations of behaviors and events (awareness domain). Lastly is the ability to modify interventions and techniques to fit the unique needs of clients (skills domain). While these competencies help identify specific training objectives, much of multicultural literature has researched the awareness and knowledge domain and translated skills to culturally adapted treatment methods. In order for counselors to be

multiculturally sensitive, we need to have a broader definition of culture that recognizes the importance of each person's cultural upbringing and how it contributes to their worldview and actions, regardless of whether they have non-dominant or marginalized identities. This requires counselors to not only have the skills to identify multicultural factors but also derive inferences on how these factors give meaning to a client's experiences. We lack multicultural literature on this domain of interpreting and drawing inferences from cultural data.

The Need for a Schematic Framework

Although we understand the importance of including cultural data, we lack clarity on how cultural data informs our clinical decision-making process. Clinical decision-making "refers to the intricate decisions professional counselors make when they assess the degree of severity of a client's symptoms, identify a client's level of functioning, and make decisions about a client's prognosis" (Hays, et al., 2010). These components of clinical decision-making can be assessed through the counselor's case conceptualizations. The mastery of complex cognitive skills related to clinical decision making is needed along with understanding how these cognitive complexities influence the types of information we consider and how we use them (Belar, 2009; Ridley, et al., 2011). The field of cognitive psychology provides us with an understanding on how we process information received that later become our thoughts and perceptions and how these thoughts and perceptions can be organized into cognitive structures that support and confirm the beliefs we hold (Thompson, et al., 1999; Mayer, 2012).

A cognitive structure is defined as the organization of various beliefs and attitudes in our mind such that activation of one component in the structure may lead to other related concepts to also be activated. These cognitive structures can then become a schema which holds a set of expectations that can influence the speed, consistency, and recall of schema-relevant information

(Adenpole, et al., 2015; Thompson, et al., 1999). Furthermore, previously rewarded stimuli can influence people's decision-making tasks when individuals pay attention to that stimuli even when it is irrelevant to the current task (Anderson, 2017). The ambiguous and complex information that counselors have to process in clinical settings can lead to reliance on non-analytical thinking (using automatic heuristics that rely on prior knowledge and beliefs) and reflective reasoning which is prone to misdiagnosis, incomplete or irrelevant formulations (Adenpole, et al., 2015; Belar, 2009; Beutler, 2000). Novice counselors have inadequately developed conceptual maps of client issues and this leads them to formulate problems quickly and give advice (Ridley, et al., 2011).

Furthermore, if we fail to consider the influence of sociocultural factors in client's psychological presentations, we might be more prone to misdiagnosing, applying inappropriate treatment interventions, and employ limited conceptualization of our clients (Alcantara & Gone, 2014; Bhugra, 2010). Without a schema for interpreting cultural variables in clinical practice, we lack the cognitive structure to organize the cultural data of clients. Hays, et al. (2010) examined how consideration of culture affects the clinical decision-making by assessing case conceptualizations of counselors provided with case vignettes varying on cultural factors (e.g., race, ethnicity, gender, socio-economic status). They found that most counselors stated that cultural factors did not influence the client's presenting problem or diagnosis and when cultural identities (factors) were identified they were tied either to presenting problem or diagnosis but not both. Furthermore, participants did not mention cultural factors unless it was specifically asked. The cultural match for minority counselors and case vignettes played a role in how the culture was regarded in the case conceptualization, such that if the participants and the client

case matched on race/ethnicity and/or gender, those factors were more likely to be considered in the case conceptualizations.

In light of the paucity of literature that considers culture's role in clinical decision making, clinicians have limited guidance in the incorporation of cultural factors in their decisions. We can ascertain considerable variability. Improving the level of integration of cultural factors throughout clinical practice warrants a structure that counselors can follow on what to pay attention to and how to meaningfully incorporate culture into their clinical decision-making process.

The lack of structure can lead to differences in our clinical judgment and decision making due to: (a) information variance (how data is obtained), (b) criterion variance (inference made about the severity of symptoms), and (c) patient variance (information offered by patients) (Alcantara & Gone, 2014). This study is aimed at reducing such variances by providing a schematic map for interpreting the cultural data that clinicians encounter. This is achieved through the five steps of interpreting cultural data suggested by Ridley and Kelly (2007), which provides concrete sequential steps to evaluate each cultural data point resulting in a more culturally contextualized understanding of the severity of symptoms, levels of functioning, and prognosis of the client. The training hopes to provide a schematic structure that provides guidance on what factors to pay attention to and how to process the schema-relevant information. This cultural schema relevant information would serve as the guiding blocks for creating more comprehensive and culturally sensitive conceptualizations of clients.

Case Conceptualization as an Important Clinical Skill

Case conceptualization incorporates a variety of methods and processes that aims at organizing the information about a client to shed light on the client's psychological presentation

and hypothesis that explains the clinical picture. There has been a great variety in the ways in which scholars have operationally defined case conceptualizations but what is in common is the process of assessing symptoms, precipitating life events and stressors to create a clinical hypothesis that explains client's maladaptive patterns and/or current psychological state (Bucci, et al., 2016; Sperry & Sperry, 2012). The ability to develop a case conceptualization is regarded as a basic core competency for counselors (Betan & Binder, 2010; Eells, et al., 2005; Sperry, 2005). A good conceptualization is able to have both explanatory power (a compelling explanation for the presenting problem) and the predictive power (anticipation of obstacles and facilitators to treatment success) (Sperry & Sperry, 2010). With supervision, training and time, trainees case conceptualizations become more sophisticated and complex (Kelsey, 2015; Kendjelic, & Eells, 2007; Shulman, 2018; Sperry, 2005; Zubernis, et al., 2017).

Creation of a case conceptualization is "far from a passive process" and requires clinicians to engage in the deductive and inductive reasoning processes such that clinicians collect, organize, and make inferences of the clinical data collected (Sperry, 2005; Zubernis, et al., 2017). There is a diversity of case conceptualization models such as those specific to certain theoretical orientations (e.g., cognitive behavioral therapy, interpersonal therapy, psychodynamic therapy), nonetheless some of the common components include: client's presentation, predisposing and perpetuating factors that affect current maladaptive patterns, an explanation of those patterns, along with diagnostic and treatment formulations (Bucci, et al., 2016; Kelsey, 2015; Sperry & Sperry, 2012).

The formulation and evaluation of case conceptualization have been researched using multiple quality measures. A recent systematic review by Bucci, et al. (2016) examined eight measures of case conceptualization namely: Case Conceptualisation Coding Rating Scale, Case

Formulation Content Coding Method, and Case Formulation Checklist as instruments that have been most robustly tested. In their analysis, the Case Formulation Content Coding Method (Eells et al., 1998; 2005) was considered "comprehensive" with "extensive scoring criteria", across "multitheroetical services with a range of clinical" presentations (Bucci, et al., 2016). The CFCCM is a good teaching tool which contains four main categories: symptoms and problems, precipitating stressors or events, predisposing life events/stressors, and inferred mechanisms, this helps clinician integrate information to provide explanations of client's maladaptive patterns and/or psychological presentation.

Multicultural case conceptualizations

Over the past years, the cultural formulation has been incorporated as key tenets of case conceptualization which assesses broader sociocultural factors, their interaction, and the role of culture in formulating client's current presentation (Sperry & Sperry, 2012). Multicultural case conceptualization is the extent to which cultural factors are incorporated and integrated into case conceptualizations by explicitly paying attention to culturally encapsulated intra- and interpersonal, contextual, and sociopolitical cultural factors (Constantine & Ladany, 2000; Lee & Tracey, 2008). Multicultural case conceptualizations have been studied in relation to multicultural training, supervision, and self-rating scales on multicultural counseling competence (Bromley, 2004; Proctor & Rogers, 2013; Weatherford & Spokane, 2013). Various researchers have studied the presence of culturally implicit, explicit and neutral data on multicultural case conceptualizations (Lee, et al., 2013; Neufeldt et al. 2006). Ideally, we would like trainees to recognize that as cultural beings each person's experience is culturally bonded, hence, having the ability to delineate and pay attention to cultural factors even if it does not fall into racial and ethnic minoritized categories.

Also, multicultural case conceptualization skills were found to have no significant relationship with self-reported multicultural counseling competency after social desirability is taken into account (Constantine & Ladany, 2000; Ladany, et al., 1997). Multicultural conceptualization skills were found to be positively related to multicultural training (Constantine & Gushue, 2003). However, a study by Schomburg & Prieto (2011) found that despite didactic, clinical, and extracurricular training in multiculturalism, marriage and family therapy trainees did not sufficiently incorporate cultural factors into their clinical case conceptualizations", as measured by the criterion established by Constantine and Ladany (2000). This sheds light on the earlier issues related to multicultural training that may not equip students with the necessary skills and framework required to meaningfully incorporate and draw from cultural factors present in counseling.

In this study, case conceptualization is used to measure the outcome variable of multicultural case conceptualization skills. This is considered critical to informing diagnosis and treatment (Zubernis, et al., 2017). The case conceptualizations provide us with the ability to assess what cultural information to which trainees attend and how they organize and integrate the information into their clinical hypothesis. These components are indicative of higher-level clinical decision making (Ridley, et al., 2011). The criterion established by Constantine and colleagues (2000) – differentiation and integration have been heavily used to evaluate multicultural case conceptualizations. Lee & Tracey (2008) extended the criterion to include expertness (quality of case conceptualization similar to that of experts) and integrative complexity (differentiation and integration) and using case vignettes with "client issues that were explicitly tied to cultural issues versus when they were not" (p. 509). Therefore, analyzing the

trainee's case conceptualization, allows us to assess this greater complexity and integration of cultural variables in case conceptualization.

To attain inter-rater reliability for the Multicultural Case Conceptualization Analysis, two graduate research coders were trained to identify and score for multicultural differentiation, inference, and integration categories. These coders were trained using practice case vignettes through Zoom training sessions. Coders did not engage in evaluation of case conceptualizations until sufficient interrater reliability had been established. The case vignettes, operational definitions of the category, and ratings under each category were first evaluated for consistency and face validity. This was established by presenting the operational definitions and categorical ratings, to a faculty instructor and researcher in the field of multicultural counseling psychology and a research team comprising of five graduate students to ensure that the coding categories sets out to measure what it is supposed to measure. The interrater agreement was measured for each case on each of the outcome variable and on at least 20% of the data points within each condition (Kratochwill, et al., 2013).

CHAPTER III

METHOD

Research Design

A quasi-experimental single-subject basic design was to determine the effects of training in interpretation of cultural data on the case conceptualizations of seven counselor-trainees. A single-subject research design was selected because of the limited number of beginning level of counselor-trainees who have taken no or few multicultural counseling courses and presumed to have insufficient knowledge and skills in multicultural counseling. This design approach was needed since the skills being taught are non-reversible, thus, the single case AB design is considered appropriate to assess this clinical skill (Hayes, 1981).

In this within-subjects design, each student's baseline performance served as their control. An AB design where A is the baseline phase and B is the intervention phase is used to study the changes in ratings for students' multicultural case conceptualization skills. In this design, all seven counselor trainees were enrolled in the training at the same time. Both the phases involved multiple observations and participants served as their control, and hence, the comparison is between their scores in A and B phases (Smith, 2012). The dependent variable, multicultural case conceptualization skill is analyzed using three categories. These categories include: multicultural - differentiation, integration, and inference.

Participants

Seven graduate students in their first year of the Counseling Psychology doctoral program an APA accredited university in Southern United States consented to participate in the study. The students were enrolled in a multicultural counseling class, and the training module (intervention) was a requirement of the course. The students were informed that consenting to

this study means that the case conceptualizations they have created as part of this course will be utilized for analysis purposes. All students consented for their case conceptualizations to be utilized for analyzing the impact of the training intervention on their multicultural case conceptualization skills. The students completed 10 case conceptualizations and attended a total of 8 hours of training on the interpretation of cultural data. Among the participants, 71% identified as female, while 29% identified as male. The mean age of participants was 23, and the ages ranged from 21-26. In addition, 43% of the participants identified as White, non-Hispanic; 29% as white, Hispanic; 14% as biracial; and 14% as South Asian. Two of the participants had a master's degree in counseling, while the others held a bachelor's degree.

Setting

This study was conducted at a large, public university in the southern United States. The university has a robust undergraduate and graduate program with a diverse group of graduate students. The doctoral program in counseling psychology has coursework taught by the faculty who incorporate concepts and principles under multiculturalism. The program is accredited by the American Psychological Association (APA) and expects students to meet the competencies mandated under APA standards.

One such benchmark competency expected of students is in Individual and Cultural Diversity which forms as one of the categories under Professionalism (APA, 2012). The program meets and evaluates counselor trainees in this competency through a variety of ways, one of which is required coursework in Multicultural Counseling. The course focuses on developing students' knowledge and skills in theory, research, and practice of multicultural counseling. These include knowledge and critique of current multicultural research, theories, and models,

addressing disparities and racism in the mental health system, and emphasizing the importance of accounting for the cultural context in service delivery.

Measures

The study aimed to investigate the effects of a training intervention on multicultural case conceptualization skills as assessed by categories of multicultural differentiation, integration, and inferences. These measurement categories assess for the level of consideration paid to multicultural factors in conceptualizing clients by evaluating the number of cultural factors mentioned, the associations formulated within the factors, and their relation to the clinical hypothesis and deepened understanding of the client. The study adapted the rating categories created by Constantine & Ladany (2000) and Lee & Tracey (2008). These categories were chosen due to the relevance to the topic under study and appropriateness for the research design. Along with analyzing for multicultural case conceptualization skills, trainees were also assessed for their multicultural knowledge and awareness by using Ponterotto and colleagues (2002) MCKAS scale. Participants' were also administered a Training Questionnaire, an 8-item questionnaire created by this author to assess for participants' knowledge and attitude towards case conceptualization and cultural sensitivity in multicultural case conceptualization.

Multicultural Case Conceptualization Analysis

To analyze trainees' case conceptualizations for multicultural considerations and integration of cultural data, this study employed rating categories created by Constantine & Ladany (2000) and Lee & Tracey (2008). The level of consideration given to cultural factors and the integration of these various cultural factors to the inferences made about the client was of particular interest in the evaluation of participants' multicultural case conceptualization skills. To evaluate these particular skills that require cognitive complexity to formulate comprehensive

case conceptualizations, these categories aimed at providing insight on what cultural factors are considered and what meanings are derived from them. It is important for counselors to not only consider cultural factors but also understand how diverse sociocultural, historical, environmental and psychological factors influence the clinical presentation or target behavior of interest (Resnicow, et al., 1999, p. 10).

The categories of interest include multicultural differentiation, integration, (Constantine & Ladany, 2000; Lee & Tracey, 2008) and multicultural inference a variable adapted from The Process Model of Multicultural Counseling Competence (Ridley et al., in press). In Constantine and Ladany's (2000) study, differentiation and integration were combined together to provide a score on multicultural case conceptualization that is indicative of higher complexity. The interrater reliability between the two coders was .93 for etiology and .82 for treatment ratings for multicultural case conceptualization. In Lee and Tracey's (2008) study, these components were evaluated separately as the two categories were considered non-linearly related to level of training. They calculated intraclass correlation coefficients with reliability estimates for each of their rated measures ranging from .89 to 1.00. In this study, the scoring of case conceptualization was done using three categories separately and were plotted in graphs for purpose of analysis. This allowed for evaluation of the level at which cultural factors are included and how these factors were integrated with possible explanations provided for client's clinical presentation. The visual representations helped us determine if multicultural differentiation, integration, and inference improved after the introduction of the training intervention.

Multicultural Differentiation. To understand multicultural differentiation, it first is helpful to understand differentiation which is defined as an "ability to offer alternative interpretations or perspectives of a client's presenting problem" (Constantine & Ladany, 2000, p.

158). The higher the number of different ideas presented in relation to the client's presenting problem, the higher is the degree of differentiation. In this same vein, Lee & Tracey (2008) define multicultural differentiation as "the number of different ideas that included any specific reference to culture, race, ethnicity, sex, age, socioeconomic status, ability status and sexual orientation" (p. 511). Multicultural differentiation hence looks at the number of different cultural factors included as they relate in explaining the client's psychological presentation. This includes race, ethnicity, sex, age, socioeconomic status, ability status, acculturation etc. Higher number of cultural factors mentioned indicates a higher degree of multicultural differentiation. In order to keep the rating scales standard, this category was adapted to a 5-point Likert scale where 1 = mentioning a cultural factor without linking it to explanations or hypothesis; 2 = one cultural factor mentioned when providing an explanation, hypothesis or treatment consideration for the client; 3 = two cultural factors mentioned when providing an explanation, hypothesis or treatment consideration for the client; 4 = three cultural factors mentioned when providing an explanation, hypothesis or treatment consideration for the client; and 5 = three or more cultural factors mentioned when providing an explanation, hypothesis or treatment consideration for the client. The higher the level of cultural factors mentioned along with consistently tying it to client's presenting problem, such that a variety of alternative perspectives are offered on client's presenting problem would receive a higher score in this category.

Multicultural Integration. Integration is defined as the "ability to formulate associations between and among differentiated interpretations" (Constantine & Ladany, 2000, p. 158), and assesses the "overall cohesion of the conceptualization" (Lee & Tracey, 2008, p. 512). It is the overall cohesion of the case conceptualization achieved by the associations made between different ideas presented in a case conceptualization. The ratings are on a 5-point Likert scale

ranging from 1 to 5, where 1 = no cultural factors connected to linkage to explanations of clinical hypothesis; 2 = low level of integration with one cultural factor is presented with poor linkage to explanations of clinical hypothesis; 3 = moderate level of integration with two cultural factors presented with linkage to explanations of clinical hypotheses; 4 = intermediate level of integration two or more cultural factors presented with thorough and comprehensive linkage to explanations of clinical hypotheses; 5 = high integration with three or more cultural factors integrated together and well connected to explanations of clinical hypotheses and also well-connected to each other (intersection of cultural factors). Therefore, a well-formulated case conceptualization with a variety of ideas that are well connected to explain client's psychological presentation will likely receive higher scores.

Multicultural Inference. This category was created in order to capture the meaning-making. It is a tentative clinical judgment about the client's mental health functioning based on the multicultural differentiation and multicultural integration of cultural factors. The judgment is a statement about the adequacy of the functioning. It includes a hypothesis about the client's self-experience of the symptoms, i.e. their internal thoughts, feelings, and behaviors in response to various multicultural contexts e.g. family, community, society etc. The category incorporates the cultural factors that link to the cause of client's presenting problem and the consequences of those behaviors. In this meaning making, attention is paid to how personal, interpersonal, and sociocultural (contextual) factors are used to generate clinical hypotheses and describe client's self-experience. This category is adapted from the work of Eells, et al. (1998) and Ridley et al. (in press).

The degree of inference under CFCCM is defined as "the extent to which the formulation goes beyond descriptive information" (Eells, et al., 1998, p. 148) to include counselor's hypothesis and considerations. A higher degree of inference was associated with higher number of hypothetical considerations and deep level understanding of the client. In Ridley et al. (in press) work interpretation of cultural data is defined as making meaning of the cultural data, shed deeper light on clients' psychological presentations, and understand clients as unique individuals. Here attention is paid to the influence of clients' cultural values, beliefs, and norms on their presenting thoughts, feelings, and behaviors. Hence, multicultural inference looks at how various cultural factors are integrated to create a more comprehensive clinical picture of the client.

The ratings are on a 5-point Likert scale ranging from 1 to 5, where 1 = no inference, mention of one cultural factor at a descriptive level and attributions only to diagnosis or diagnostic symptoms, 2 = low inference, mention of one cultural factor at a descriptive level and an attribution is made to the client's functioning or internal experience ; 3 = moderate inference, mention of two cultural factors and offering an attribution to the client's functioning or internal experience; 4 = intermediate inference, mention of three cultural factors with an explanation provided to the client's functioning or internal experience; 5 = high inference, mention of three or more cultural factors with an explanation provided to the client's functioning or internal experience such that it creates a complex and comprehensive clinical picture.

Multicultural Knowledge and Awareness Scale

Trainees were administered the Multicultural Counseling Knowledge and Awareness Scale (MCKAS) (Ponteretto, et al., 2002) to examine their current and developing levels of multicultural knowledge and awareness. The MCKAS scale was developed by Ponterotto, et al.

(1994) which evaluated "the three-dimensional model (awareness, knowledge, and skills) of multicultural competence posited by Sue et al. (1982)". In the development of MCKAS, the items loaded into two dimensions, namely knowledge, and awareness; here knowledge and skills loaded together and awareness onto its own subscale. The alpha coefficient for the knowledge and awareness subscales was .85 and the correlation between the subscales was non-significant, with the inter-correlation between the two subscales of .04 (Ponterotto, et al. 2002). The convergent, discriminant, and criterion-related validity has been examined using the correlation between MCKAS with Multicultural Counseling Inventory (MCI) and Multigroup Ethnic Identity Measure (MEIM). The MCKAS knowledge subscale significantly correlated with MCI's Knowledge (r = .49), Skill (r = .43), and Awareness (r = .44) subscales. The MCKAS Awareness subscale correlated significantly with MCI's Counseling Relationship subscale (r = .74). MCKAS Knowledge subscale correlated moderately with MEIM Ethnic Identity scores (r = .31), while the MCKAS Awareness subscale did not significantly correlate with MEIM Other Group Orientation subscale (r = .20) (Ponterotto, et al. 2002).

The MCKAS is a 32-item scale with ratings on a 7-point Likert scale of 1 = not at all true to 7 = totally true). The scale measures the domains of multicultural knowledge and awareness. The knowledge/skills domain (28 items) assesses general knowledge related to multicultural counseling and the awareness subscale (14 items) measures subtle Eurocentric worldview bias and three items that measure social desirability. The factor structure of MCKAS scale has been examined previously by Ponterotto and colleagues (Ponterotto, et al, 1996; 2002), but the most recent factor analysis was conducted by Lu (2016) yielding a 28-item scale that loaded on two factors. This scale was labeled as MCKAS-R, where "R" stood for refined. The "major feature of the MCKAS-R is that its knowledge domain contains items that are conceptually consistent with

the construct of interest" (Lu, 2016, p. 23), compared to MCKAS which had items related to attitudes and beliefs. The MCKAS scale was administered to the trainees as it fits appropriately with the knowledge/skill and awareness domain which compose the main tenets of multicultural counseling competence as defined by Sue (2001).

Training Questionnaire and Satisfaction Survey

Singe case research design encourages researchers to inquire the social validity of their research from their target participants. This author created an 8 item Training questionnaire that aimed at understanding each participant's knowledge and attitude towards case conceptualization skills. A breakdown of these items is presented in Table 2 in the Results Section. The trainees were also provided with a Satisfaction Survey in the last session which aimed at understanding student's experience with the training intervention and suggestions for ways it can be improved. This brief satisfaction survey was to evaluate the social importance and validity participants placed on this training. Students were asked to rate their agreement with 8 statements, using the following three options, Yes, No and Unsure. A breakdown of the items in this survey is provided in Table 3 in the Results Section. These two questionnaire/surveys were administered as a way to assess for social validity of this research.

Procedure

Following the approval from IRB, first-year doctoral counseling psychology trainees were recruited from the Multicultural Counseling course offered at a large Southern University. All students enrolled in this course were provided with training in interpretation of cultural data. Students provided informed consent for their work products (case conceptualizations) from this course used for analysis purposes. In order to prevent coercion and biases, a graduate student not affiliated with the coursework administered the consent form prior to the start of the training

intervention. Students were informed of the voluntary nature as well as their right to withdraw consent at any point in the future.

This training intervention was part of their course requirement. It was administered under the direct supervision of the professor of record who is also a subject matter expert in multicultural counseling. The pedagogical benefits to the trainees were (a) formal training in case conceptualization which is a necessary clinical skill, (b) in-depth understanding of issues related to current multicultural counseling models and critical thinking of ways in which they can be addressed (a competency expected as part of APA competency mandates), and (c) explicit learning in how to put multicultural theoretical concepts and principles into clinical practice. These incentives were present to indicate the importance of the knowledge and clinical skills that are required competency in the field and is of academic and clinical benefit for students. While participation in the training was mandatory the activities completed in the training module were not used to calculate course grade. Students were informed that their performance in the activities would in no way impact their performance and standing in the class. Only active participation (attending) and completion of the training intervention module would be considered for the overall course requirement. The training intervention was administered in Spring of 2019 in the Multicultural Counseling course.

Training Intervention

The training intervention took place over the course of six sessions. The intervention consisted of the following components: (a) training in case conceptualization under Case Formulation Content Coding Method (CFCCM) framework, (b) teaching of The Process Model of Multicultural Counseling Competence, the theoretical model guiding interpretation of cultural data, (c) instructing in interpretation of cultural data using case vignettes, (d) practicing

interpretation of cultural data using de-identified client case and (e) creating case conceptualizations using standard case vignettes. The training engaged trainees in creating case conceptualizations each session. These case conceptualizations were evaluated using a coding manual to analyze for multicultural case conceptualization skills. The various sessions under the training intervention are described below.

Session 1. To evaluate participants' multicultural case conceptualization skills, participants needed to have basic knowledge and skills in creating case conceptualizations. Session 1 included training in foundational knowledge and skills in formulating case conceptualizations. The participants received a two-hour didactic instruction on creating case conceptualizations based on the categories of the Case Formulation Content Coding Method (CFCCM) framework (Eells et al., 1998; 2005). Eells, and colleagues (1998) use the term case formulation (which is used interchangeably with case conceptualization in the literature) and define it as "a hypothesis about the causes, precipitants, and maintaining influences of person's psychological, interpersonal, and behavior problems" (p. 146).

The Case Formulation Content Coding Method (Eells et al. 1998; 2005) is designed as a transtheoretical case conceptualization framework which reliably and comprehensively categorizes the information counselor's gather in developing their case conceptualizations. Under the CFCCM framework case conceptualizations are analyzed using a standardized rubric that rates the quality of these conceptualizations on the following categories: complexity, the degree of inference, and precision of language, along with an overall quality rating. The information on these case conceptualizations is broken down into the following categories: (a) symptoms and problems, (b) precipitating stressors or events, (c) predisposing life events/stressors, and (d) inferred mechanism that links information from all other categories to

the client's psychological presentation. These categories and quality ratings provide beginning level counseling trainees with foundational knowledge on the composition of case conceptualization and the necessary components needed to formulate cases. Trainees were also presented with a basic structure of a case conceptualization and taught how to connect categories in CFCCM to create case conceptualizations. These four categories were used to teach counseling trainees how to use information from the case vignettes and integrating them to make inferences about client's problems.

The first session comprised of an hour and a half of didactic instruction on defining case conceptualizations, its importance in clinical training, specifically how it guides clinical decision making and is regarded as an integral clinical skill. An introduction to the CFCCM framework is presented, followed by a demonstration of creating a case conceptualization using a case vignette. Trainees were provided necessary handouts that defined the different categories in a case conceptualization along with a document with these categories listed to provide guidance for future case conceptualizations. After the first session, trainees were assigned to create a case conceptualization based on a standardized case vignette provided to them. Trainees were required to complete this case conceptualization prior to the second session and email the case conceptualizations by a set deadline. Trainees were also administered the Multicultural Counseling Knowledge and Awareness scale (Ponterotto, et al., 2002).

Session 2. The second session comprised of a two-hour didactic instruction on the Process Model of Multicultural Counseling Competence (Ridley, et al., in press). This theoretical model formed the basis of understanding multicultural counseling competence and how it can be meaningfully incorporated into counseling therapy. The skill of interpretation of cultural data is a sub-component of the central operation of deep-structure incorporation of culture. This didactic

instruction was to help students understand how interpretation of cultural data that will be introduced later fits into the conceptual framework of this process model. Additionally, feedback was provided on each participant's case conceptualization along with questions participants had about the prior lecture or assignment.

An in-depth overview of the model provided students with an ability to understand how the clinical skill of interpreting cultural data fits in the holistic process model structure. Ridley and colleagues (in press) define multicultural counseling competence as "the facilitation of therapeutic change through the deep-structure incorporation of culture into counseling and psychotherapy" (p. 4). They stated that the facilitation of therapeutic change requires a variety of competencies and a conceptual framework that is accurately able to map and guide the facilitation of the change process. These competencies "entail the translation of the multicultural principles and ideas into purposeful and actionable behavior" (Ridley, et al., in press). Deep structure incorporation of culture is comprised of identification, interpretation and integration of cultural data. This study evaluates the interpretation and integration of cultural data through case conceptualizations. Hence, the interpretation of cultural data serves as one of the bases of translating the multicultural principles into actionable clinical skills of case conceptualization. The trainees were provided a handout which included a graphic representation of the Process Model of Multicultural Counseling Competence, along with handouts of case vignettes for which trainees were expected to create case conceptualizations prior to the next training session.

Session 3. This session began with a review and feedback of assignments completed so far by the participants as well as answering any questions that rose for the participants. This session consisted of the introduction of the training intervention in interpretation of cultural data. A didactic instruction and demonstration using a case vignette on how to interpret cultural data

was provided. The trainees were taught how to interpret cultural data based on the five steps proposed by Ridley & Kelly (2007). Following are the five steps as ways to interpret cultural data:

1. Differentiate cultural from idiosyncratic data.
2. Apply base rates to cultural data to determine if the data is typical or not.
3. Identify, stressors that can be differentiated between environmental and dispositional.
4. Divide data into clinically significant and clinically insignificant.
5. Create a working hypothesis for the clinically presented data.

Participants were provided with a handout of the article that discussed these steps in greater detail. The session also comprised of a demonstration using a case vignette which taught trainees to utilize the five steps to interpret cultural data and connect it to the client's psychological presentation. To accurately interpret cultural data participants would develop an understanding of how to: (a) derive meaning of the data presented in case vignettes by identifying the cultural values, beliefs, and identities present in case vignettes, (b) shed light on how it relates to client's psychological presentations by drawing accurate inferences, and (c) interpret the data within the uniqueness of client's psychological presentation, such that each conceptual understanding is unique as opposed to being general. Participants were also be required to create a case conceptualization on a case vignette by the following training session.

Session 4. This session included a review of the steps in interpretation of cultural data and feedback on last session's case conceptualizations. Using a case vignette this author demonstrated how to interpret cultural data and create case conceptualization using the information provided in a case vignette. This two-hour training session helped participants

interpret the cultural data presented in the case vignette using the five steps and integrate it with the information categories in the CFCCM framework to create a case conceptualization. Participants were provided handouts for the case vignettes used for the training session. They also completed case conceptualizations prior to next training session.

Session 5. This one and half hour training session consisted of demonstration and group activity to create case conceptualization using a de-identified case example. Participants worked collaboratively with the author (who was also the instructor for this training intervention) to create a case conceptualization using the CFCCM framework and the five steps under the interpretation of cultural data. Then each trainee was required to individually write the case conceptualization for this de-identified case. They were provided forty minutes to complete this case conceptualization within the training session. This author answered any questions participants had about prior to the sessions as well as their assigned homework from previous week.

Session 6. In the final training session, participants were provided with a case vignette and given one hour to create a case conceptualization in class using the interpretation of cultural data and CFCCM methodology taught so far. Participants were expected to incorporate the steps under the interpretation of cultural data and categories along with the CFCCM framework to create a comprehensive case conceptualization. They were provided with the handout of the case vignette five minutes prior to start of the class. This author also administered the training questionnaire and satisfaction survey that students were asked to return after class.

Interrater Agreement

The interrater agreement was measured for each case on each of the outcome variables and at least 20% of the data points within each condition (Kratochwill, et al., 2013). The interrater agreement was analyzed using the Intraclass Correlation Coefficient statistic. Two coders from a graduate degree program in Counseling Psychology were recruited to analyze the data.

Coder 1 identified as a cisgender, Asian American female who was a third-year doctoral student in a Counseling Psychology Program. She held a master's degree in Educational psychology and had three years of involvement in a multicultural research team with multiple conference presentations and several publications on this subject matter. Coder 2 identified as a cisgender, Asian male, an international fourth-year doctoral student in a Counseling Psychology with a master's degree in Counseling Psychology, and four years of involvement in a multicultural research team with multiple conferences and several publications on this subject matter. These two coders were trained to identify and score the case conceptualizations for multicultural differentiation, multicultural inference, and multicultural integration. They were trained using a Coding manual to attain inter-rater reliability for the Multicultural Case Conceptualization Analysis.

The coding manual was developed with operational definitions, case examples, and guidelines for Likert-scale ratings for each of the categories. The coders were trained by the researcher using practice case vignettes through training sessions via Zoom. They began scoring after achieving 83% agreement on the sample case vignettes, indicating sufficient interrater reliability. The coders were blinded to the conditions such that they were not aware of which case conceptualizations belong to the baseline or intervention phase. This researcher also

facilitated discrepancy discussions whenever there was a difference in ratings in the three categories. If there was disagreement in rating (for example, one coder gives a rating of 2 and the other a 3 in multicultural differentiation), then the researcher led them in a discrepancy discussion. The coders along with this researcher arrived at a consensus on how that category should be scored in these discussions.

The intraclass correlation coefficient and their 95% confidence intervals were calculated using a 2-way mixed effects model with absolute agreement using SPSS Statistical software. The average measure ICC was .935 with a 95% confidence interval from .884 to .963, $p < .001$. This indicates a high degree of reliability between the coders on the multicultural case conceptualization rating categories.

CHAPTER IV

RESULTS

The results of this research study are presented in the form of individual level analysis and group level analysis. Statistical and visual analysis is provided for each of the participants to evaluate the effects of the training intervention on their multicultural case conceptualization skills. A discussion of trainee's satisfaction with the training intervention and social validity of this research is presented under group level analysis. An evaluation of trainee's attitudes and knowledge towards case conceptualization skills pre- and post-training is provided. Overall, two participants showed weak effects of the training intervention on their multicultural case conceptualization skills. Participants reported the utility and importance of this training for their ongoing development of case conceptualization skills.

Individual Level Analysis

The data was analyzed using visual and statistical analysis for a single case research design. The visual analysis was conducted following the standards set forth by What Works Clearinghouse (Kratochwill, et al., 2013). The visual analysis for a time series data is graphed for each participant on each outcome variable of interest. These visual analyses are evaluated through six features: (a) level of change (mean score within a phase), (b) trend (the slope and direction of data series over time), (c) variability (fluctuation in the data values), (d) overlap of data points across phases, (e) immediacy of the change or effect and, (f) consistency of data patterns across the similar phases.

Level of change can be high, medium, or low—each referring to the average score within a phase. Trend is the slope and direction of the data series over time, with an observation of trend direction, trend magnitude, and trend stability. Variability is the range or standard deviation of

data about the best fitting line such as variations in predictability, consistency, and fluctuation in the data values. Overlap is the proportion of data from one condition/phase that is of the same level as the data from an adjacent condition, typically reported in the percentage of overlapping data. The immediacy of change is the degree to which the change in the outcome variable as soon as the intervention is introduced. Consistency of data patterns refers to the extent to which data patterns in one condition are similar to data patterns in other similar conditions. The level, trend, and variability of data were analyzed within each phase followed by analyzing the data points across the phases for overlap, an immediacy of effect, and consistency of data in similar phases. These six features were utilized to evaluate where the data demonstrate at least three demonstrations of an effect, i.e. documenting a functional relation between the changes in the outcome variable related to the manipulation of the independent variable (intervention effects).

Statistical analysis was conducted using the Baseline Corrected Tau single-case statistic to calculate the effect size for the outcome variable for each participant (Tarlow, 2017). Kendall's Tau statistic is a non-parametric rank correlation coefficient based on the homogeneity between two samples (Kendall, 1962). Within the single case research design, this has been adapted to a Tau-U statistic for single-case data analysis (Parker, et al., 2011). The Baseline Corrected Tau addresses the limitations of the Tau-U statistic particularly providing a more clear and succinct method to account for baseline trends in the data. The Tau-U baseline trend correction uses a ratio-based statistic of the baseline and experimental phase length. Tarlow (2017) argues that Tau-U changes as the number of observations in each of these phase changes. Trends in the baseline data (phase) indicate that the outcome variable in this study is not stable thus weakening the inferences we can make about our interventions.

The method proposed by Tarlow (2017) combines the Theil-Sen estimator and Kendall's Tau to correct for baseline trend. Hence, if a baseline trend exists, then a Theil-Sen regression is applied to adjust for the presence of this baseline trend. If a baseline trend does not exist then Kendall's Tau rank-order correlation coefficient is used to calculate the effect size. An effect size is then calculated by comparing the baseline and intervention phase data, which shows the strength and the direction of change in outcome variables between the baseline and intervention phase. These calculations were made using a web-based calculator that can be found at http://ktarlow.com/stats/tau/. Each of the participants' data was analyzed using Tarlow's (2016) web-based calculator for Baseline Corrected Tau. Each participant's Baseline Corrected Tau (statistical analysis), as well as interpretation of graphs (visual analysis), are discussed below.

Each participant was also administered the Multicultural Knowledge and Awareness Scale (Ponteretto, et al., 2002). Individual's scores range from 20 to 140 in the Knowledge scale, with higher scores indicating higher perceived knowledge of multicultural counseling issues. Scores on the Awareness scale range from 12 to 84 with higher scores indicating a greater awareness of multicultural counseling issues. Within this study, the mean score on the Knowledge sale was 118.86 and 69 on the Awareness scale.

A summary of statistical significance and visual evidence of effect for each of the participants is provided in Table 1 below. Here the three categories are abbreviated as follows: (a) multicultural differentiation – MD, (b) multicultural integration (MIntg), and (c) multicultural inference (MI). There were no statistically significant results for the three categories of multicultural case conceptualization skills for Participants 1 through 5. Participant 6 had a statistically significant result for multicultural integration and inference. Participant 7 had a

statistically significant result for multicultural integration. Furthermore, only these two out of the seven participants showed weak evidence of an effect of the intervention on multicultural case conceptualization. One participant had a contratherapeutic effect of the intervention while the remaining five participants had no evidence of an effect of the intervention. An in-depth individual analysis is presented for each of the participants with results of both the statistical as well as the visual analysis. These visual analyses were conducted for each of the outcome measures for each participant and are graphically presented in Appendix C.

Table 1

Summary of Statistical and Visual Analysis.

Participant #	Statistical Significance			Visual Evidence of an Effect
	MD	MIntg	MI	
Participant 1	Tau = 0.034, *p* = 1.000	Tau = 0.144, *p* = 0.734	Tau = 0.036, *p* = 1.000	None
Participant 2	Tau = -0.334, *p* = 0.345	Tau = -0.209, *p* = 0.606	Tau = 0.000, *p* = 1.119	Contratherapeutic
Participant 3	Tau = 0.297, *p* = 0.408	Tau = -0.074, p = 0.906	Tau = 0.000, *p* = 1.119	None
Participant 4	Tau = 0.495, *p* = 0.146	Tau = 0.200, *p* = 0.631	Tau = 0.333, *p* = 0.424	None
Participant 5	Tau = 0.949, *p* = 0.043	Tau = 0.333, *p* = 0.424	Tau = 0.395, *p* = 0.257	None
Participant 6	Tau = 0.467, *p* = 0.156	Tau = 0.723*, *p* = 0.023	Tau = 0.778*, *p* = 0.016	Weak
Participant 7	Tau = -0.260, *p* = 0.488	Tau = 0.778*, *p* = 0.016	Tau = 0.408, *p* = 0.270	Weak

Note. This table provides a summary of the TAU and *p* values for each of the participant as well as the strength of evidence from visual analysis of the effect of the intervention on participant's

multicultural case conceptualization scores. Here MD standards for multicultural differentiation, MIntg for multicultural integration, and MI for multicultural inference. *$p < .05$.

Participant 1

Participant 1 identified as a biracial ("Black and White"), lesbian, female identified student. She had no prior training in multiculturalism and case conceptualization. She did not have a master's degree in counseling. She identified her theoretical orientation as integrated with a Cognitive Behavioral Therapy (CBT) and a Multicultural counseling framework. The framework included an emphasis on how individual's intersecting identities framed their experiences. She obtained a score of 110 in Multicultural knowledge and 78 in Multicultural Awareness.

Participant 1 did not have any significant changes in her multicultural differentiation (Tau = 0.034, $p = 1.000$), multicultural integration (Tau = 0.144, $p = 0.734$), and multicultural inference (Tau = 0.036, $p = 1.000$) scores.

The participant's score in multicultural differentiation fluctuates in the baseline and intervention phase with a high level of scores during both the phases. The level of change in scores from the baseline phase (mean = 3.8) to the intervention phase (mean = 4) is a slight immediate increase, however, there are no visible changes in the trend data. The percentage non-overlap between baseline and intervention phase data points was 10%. Her score in multicultural integration was medium level with a mean score of 2.8 in the baseline phase and 4 in the intervention phase with an immediate change in score post-intervention until the scores level off. There was a complete overlap between baseline and intervention phase data points. Scores for

multicultural inference range from low to medium levels of scores with a mean of 2 in the baseline phase and 2.6 in the intervention phase. There is no visible trend data and complete overlap between baseline and intervention phase data points. Considering the data from the visual analysis, there is no evidence of the effect of the intervention on her multicultural case conceptualization scores.

Participant 2

Participant 2 identified as a White, non-Hispanic, "Queer", female identified student. She had no prior training in multiculturalism and case conceptualization. She did not have a master's degree in counseling. She identified her theoretical orientation as "eclectic" and still "exploring" the various theoretical orientations. She obtained a score of 127 in Multicultural Knowledge and 83 in Multicultural Awareness.

Participant 2 did not have any significant change in her multicultural differentiation (Tau = -0.334, $p = 0.345$), multicultural integration (Tau = -0.209, $p = 0.606$), and multicultural inference (Tau = 0.000, $p > 0.99$) scores.

Visual analysis indicates that the participant's scores in multicultural differentiation are at a low level with a mean of 2.8 in the baseline phase and 2 in the intervention phase. There is a gradual decelerating trend in the scores from the baseline into the intervention phase. The percentage non-overlap between baseline and intervention phase data points was 20%. Her score in multicultural integration was low level with a mean score of 2 in the baseline phase and 1.8 in the intervention phase. There is a gradual decelerating trend in the scores. The percentage non-overlap between baseline and intervention phase data points was 30%. Scores for multicultural inference are in the low levels of scores with a mean of 1.2 in both the baseline and intervention phases. The trend is zero celerating (i.e. data is almost parallel to abscissa) and there is complete

overlap between baseline and intervention phase data points. Considering the data from the visual analysis, there is evidence of a contratherapeutic effect of the intervention on her multicultural case conceptualization scores.

Participant 3

Participant 3 identified as a White, Hispanic, "Latino", heterosexual, male identified student. He had courses in multicultural counseling and case conceptualization during his master's degree in counseling. He identified his theoretical orientation as Interpersonal therapy. He obtained a score of 102 in Multicultural knowledge and 55 in Multicultural Awareness.

Participant 3 did not have any significant change in her multicultural differentiation (Tau = 0.297, $p = 0.408$), multicultural integration (Tau = -0.074, p = 0.906), and multicultural inference (Tau = 0.000, $p > 0.99$) scores.

Visual analysis indicates that the participant's scores in multicultural differentiation fluctuate in the baseline with a mean of 2.6 in the baseline phase. The scores are at the medium level in the intervention phase with a mean of 3.2. The trend is zero celerating in the intervention phase. There is a complete overlap between the data points in the baseline and intervention phases. Scores for multicultural integration range from low to high level with a mean of 2.8 in the baseline phase and 3 in the intervention phase. There is a complete overlap between baseline and intervention phase data points. His scores in multicultural inference are at the low level with some variability in the baseline phase. The mean score in both the baseline and intervention phases is 2. There is a zero celerating trend in the intervention phase and a complete overlap of data between the two phases. Considering the data from the visual analysis, there is no evidence of the effect of the intervention on his multicultural case conceptualization scores.

Participant 4

Participant 4 identified as a "South Asian", heterosexual, male identified student. He had no prior training in multiculturalism and case conceptualization. He did not have a master's degree in counseling. He indicated that he is still "exploring" the various theoretical orientations and identified with an integrated person-centered approach. He obtained a score of 119 in Multicultural knowledge and 61 in Multicultural Awareness.

Participant 4 did not have any significant change in her multicultural differentiation (Tau = 0.495, $p = 0.146$), multicultural integration (Tau = 0.200, $p = 0.631$), and multicultural inference (Tau = 0.333, $p = 0.424$) scores.

Visual analysis indicates that the participant's scores in multicultural differentiation are at the low level with a mean of 1.4 in the baseline phase and 2.2 in the intervention phase. There is an immediate increase in scores post-intervention, but the scores gradually decrease within the intervention phase. The percentage non-overlap between baseline and intervention phase data points was 20%. His scores in multicultural integration are at the low level with a mean score of 1.4 in the baseline phase and 2.8 in the intervention phase. There is a gradual decelerating trend in the scores and there is a complete overlap between the baseline and intervention phase data points. Scores for multicultural inference are in the low levels of scores with a mean of 1 in the baseline phase and 1.2 in the intervention phase. The trend is zero celerating (i.e. data is almost parallel to abscissa). The percentage non-overlap between baseline and intervention phase data points was 10%. Considering the data from the visual analysis, there is no evidence of the effect of the intervention on his multicultural case conceptualization scores.

Participant 5

Participant 5 identified as a White, non-Hispanic, heterosexual, female identified student. She had no prior training in multiculturalism and "limited" exposure to case conceptualization skills. She did not have a master's degree in counseling. She is still "exploring" the various theoretical orientations. She obtained a score of 125 in Multicultural knowledge and 54 in Multicultural Awareness.

Participant 5's score in multicultural differentiation scores appeared to steadily increase during the pre-intervention phase (Tau = 0.949, p = 0.043); therefore, a Baseline Corrected Tau was calculated. Participant's 5 score on multicultural differentiation was not significant (Tau = 0.333, p = 0.424). She did not have any significant change in her multicultural integration (Tau = 0.395, p = 0.257), and multicultural inference (Tau = 0.000, p = 1.097) scores.

Visual analysis indicates that the participant's scores in multicultural differentiation gradually increase in the baseline with a mean of 2.8 in the baseline phase. There is an immediate drop in score in the intervention phase with a gradual accelerating trend in the intervention phase with a mean of 2.8. There is a complete overlap between the data points in the baseline and intervention phases. Scores for multicultural integration are at the low level with a mean of 1.6 in the baseline phase and 2.2 in the intervention phase. There is a gradual accelerating trend in the scores in the intervention phase. The percentage non-overlap between baseline and intervention phase data points was 20%. Her scores in multicultural inference are at the low level with some variability in the baseline phase. The mean score in both the baseline and intervention phases is 1.6. There is a zero celerating trend in the intervention phase and a complete overlap of data between the two phases. Considering the data from the visual analysis,

there is no evidence of the effect of the intervention on her multicultural case conceptualization scores.

Participant 6

Participant 6 identified as a White, non-Hispanic, heterosexual, female student. She had no prior training in multiculturalism but some prior training in case conceptualization skills. She had a master's degree in counseling. She identified her theoretical orientation as an integrated approach of Cognitive Behavioral Therapy and Acceptance and Commitment Therapy. She obtained a score of 126 in Multicultural knowledge and 74 in Multicultural Awareness.

Participant 6 did not have any significant change in her multicultural differentiation (Tau = 0.467, p = 0.156). Participant 6 saw significant increase in her multicultural integration (Tau = 0.723, p = 0.023) and multicultural inference (Tau = 0.778, p = 0.016) scores from baseline to intervention phase.

Visual analysis indicates that the participant's scores range from low to high scores. There is a gradual increase in multicultural differentiation scores in the baseline with a mean score of 3 in the baseline phase. There is a gradual accelerating trend in the intervention phase with a mean score of 4. There is a complete overlap between the data points in the baseline and intervention phases. Scores for multicultural integration range from a low to high level with a gradual increase in score in the baseline phase with a mean score of 2.4. There is a gradual accelerating trend in the intervention phase with a mean score of 4.2. The percentage non-overlap between baseline and intervention phase data points was 40%. Her scores in multicultural inference range from a low level to a high level. There is an immediate change in scores in the intervention phase with a gradual accelerating trend. The mean score in the baseline phase is 1.2 and 2.8 in the intervention phase. The percentage non-overlap between baseline and

intervention phase data points was 30%. Considering the data from the visual analysis, there is weak evidence of the effect of the intervention on her multicultural case conceptualization scores.

Participant 7

Participant 7 identified as a White, non-Hispanic, "Latina", heterosexual, female identified student. She had no prior learning in multiculturalism and case conceptualization skills. She did not have a master's degree in counseling. She identified her theoretical orientation as Family Systems Theory. She obtained a score of 123 in Multicultural knowledge and 78 in Multicultural Awareness.

Participant 7 did not have any significant change in her multicultural differentiation (Tau = -0.260, p = 0.488) and multicultural inference (Tau = 0.408, p = 0.270) scores. Participant 7 saw a significant increase in her multicultural integration (Tau = 0.778, p = 0.016) scores from baseline to intervention phase.

Visual analysis indicates that the participant's scores range from medium to high scores with baseline mean score of 3.6 and 3.2 in the intervention phase. There was an immediate change in score in the intervention phase with a gradual accelerating trend. The percentage non-overlap between baseline and intervention phase data points was 10%. Scores for multicultural integration range from a low to medium level range. There is some variability in scores in the baseline phase with a mean score of 2.4. There is a gradual accelerating trend in the intervention phase with a mean score of 2.8. The percentage non-overlap between baseline and intervention phase data points was 10%. Her scores in multicultural inference are in the low level with a mean score of 1.2 in the baseline phase and 1.6 in the intervention phase. There is complete overlap between the data points in the baseline and intervention phase. Considering the data from the

visual analysis, there is weak evidence of the effect of the intervention on her multicultural case conceptualization scores.

The overall consistency of data patterns is the extent to which data patterns in one condition are similar to data patterns in other similar conditions across the participants. Due to variability in the data points, there is inconsistency in data patterns across similar phases.

Group Level Analysis

Training Questionnaire

Students were administered a training questionnaire comprising of 8 items that assess student's knowledge and attitude towards case conceptualization and cultural sensitivity in multicultural case conceptualization. Students were asked to rate their agreement with each of the eight statements, ranging from Strongly disagree (1) to Strongly Agree (10). In comparison to pre-training, participants' scores post-training showed greater agreement in their knowledge of creating culturally sound case conceptualizations as well as their attitude towards formulating culturally sensitive case conceptualizations. Table 2 below demonstrates the average rating and standard deviation pre- and post-training.

Table 2

Means and Standard Deviations for Training Questionnaire, pre- and post-training.

Items	Pre-training		Post-training	
	M	*SD*	*M*	*SD*
Case conceptualization is an important skill	9.14	1.21	9.57	1.13
It is important to create culturally sensitive case conceptualization	9.86	0.38	11.29	3.86
Formulating a case conceptualization is too time consuming	3.29	2.06	3.71	2.69
I know how to create a case conceptualization	3.86	3.02	8.14	1.07
I know what cultural factors to pay attention to in counseling	6.14	1.57	7.57	0.98
I know how to derive meaning with the cultural data presented	6.29	1.89	7.86	1.07
I know the key components needed in case conceptualization	3.57	2.44	9.29	0.95
I know how to create culturally sound case conceptualization	3.86	2.67	8.00	1.00

Note. This table provides a summary of the mean and standard deviations for each of the statements in the training questionnaire. Values are presented for pre- and post-training.

Satisfaction

Students were administered a brief satisfaction survey at the end of the training to evaluate the social importance and validity they place on the training. Students were asked to rate their agreement with 8 statements, using the following three options, Yes, No and Unsure. Table 3 shows the responses that indicate percentage agreement with the statements. Most students agreed that they learned how to create conceptualizations and knowledge to integrate cultural factors into these conceptualizations. Students also indicated their ability to use what they have

learned in training and apply it in other settings. One student stated that they “appreciated the concrete steps presented for unpacking and interpreting cultural data rather than presenting an abstract model/training, we were provided with actual usable tools,” while another student shared, “I really enjoyed how well the case conceptualization process broken down. I hadn’t thought so explicitly about what to write in each part of a formulation before this.” Students also shared how they can utilize this training outside of the class. “I can see myself using this with clients and soundly being able to discuss and incorporate cultural data into their treatment/my understanding of them,” said one student. Another student noted, “I think I’ll use my general improvement in writing case conceptualizations for all of my future cases.”

Table 3

Responses to Satisfaction Survey.

Items	Percentage (Yes)
Learn how to create a case conceptualization	100%
Know what are the key components in a case conceptualization	86%
Able to identify various cultural factors	86%
Know what cultural factors to pay attention to	86%
Know how to interpret the cultural factors presented with	71%
Know how to integrate the various cultural facets of a client to create a deeper understanding of the client	86%
Provide a framework on how to consider cultural factors and what to pay attention to	71%
I would be able to use what I learned in this training module and apply it to other settings	86%

Note. This table indicates the number of students who responded "Yes" to the satisfaction items. Most students agreed with the statements presented in the satisfaction survey indicating learning how to create case conceptualizations, paying attention to cultural factors in their formulations and using this training outside of the classroom context.

CHAPTER V

DISCUSSION

Multicultural counseling competencies are regarded as an integral component in the standards of evaluation of trainees and professionals in the field of counseling psychology. Much attention had been paid to developing multicultural training that assesses the tenets of multicultural knowledge, awareness, and skill (Abreu, et al., 2000; Anuar, et al., 2016; Collins, et al., 2015; Rogers, & O'Bryon, 2014). While trainees are taught to pay attention to various multicultural factors, they most often lack a framework to understand how these factors interact to shape and inform the client's psychological presentation (Alcantara, & Gone, 2014; Belar, 2009; Hays, et al., 2010). This study attempted to evaluate a framework for psychology trainees to interpret and integrate cultural data into their conceptualization of the client's presenting concern. This framework was guided by Ridley & Kelly's (2007) work on interpreting cultural data in assessment and was used as a basis for a training intervention on the interpretation of cultural data and connecting it to the skill of case conceptualization. This section provides a thorough interpretation of the findings, followed by a discussion on implications for theory and research. Elaborations on the limitations of this study and recommendations for future research are also examined.

The purpose of the study was to examine the effects of training in the interpretation of cultural data (training intervention) on the multicultural case conceptualization skills of seven first-year doctoral students in a counseling psychology program. The study employed a quasi-experimental single-subject AB design. This design helped to examine a non-reversible clinical skill and for participants to serve as their control. Hence, it allowed for comparison between baseline and intervention performance. The multicultural case conceptualization skills were

evaluated using three categories: multicultural differentiation, integration, and inference. These categories were adopted from the research literature assessing this clinical skill (Constantine & Ladany, 2000; Lee & Tracey, 2008). Each participant was introduced to the training intervention at the same time, and they were expected to create case conceptualizations based on vignettes of cases after each session. Participants' multicultural case conceptualization skills were analyzed for a total of ten cases, five prior to the introduction of the training intervention and five after the intervention, across the span of six sessions. A combination of visual and statistical analyses was conducted to examine the effects of the training intervention on participants' multicultural case conceptualization skills. The study aimed at answering the following research questions (RQ):

1. Is there a functional relation between training in interpretation of cultural data (training intervention) and multicultural case conceptualization skills for trainees? (primary research question)
2. What are the effects of training on trainees' level of multicultural differentiation?
3. What are the effects of training in the interpretation of cultural data on trainee's level of multicultural inferences?
4. Do trainees consider client's culture (e.g. race, ethnicity, gender, sexual orientation, acculturation status etc.) in the client's presenting problem?
5. What is the pattern of growth in the multicultural case conceptualization skills following training?
6. Does growth in multicultural inference mirror growth in multicultural differentiation and integration?

Due to the quasi-experimental nature of the study, it does not meet the standards determined by What Works Clearinghouse (Kratochwill, et al., 2010) to establish a functional relationship

between the independent variable (training intervention) and the dependent variable (multicultural case conceptualization skill). Hence, a functional relationship could not be determined between the training intervention and multicultural case conceptualization skills for counselor trainees (RQ 1). Because there is no definitive functional relationship between the training intervention and participant's scores in multicultural case conceptualizations, the intervention cannot demonstrate direct improvement of participants' multicultural case conceptualization skills. Nevertheless, the findings may provide indirect evidence of a relationship and serve as a proof of concept study.

Statistical and visual analysis was conducted to answer Research Questions 2 through 6, and for most participants, there was no evidence of the effects of the intervention on participants' levels of multicultural case conceptualization skills. Results from these visual and statistical analyses indicate weak effects of the intervention for two of the seven participants, a contratherapeutic trend for one participant, and no evidence of effects of the intervention on the remaining four participants.

Participant 6 had statistically significant results for the categories of multicultural integration and inference. Visual analysis indicated there was a gradual increase in scores from baseline to intervention phase for all of the three categories assessing multicultural case conceptualization skills (RQ 5). There was an increase in levels of multicultural differentiation (RQ 2 and 4), multicultural inference (RQ 3), and the change in multicultural inference mirrored the change in multicultural differentiation and integration (RQ 6). Participant 6 was a master's level student with some prior training in case conceptualization. She indicated a well thought out understanding of her theoretical orientation and the basic structure of a case conceptualization. Throughout the intervention, she asked for clarification regarding the steps to the interpretation

of cultural data and actively participated in the in-class discussion. Prior knowledge and understanding of case conceptualization, as well as theoretical orientation, may have contributed to grasping and integrating training in the interpretation of cultural data within her theoretical framework.

Participant 7 showed a statistically significant increase in her multicultural integration scores from baseline to intervention phase. Visual analysis indicated a gradual increase in scores from baseline to intervention phase for the categories of multicultural differentiation and integration. There was an increase in levels of multicultural differentiation (RQ 2 and 4) and an increase in multicultural integration scores. However, there was no support for the effects of the intervention on multicultural inference (RQ 3). The change in multicultural inference did not mirror the change in multicultural differentiation and integration (RQ 6). Participant 7 expressed enthusiasm and interest in learning the subject matter. She also commented on her developing knowledge and skills in creating case conceptualization and incorporating cultural data into these conceptualizations. During the second to last session of the intervention, this participant commented on her ability to think deeply in integrating cultural information and thoroughness in her case conceptualization compared to earlier sessions. She also indicated how she conceptualized clients differently based on case vignettes that had similar cultural values and psychological presentations but different genders, hence, displaying some understanding of the role of gender cultural socialization.

On the other hand, Participant 2 had no statistically significant results for the multicultural case conceptualizations skills and visual analysis indicated a decelerating trend (contratherapeutic effect) of the intervention (RQ 5) on her multicultural differentiation (RQ 2 and 4) and integration scores. This means that instead of improvement or increase in scores of

multicultural case conceptualization skills, this participant showed a gradual decrease in scores over the intervention. There was zero celerating trend, i.e. no changes in her scores on multicultural inference (RQ 6). As the sessions progressed this student's case conceptualization remained brief and lacked depth and integration of cultural and psychological data. This researcher provided feedback and elicited questions and feedback from this student to cater to their needs. However, there were no changes in the conceptualizations over the course of the interventions. This could also be reflective of participant fatigue given that students were expected to complete a total of ten conceptualizations over a span of six weeks. For the other four participants, there were no significant effects of the training intervention on their multicultural case conceptualization skills and thus no support for the research hypotheses.

From the qualitative feedback provided by the participants, overall, there was an appreciation for learning concrete steps for interpreting cultural data and utilizing it to inform the case conceptualizations. Participants described the intentionality and thoughtfulness needed in creating multiculturally sensitive case conceptualizations. Participants also shared expecting to use this knowledge and skills in future clinical settings and with clients to discuss and incorporate cultural data in conceptualization and treatment planning. To a certain degree, this indicates the social validity of this research study and the importance of providing and improving multicultural training.

Individual level analyses suggest that the training intervention was a source of effect on some of the components of multicultural case conceptualization skills for a few participants. However, it did not have a significant effect on most of the participants. Additionally, examining the overall results from the visual analysis, change in the multicultural inference did not mirror change in multicultural differentiation and integration (RQ 6). Implications of these findings,

along with a discussion on limitations and directions for future research are discussed in the following sections.

Interpretation of Findings

While the findings generally do not support the effectiveness of the training intervention on multicultural case conceptualization skills, the interpretation of the results may shed light on some worthy insights. In particular, several factors may have contributed to the results: (a) limitations of an analogue format; (b) implementation of the training intervention at an early stage in trainees' graduate training; (c) inadequate robustness of the training intervention to capture the complexities involved in multicultural case conceptualization; and (d) implementation of the training intervention in a classroom rather than clinical setting. Collectively, these explanations give insights into training on interpretation of cultural data and ways in which it might be improved to help trainees develop multiculturally sound case conceptualizations.

First, this research study used an analogue format in the form of case vignettes for teaching and evaluation purposes. Case vignettes have been used in prior research studies (Hays, et al., 2010; Lee & Tracey, 2008) to study the dependent variable of interest in this investigation, which is multicultural case conceptualization skills. Case vignettes are effective in providing pertinent information, controlling for the type of information presented, and ease of administration and evaluation in clinical research (Cook & Rumrill, 2005; Munley, 1974; Scheel et al., 2011; Stone, 1984). However, they have several limitations particularly in mimicking the nuances of information gathering, interpreting, and integrating the process involved in clinical practice. The case vignettes utilized in this study were standardized such that each vignette was 400 words, had a similar presenting concern (depression or anxiety symptoms), with the

inclusion of cultural and psychological variables. There were five case vignettes created with an additional five having the same cultural and psychological information but with a different gender of the client.

Although these case vignettes (analogue method) allowed the participants to extract relevant cultural and psychological information to create case conceptualizations, their usage in research does not exactly replicate the process of information gathering and meaning-making that should occur in actual clinical settings. For example, missing from the process was the collaboration with clients to further identify, interpret, and integrate client's cultural values, beliefs, and norms. Furthermore, the inability to identify new cultural data necessarily could impact the overall interpretation and integration of these possible data in the case conceptualization of clients. These inaccessible clinical activities serve as a functional part of the development of case conceptualizations, thereby restricting the attainment of more comprehensive clinical pictures of clients. Analogue method offers good internal validity due to its experimental control however, it is limited in its generalizability. Particularly, one limitation and critique of this methodology is its inability to replicate the real-world processes between a counselor/clinician and a client (Munley, 1974). Overall, the advantage of tight control over case data in the vignettes is a limitation for the external validity.

Second, this study was conducted with first-year doctoral students. Most of these participants had no previous exposure to theory and practice of case conceptualization. Simultaneously, the students were in the early stages of developing their therapeutic orientations and multicultural counseling skills. The combination of these factors made the training a daunting experience. Given the findings that even experienced clinicians show modest improvement in their clinical judgment (Spengler et al., 2009), perhaps it should not be

surprising that early-stage trainees find it challenging to master case conceptualization skills. In essence, in this study, the participants had dual training tasks: acquire an understanding of the nature of case conceptualization as a clinical activity and incorporate culture into their conceptualizations. The lack of case conceptualization skills was expected and accounted for as students were taught the CFCCM case conceptualization method, which served as a transtheoretical approach to case conceptualization. The participants were also taught the basic structure of a case conceptualization as outlined and expected by their graduate program. Students enrolled in this graduate program are expected to create case conceptualizations for their candidacy. Learning the basics of case conceptualization simultaneously with learning multicultural case conceptualization could be a major leap, even for the most ardent graduate trainees.

Case conceptualization is clearly a complex process. In this study, participants were taught to interpret and integrate cultural data, which is again a daunting clinical activity. A majority of the participants were in their first semester of clinical practicum at a community-based clinical training site. Developing foundational clinical skills with advanced theoretical orientation may assist with the process of interpretation of cultural data in creating multiculturally sensitive case conceptualizations. This explanation is bolstered by the fact that the one participant who had a master's degree in a mental health field also was the only participant who showed significant improvement in training outcomes. In light of the meta cognitive requirements and complex inferential and judgmental skills needed to formulate sound case conceptualizations, an important interpretation of this research is that this level of multicultural case conceptualization could require a strong theoretical and clinical foundation upon which to build this skillset.

Third, the training intervention may not have been robust enough to achieve the desired training outcomes. As indicated in the second interpretation of the findings, developing multicultural case conceptualization skills again is a complex, metacognitively demanding clinical activity. The eight hours of training over the course of six weeks arguably was not enough time for most participants to saturate the complexity inherent in this case conceptualization. In addition, the training intervention attempted to provide a concrete and structured approach to the skill of multicultural case conceptualization. The intervention is based on The Process Model of Multicultural Counseling Competence (Ridley, Sahu et al., in press) and underscored by the interpretation of cultural data proposed by Ridley & Kelly (2007). This is the first study to investigate the efficacy of the model. More attention possibly needs to be given to the nuances of the model and training to make it as robust as is possible. Therefore, further investigation and testing of the model in clinical training settings is warranted.

Given the complexities involved in case conceptualization, the training intervention was not robust enough for students to master this skill; especially given the short nature of this training. The training intervention taught students how to connect the five steps under the interpretation of cultural data with the different categories under the CFCCM framework. The limited number of sessions involved in teaching these steps to create case conceptualization may have also factored in the lack of effects of the intervention. This training intervention used three sessions to introduce interpretation of cultural data and utilize it to create case conceptualization. A thorough and integrated approach to training that happens gradually over time, for example, an academic semester, may allow students to grasp these concepts better and employ them in their clinical work. This gradual learning process and applying it to clinical work would allow for a more meaningful evaluation of this training intervention.

Fourth, the training intervention may not have its most powerful effect in a classroom setting. A practicum setting where participants can learn case conceptualization while counseling actual clients may be more efficacious. In fact, employing the training intervention in a practicum setting may help to address the aforementioned problems: artificial nature of an analogue format, early-stage trainees (since practicum requires foundational counseling courses), and robustness of the training, increasing its length and depth. In such a setting, trainees can get ongoing feedback through their clinical supervision and put the feedback into practice. This aligns with the explanation pertaining to the use of an analogue research method.

Using a case vignette to particularly capture multicultural inference may have been limited in providing comprehensive clinical pictures of the clients. The category of multicultural inference was defined as a tentative clinical judgment about the client's mental health functioning which includes a hypothesis about the client's self-experience of the symptoms, i.e. their internal thoughts, feelings, and behaviors in response to various multicultural contexts may not have been easily derived using a case vignette format. In clinical settings, trainees would be encouraged to explore the client's thoughts, feelings, and behaviors in counseling and connect them to the information gathered so far to draw inferences and formulate a clinical hypothesis. This is an ongoing and ever-evolving process in therapy. The ability to draw inferences that link to the client's presenting concern and the consequences of their behaviors requires exploration of the client's self-experience.

The weak effects for this training intervention provided some insight into the connection between the interpretation of cultural data and its integration to formulate case conceptualizations. The training intervention was crafted such that the attention paid to cultural factors is made intentional and explicit. It was an attempt to provide more structure and guidance

for trainees and professionals to utilize and make meaning of the cultural data gathered. This author hopes to accomplish this by engaging clinical supervisors and multicultural scholars to provide feedback on the training intervention as well as the coding manual that assesses multicultural case conceptualization skills.

Implications for Research and Training

With multiple training and supervision models for multicultural counseling competencies, scholars identify the need for more prescriptive models of multicultural counseling competence to teach trainable skills (Sehgal, et al., 2011). This author attempted to introduce intentionality, structure, and concrete guidance for multicultural case conceptualization skills. Case conceptualization is regarded as an integral skill in the clinical decision-making process as it informs therapeutic interventions, treatment planning, and diagnosis (Betan & Binder, 2010; Eells, et al., 2005; Hays, et al., 2010; Sperry, 2005). In an effort to contribute to the development of multicultural case conceptualization skills this training offered a structured framework for incorporating multicultural data. The findings of this study have a number of implications for research and training which are discussed in greater detail below:

1. *Conduct research on the training intervention with participants who are at a more advanced level of development*. Since this training intervention was conducted with first-year doctoral students who are in the early stage of development in theoretical orientation and case conceptualization skills, it provides insight on the importance of having these foundational skills. Participants in this study reported an eclectic or integrated theoretical orientation and some noted that they are still considering which theoretical orientations connect with their clinical work. Employing this training intervention in later stages of training with advanced doctoral students may be an appropriate timing of teaching multicultural case conceptualization skills.

The assumption being that advanced doctoral students further along in their training may have a deeper and thorough understanding of their theoretical orientations and case conceptualization skills. In conducting the training intervention with advanced doctoral students, comparisons can be made between graduate students earlier in their graduate studies vs. those more advanced such as students on internship who are expected to have developed skills in case conceptualization and identified their theoretical orientation. This can help provide insight on how different components of the training intervention data may differ at varying developmental levels of graduate training.

2. *Introduce training in a developmentally appropriate manner.* It may be helpful to introduce components of the training intervention in a strategic and developmentally appropriate manner in clinical training. Trainees need to master foundational case conceptualization skills and have a strong grasp of their theoretical orientation to help build their multicultural case conceptualization skills. This requires evaluating trainees' current understanding of theoretical orientation and case conceptualization skills and match the training according to their developmental needs. The introduction to the training intervention would require strategic evaluation of student's current knowledge and skills. Based on those evaluations, different components of the intervention could be introduced to the student at developmentally different times. For example, students could first be taught how to identify cultural data and then distinguish between idiosyncratic and cultural data. Once students have mastered this component, they can be taught the following steps of interpretation of cultural data. This format would underscore the principle of "developmentally sensitive trainee focus" whereby judgments surrounding training "considers trainees in the context of their developmental level in decisions regarding trainee expectations and responsibilities" (Bell et al., 2020, p. 924). This systematic

approach based on sequential development and evaluation may reflect developmentally appropriate application of the intervention.

3. *Create more robust training intervention*. The mastery of multicultural case conceptualization skills involves a variety of complex and nuanced processes. The training intervention would require creativity and flexibility in its application and evaluation of training components. Possible considerations to capture these nuances and complexities to create a more robust training intervention would include: (a) a longer training period that overall would allow trainees more time to internalize the concepts and master the skills and competencies, (b) more in-depth attention to each facet of the training; and (c) more instructional strategies and tools to enhance the trainees' development in identification of cultural data.

First, the length of the training should span across a longer period for example, 15 weeks or a course of the semester. The current study implemented the training intervention in 6 weeks with the expectation of students to master a complex and cognitively demanding task of multicultural case conceptualization skills. A longer period of time would help breakdown the components of the training intervention as well as give time to students to internalize the knowledge and skills being taught to them.

Second, a more in-depth attention to each facet of the training is needed such that there is systemic application of each facet as trainees progress through the intervention. This entails including instructional strategies for each of the facet of the training intervention. This would include instructional strategies for case conceptualization skills, knowledge of various theoretical orientations, identification of cultural data, use of clinical supervision in clinical practicum among others. Theoretical orientations in the field of counseling psychology inform the type of questions we ask in therapy, how we formulate the psychological concern of the client, and the

strategies and interventions to address the concern. Well-developed case conceptualizations involve the application of "theoretical and clinical knowledge in an intuitive, flexible manner that responds and adapts to the unique and complex context of the treatment" (Betan & Binder, 2010, p. 141). Theoretical lens serves as a blueprint for clinician and client's engagement in therapy. Hence, the inclusion of teaching various theoretical orientations alongside learning basic elements of a case conceptualization might be beneficial. Once students' have a basic grasp of case conceptualization skills they can be introduced to the training in interpretation of cultural data. This would additionally require evaluation of student's case conceptualization skills throughout practicum training.

Additionally, supervisors can be trained in interpretation of cultural data and how it can be used to create multiculturally sensitive case conceptualization. Clinical supervision plays a key role in students' development of clinical skills, including case conceptualization skills (Shulman, 2018). The inclusion of clinical supervisors in the training also addresses one of the key insights of this training intervention – that perhaps its application is best served in a clinical than a classroom setting as discussed in the point below. Supervisors can help students engage in the identification, integration and inference of cultural data to create deep, rich, and comprehensive understanding of their clients. Research shows that with guided supervision, training, and time, trainees' case conceptualizations become increasingly more sophisticated (Kelsey, 2015; Kendjelic, & Eells, 2007; Shulman, 2018; Sperry 2005; Zubernis, et al. 2017).

Third, trainees would need additional instructional strategies and tools for identifying cultural data. The formulation of multiculturally sensitive case conceptualization require students to have the ability to identify cultural data in therapy. This identification can be aided by the use of tools such as Hay's (2001) ADDRESSING framework, DSM-5's Cultural Formulation

Interview and/or the RESPECTFUL model (D'Andrea & Daniels, 1997). This can be taught during pre-practicum courses where students learn microskills and techniques and encouraged to utilize and practice using these tools during their clinical training. The addition of this component in the training intervention would allow students to actively engage in the identification, integration and inference of cultural data. Training students in basic case conceptualization skills, interpretation of cultural data, and theoretical orientations may contribute to a well-developed multicultural case conceptualization skill set.

4. *Conduct research in clinical settings*. This training intervention and its testing can be incorporated into practicum training, internship, post doc. The application of this training intervention with trainees engaged in clinical practicum, internships, and postdocs may provide additional insight into the applicability of this training in clinical settings. A practicum setting would allow participants to actively collaborate with their clients in the identifying, interpreting and integrating of cultural data in counseling. These settings would help students engage in an ongoing process of developing case conceptualizations and reflect the cognitive complexities involved in this. This research used case vignettes which is limited in its ability to replicate the collaborative processes involved in construction of case conceptualization. Conducting this training intervention in clinical settings would allow trainees to create de-identified case conceptualizations by selecting clients they are currently working with. Consequently, the application of this training intervention in a practicum setting may yield a more comprehensive and multiculturally sensitive case conceptualizations.

5. *Conduct research and training using a variety of cultural/racial client populations.* There is an increasing diversity within the graduate students in the field of counseling psychology as well as the clients we serve. There is a need for the application of this training

intervention with a variety of clinician-client relationships reflective of the sociocultural diversity of our society. Attention could be paid to examining this training with a wide sample of graduate students at varying developmental levels. This sample should be reflective of the diversity in age, race, ethnicity, gender, sexual orientation, nationality, religion among other sociocultural factors that is the current composition of the trainees in the field of psychology. Additionally, this diversity should also be reflected in the client populations the trainees serve. Using a variety of client populations would allow trainees to see how the identification, interpretation and integration of cultural data is a clinical process and activity that allows for individualized case conceptualizations. These case conceptualizations are unique to the client and based on the individualized expression of client's cultural values and beliefs. This should help improve their competence in the use of the protocol while gaining appreciation for the uniqueness of each client.

6. *Employ other single case research methodologies.* This study also showcases the utility of single-case research methodology in counseling research that has been proposed by scholars such as Hayes (1981). Particularly, it can serve as a good research design for evaluating multicultural training of our trainees. Employing a single-case multiple probe across participants design with doctoral students in developmentally different stages of their training would provide a more rigorous evaluation of the training intervention on multicultural case conceptualization skills. Hence, integrating this training through a semester long course may provide us with more opportunities to observe this learning and growth. A multiple probe baseline design allows us to evaluate non-reversible skills such as a clinical skill like creating case conceptualizations and addresses any concerns to internal validity due to testing threats. The multiple probes allow for assessment of dependent measures in intermittent time periods during the baseline condition so

that the trainees are not tired of taking the same measures or able to show improvements due to mere exposure to the instrument.

In this design the trainees would be introduced into intervention in a staggered form, depending on the performance of the first trainee in the intervention condition, i.e. showing adequate performance in the multicultural case conceptualization skills, the next trainee would be introduced into the intervention. Hence, there are multiple AB designs with each participant, where A is the baseline phase and B is the intervention phase used to study the changes in ratings for trainees' multicultural case conceptualization. The single case multiple probe across participants would additionally help determine three demonstrations of an effect which would assist in establishing a functional relationship between the training intervention and multicultural case conceptualization skills.

Limitations and Recommendations for Future Research

This study had several limitations. Inherent in a single case AB design with a small number of participants (n = 7) results from this study with first-year doctoral students in counseling psychology program is not generalizable to a larger population or other settings. Furthermore, a causal relationship between the intervention and multicultural case conceptualizations is not determined due to the quasi-experimental design of the study. A quasi-experimental design of this study "lacks the high level of internal validity associated with true experiments" (Cook & Rumrill, 2005, p. 93). Additionally, students were asked to produce ten conceptualizations over the span of six weeks which could have contributed to testing fatigue.

Given the short amount of time and students repeatedly being asked to complete case conceptualization after each intervention session may have contributed to shorter case conceptualizations over time, as in the case of Participant 2 and 4 in the study. Furthermore,

external factors such as prior training in case conceptualization could have also influenced the scores, for example, Participant 6 had a master's degree in counseling psychology with prior training in case conceptualization and also indicated a gradual increase in scores in multicultural case conceptualization skills. One of the benefits of a single-case research design is that participants' baseline scores serve as their control, hence, the comparisons are made between scores in the baseline vs. intervention phase of the participant. It allows us to observe the progression of scores pre- and post-intervention but limits the ability to draw meaningful comparisons between participants. However, it has several threats to internal validity along with limitations on its generalizability.

Threats to internal validity such as maturation and selection may be present. Maturation "refers to normal developmental changes in participants between the pretest and the posttest that might affect the results" (Heppner, et al., 2008, p. 94). In this study, for the two participants' with weak effects of the intervention, their multicultural case conceptualization skills may have naturally improved due to constant practice and exposure to case vignettes over time. Another threat to internal validity is selection. The participants for this study were all assigned to the intervention at the same time from the same doctoral cohort. These students were first-year doctoral students enrolled in a multicultural counseling class who were provided this training as a part of their coursework. It is possible that being enrolled in this course along with the researcher emphasizing the importance of cultural factors in case conceptualization may have influenced students' responses and composition of the case conceptualizations.

While it can be assumed that students may have the appreciation and knowledge regarding multicultural counseling psychology, they would still need the skills to interpret and integrate the cultural data provided in the case vignettes. The intervention taught the skill of

interpreting cultural data which was a new training for all participants involved in this study. Additionally, the pool of participants was not randomly selected which is another limitation of this study. Randomization was included in assignments of case vignettes as well as analysis of the case conceptualizations for their multicultural case conceptualization skills. This was achieved by randomly assigning the case vignettes to participants and randomly assigning the completed case conceptualizations for scoring to coders.

Another limitation likely influencing the results is the method of evaluation of multicultural case conceptualization skills. As discussed earlier the coding manual required coders to score the case conceptualization on three different categories, namely, multicultural differentiation, integration, and inference on a score ranging from 1-5. The graphical representation of these scores may not allow for meaningful conclusions to be drawn from the data. In a similar vein, the use of case vignettes (analogue research) also has limitations, particularly, in reflecting the process of identifying, interpreting, and integrating cultural data to inform case conceptualization. The case vignettes are helpful tools for teaching and helping students discern meaning out of the information provided, however, it is limited in its application as it restricts further information gathering and meaning-making which is an inherent part of the clinical decision-making process.

Future research should look at the utility of composite scores in assessing multicultural case conceptualization skills as well as various methods in which these categories can be transformed into measurable instruments, such as converting the numeric rating into a rubric, similar to the competency benchmark established by APA (2012). Each score could be based on a rubric with categories ranging from novice to advanced multicultural case conceptualization skills. Examples and what components to consider under each of the rating categories under the

rubric could be provided as guidance for assessing multicultural case conceptualization skills This would require continued feedback from scholars and practitioners to refine the coding manual. Additionally, clinical supervisors and educators can utilize the coding manual as an evaluation tool for analyzing multicultural case conceptualizations of their supervisees/students. This would provide further insight into the ease and appropriateness of applicability of this tool in training and clinical settings.

Future research should consider an application of this training intervention using a multiple baseline single case research design in practicum settings with trainees. This would perhaps yield more informed results. The multiple-baseline design would help establish greater internal validity and the practicum setting would allow for the process of case conceptualization that requires active collaboration between the counselor/clinician and the client. Additionally, a single-case multiple-baseline design may also help address participant fatigue as the conceptualizations can be spanned across a semester compared to completing ten conceptualizations in six weeks. This would support maintaining the integrity of the research design while also accounting for participant involvement.

The author of this study also served as the interventionist providing the training in interpretation of cultural data and hence, was not blind to the design or the hypotheses of the study. However, several steps were taken to protect the integrity of the data collection and analysis process. First, students were informed that their participation in the study, i.e. consent to analyze their case conceptualizations in the training will not impact their grade in the class. Second, their case conceptualizations were not analyzed by this author until the conclusion of their course (i.e. after submission of final course grade). Lastly, the case conceptualizations were scored by two coders who were randomly assigned the case conceptualizations and were blind to

the purpose of the study. Future research studies could train educators and clinical supervisors in this intervention. Additionally, the analyses of the case conceptualizations could involve researchers not directly involved with the implementation of the intervention.

Conclusion

This study purported to address a need for a framework to meaningfully interpret and integrate cultural data into case conceptualizations. Although the findings do not support the research questions, they nevertheless prove insights into how the training intervention and evaluation methods for multicultural case conceptualizations can be improved. The limitations of this research study shed light on ways through which this training intervention and evaluation tool can be improved through its application in clinical training settings and with advanced doctoral students. Consequently, recommendations for future research to employ a single-case multiple baseline design with students in developmentally different levels of training and those involved in clinical practicum would provide greater insight into the implementation and evaluation of this training intervention.

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APPENDIX A

EXAMPLE OF A CASE VIGNETTE

Danielle is a 19-year-old, heterosexual, Latina female, a first-generation student who is a junior majoring in psychology. Danielle sought counseling to address "burnout and lack of motivation" for classes and feeling "down and sad all the time" for the past two months. She describes feeling sad, loss of energy, lack of motivation, and an inability to focus. She feels worried about getting rejected by her friends. She reports feeling tightness in stomach, restlessness, and irritability when she is preoccupied with worries of her academic performance and relationships.

Danielle is an only child and grew up in a close-knit Catholic household with her parents and grandparents, but is not deeply religious since she moved to college. She grew up in a family and community that values close ties, interdependence, and strong family units. As the first in her family to attend college, she is seen as a role model to her younger cousins. Growing up in an environment which fostered and valued interconnectedness, Danielle shared feeling "distant" from her family and conflicted for experiencing this disconnect. She also feels "frustrated" with her friends when they discuss missing their family, resulting in an inability to connect with them. She is an active member of the multicultural Greek sorority and describes her friends from this community like family. She feels insecure, anxious and fearful of rejection in these relationships. She states that if her friends ask the "right questions" she would open up.

Danielle shares that although she can seek emotional support from her mother, her family encourages to pray and remain positive when she is feeling down. She expresses her concern of sharing that she is attending counseling with family and friends for the fear of stigma associated with mental health conditions. She shares that she needs to be "strong" and equates it with masking the hardships and emotions one experiences behind a friendly, goofy, and self-reliant demeanor. She feels "weak" when she worries about rejection in relationships and poor academic performance. She has feelings of worthlessness nearly every day. But she feels proud of her academic accomplishments and attributes her perseverance in college to her motivation and hard-work. She shares that seeing her academic success as her own also brings feelings of guilt for not acknowledging the struggles and contributions of her family.

During the interview, Danielle presents with a pleasant mood and affect and engages in pleasantries before starting the session. When sharing about her anxiety and sadness she would get visibly uncomfortable. She reports difficulty being emotionally vulnerable with her friends in the sorority and sharing about her sadness and worries.

APPENDIX B

MULTICULTURAL CASE CONCEPTUALIZATION SCORING SHEET

Coder:

Scoring is based on 1-5 Likert Scale. Please refer to coding manual for each category. Make sure to view the entire case conceptualization when scoring. Do not take points off for grammatical or spelling mistakes.

Conceptualization File#	MDifferentiation	MIntegration	MInference

APPENDIX C

FIGURES

Figure 1

Participants' Score on Multicultural Differentiation

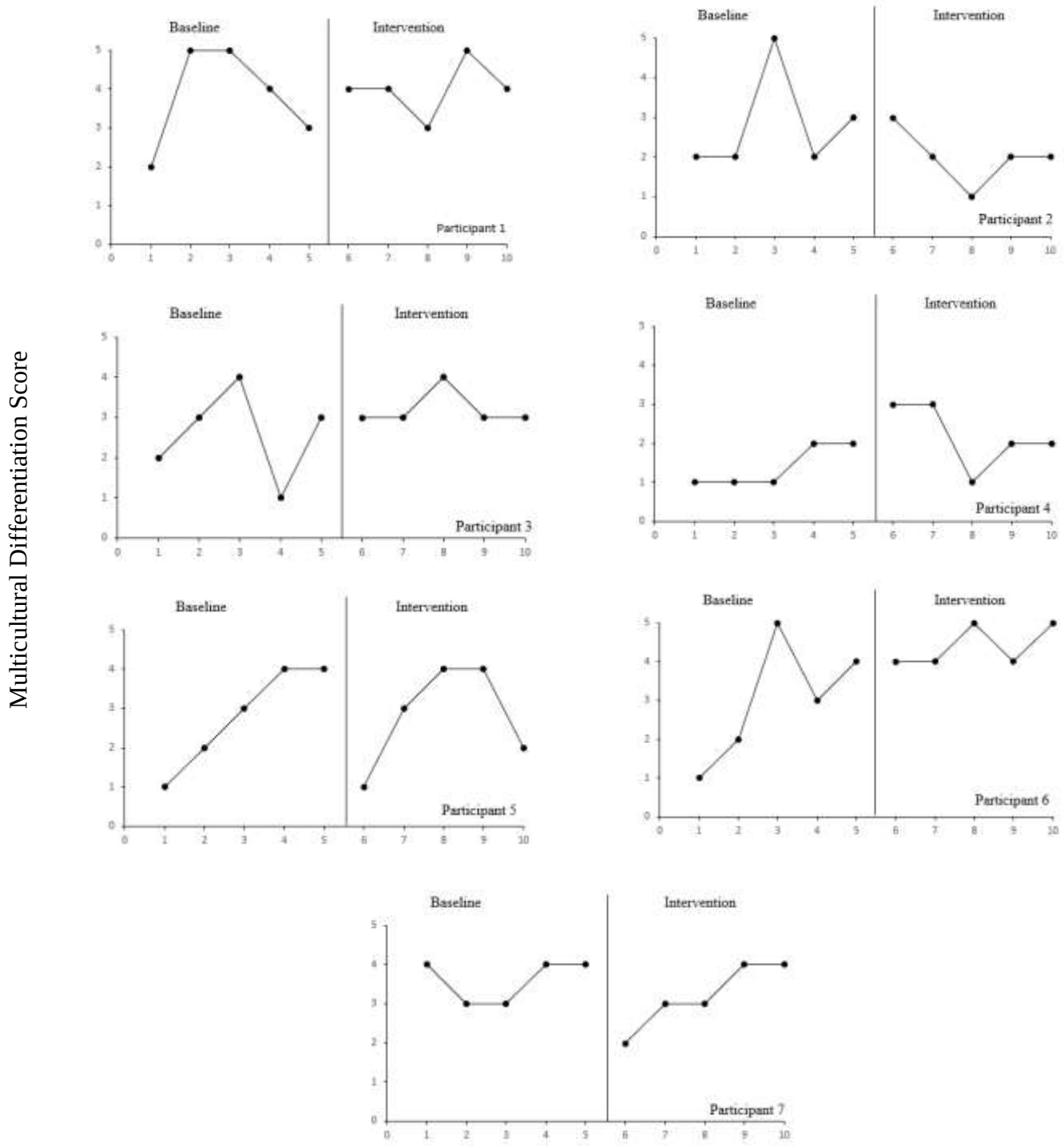


Figure 2

Participants' Score on Multicultural Integration

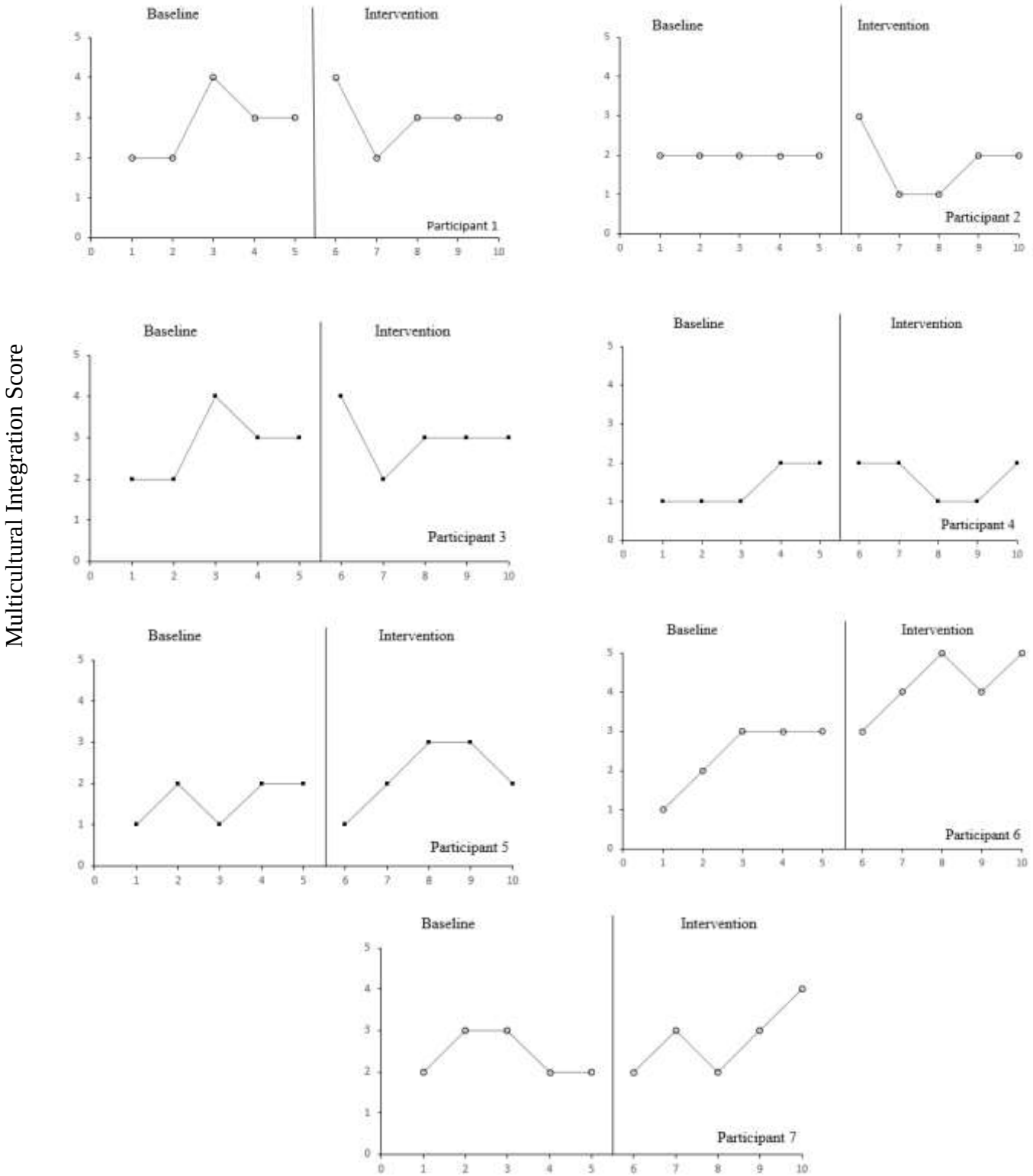
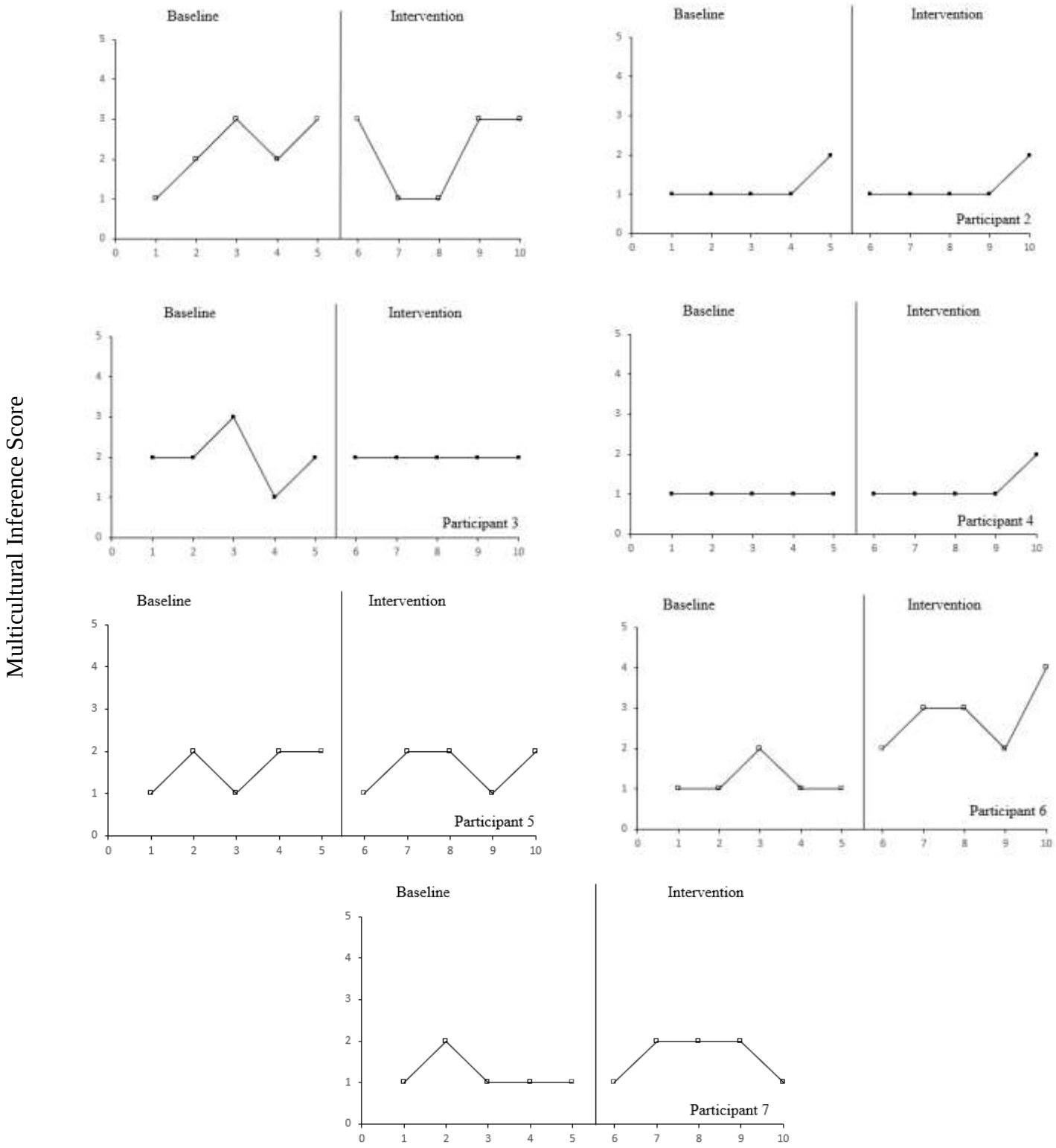


Figure 3

Participants' Score on Multicultural Inference



APPENDIX D

DEMOGRAPHIC INFORMATION FORM

Gender:

☐ Male ☐ Female ☐ Non-binary ☐ Transgender/Gender Non-Conforming

☐Other: _____ ☐ Prefer Not to Say

Sexual Orientation: ☐ Heterosexual ☐ Gay ☐ Lesbian

☐ Bisexual ☐ Asexual ☐ Other: _____

☐ Prefer Not to Say

Racial/Ethnic Identity: _____

Age: _____

Number of months of supervised counseling experience?

_____

Have you had prior courses in multicultural counseling? If yes, how many and what type?

_____

Have you received prior training in case conceptualization? If yes, how many and what type?

_____

Do you have a master's degree in counseling psychology? ☐ Yes ☐ No

What theoretical orientation do you ascribe to? How would you define your theoretical orientation?

_____

_____

APPENDIX E

INFORMED CONSENT FORM

Title of Research Study: Training in Interpretation of Cultural Data: Understanding its Effect on Case Conceptualizations

Investigator: Dr. Charles Ridley and Ankita Sahu

Why are you being invited to take part in a research study?

You are invited to participate in this study because we are trying to study the effects of training in the interpretation of cultural data on counselor trainees' case conceptualization skills in counseling psychology doctoral programs.

You were selected as a possible participant in this study because you are a counselor trainee currently enrolled in a counseling psychology doctoral program and taking coursework on multicultural counseling which offers the required training. The work (case conceptualizations) that you produce as part of this course will be analyzed to study the effects of training on case conceptualizations. You must be 18 years of age or older to participate.

What should you know about a research study?

Someone will explain this research study to you.
Whether or not you take part is up to you.
You can choose not to take part.
You can agree to take part and later change your mind.
Your decision will not be held against you.
You can ask all the questions you want before you decide.

Why is this research being done?

This research provides us with information on how to improve multicultural training to improve the skills domain under multicultural counseling competence. The current training models focus on improving counselor trainees' knowledge and awareness of multicultural counseling but are not equipped to directly teach students how to interpret the multicultural factors they encounter in counseling. The training that you are being provided as part of the Multicultural Counseling course teaches you to (i) identify multicultural factors, (b) how to draw inferences from these multicultural factors, and (iii) how to create a case conceptualization that is deep, rich and comprehensive. The training has the following pedagogical benefits: (a) formal training in case conceptualization which is a necessary clinical skill, (b) in-depth understanding of issues related to current multicultural counseling models and critical thinking of ways in which they can be addressed (a competency expected as part of APA competency mandates), and (c) explicit learning in how to put multicultural theoretical concepts and principles into clinical practice. These indicate the importance of the knowledge and clinical skills that are required competency in the field and is of academic and

clinical benefit for students. The case conceptualizations created under this training helps us analyze the effects of the training on this important clinical skill.

How long will the research last?

It will take 10 to 12 hours of training i.e. six class sessions from March 18th to April 22nd. Please note that although participating in the training module is part of the course requirement, the work that you produce within that training is in no way associated with your grade. Furthermore, your agreement to provide your work products for the purpose of research analysis is completely confidential, voluntary, and is not associated with your grade in the course. We would request your work products only after your final grades for the course has been posted. Furthermore, the instructor of record, Dr. Charles Ridley will not be informed on who chose to participate.

How many people will be studied?

We expect to enroll about seven people in this research study at this site.

What happens if I say "Yes, I want to be in this research"?

If you consent to participate, the data from the activities you participated in the training module in the Multicultural Counseling Class will be analyzed to study the effects of training. All the data will be de-identified and randomized for the purpose of analysis. Each case conceptualization will be assigned a number and alphabet combination for de-identification and ensuring anonymity. The analysis of the data would not be used for the purpose of your grade in the course. If you consent to participate in the research, we would simply collect all the data you have created so far as part of the training and two independent graders would analyze it for content and quality. This is to improve our understanding of whether the training had any positive effects.

What happens if I do not want to be in this research?

Your participation in this study is completely voluntary and you can decide not to participate in this research. Your decision not to participate will not be held against you. You can choose not to participate in this research and hence, not allow us access to your work products.

Is there any way being in this study could be bad for me?

There is no risk or discomfort related to you being part of this study.

What happens to the information collected for the research?

Efforts will be made to limit the use and disclosure of your personal information, including research study and other records, to people who have a need to review this information. The data (work products) would be completely deidentified by assigning a combination of numbers and alphabets to each participant's work. The assignments created through the activities would not consist of any identifying information, therefore ensuring anonymity. The results of the research study may be published but no one will be able to identify you.

Who can I talk to?

If you have questions, concerns, or complaints, or think the research has hurt you, please contact:

Dr. Charles Ridley
Phone: (979) 862-6584
Email: cridley@tamu.edu
Ankita Sahu
Email: asahu@tamu.edu

You may also contact the Human Research Protection Program at Texas A&M University by phone at 1-979-458-4067, toll free at 1-855-795-8636, or by email at irb@tamu.edu., if:
You cannot reach the research team.
Your questions, concerns, or complaints are not being answered by the research team.
You want to talk to someone besides the research team.
You have questions about your rights as a research participant.
You want to get information or provide input about this research.

Please sign below if you consent to take part in this research i.e. giving us permission to request your work products from the course's training.

Signature of subject	Date
Printed name of subject	
Signature of person obtaining consent	Date
Printed name of person obtaining consent	

APPENDIX F

TRAINING QUESTIONNNAIRE AND SATISFACTION SURVEY

Training Questionnaire

Please respond to the following questions by selecting your level of agreement with each statement.

* Required

1. **Name** *

_____

2. **1. Case conceptualization is an important skill** *

Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Strong disagree	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	Strongly agree

3. **2. It is important to create culturally sensitive conceptualization** *

Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Strong disagree	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	Strongly agree

4. **3. Formulating a case conceptualization is too time consuming** *

Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Strong disagree	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	Strongly agree

5. **4. I know how to create a case conceptualization** *

Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Strong disagree	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	Strongly agree

6. **5. I know what cultural factors to pay attention to in counseling** *

Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Strong disagree	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	Strongly agree

7. **6. I know how to derive meaning with the cultural data presented** *
Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Strong disagree	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	Strongly agree

8. **7. I know the key components needed in a case conceptualization** *
Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Strong disagree	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	Strongly agree

9. **8. I know how to create culturally sound case conceptualization** *
Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Strong disagree	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	Strongly agree

Thank you for taking the time to complete this questionnaire!

This is to evaluate your current attitudes and knowledge on case conceptualization and interpreting cultural data.

Training Questionnaire

Please indicate if you are satisfied with the following areas of the training module:

	Yes	No	Unsure
1. Learn how to create a case conceptualization	❑	❑	❑
2. Know what are the key components in a case conceptualization	❑	❑	❑
3. Able to identify various cultural factors	❑	❑	❑
4. Know what cultural factors to pay attention to	❑	❑	❑
5. Know how to interpret the cultural factors presented with	❑	❑	❑
6. Know how to integrate the various cultural facets of a client to create a deeper understanding of the client	❑	❑	❑
7. Provide a framework on how to consider cultural factors and what to pay attention to	❑	❑	❑
8. I would be able to use what I learned in this training module and apply it to other settings	❑	❑	❑

What did you most appreciate or enjoy about this training module in this course?

_____

_____

_____

What aspects of the training do you see yourself using in the following months? Where, with whom and how?

_____

_____

_____

What are some areas of improving the training module? Please provide your suggestions below:

_____

_____

Thank you for taking the time to complete this questionnaire!