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The Development and Initial Validation of the Cultural Humility and Enactment Scale in Counseling

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Abstract

Cultural humility (CH) involves a stance of curiosity, a never-ending learning attitude, and a life-long process of self-reflection when encountering cultural diversity. Study of CH in the context of counseling is at a preliminary stage, primarily due to the dearth of conceptually and psychometrically sound measures. The study is intended to develop a client-report measure of counselors' cultural humility, entitled the *Cultural Humility and Enactment Scale (CHES)*. The researcher examined the factor structure, internal consistency reliability, construct validity, and predictive validity of the CHES in this study.

This study was correlational in nature and adopted a cross-sectional survey design. The sample for the development of CHES consisted of 434 adults over the age of 18 who currently are or have received mental health services from a licensed professional in a clinical setting in the United States. All data were collected through a web-based survey, using Amazon Mechanical Turk and various social media platforms. The researcher developed an initial measure with sound content validity through (a) clear operationalization of the construct; (b) generating an initial item pool; (c) determining the format; (d) conducting an expert review; and (e) inclusion of validity checks. Exploratory factor analyses were used to examine the initial factor structure of the CHES. Bivariate correlations and hierarchical multiple regression analyses were used to examine the convergent and discriminant validity, and criterion-related validity of the CHES.

The results supported a 3-factor structure of the CHES, with excellent internal consistency reliability for the both the full scale and the factors. Evidence was found for the convergent and discriminant validity of the CHES in relation to the *Cultural Humility Scale* (CHS) and the *Cross-Cultural Competence Inventory-Revised-7-item (CCCI-R7)*. The CHES was also found to significantly predict the therapeutic working alliance, above and beyond the

variances explained by the CHS and gender. Limitations and the methodological highlights and contribution of the study were discussed. Moreover, implications for future research and the incorporation of the CHES in counseling and counselor education were discussed.

THE DEVELOPMENT AND INITIAL VALIDATION OF THE CULTURAL HUMILITY AND ENACTMENT SCALE IN COUNSELING

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Chapter 1: Introduction

Professional counselor's ability to integrate culturally relevant knowledge and intervention into their work with all clients is considered one of core competencies by the American Counseling Association (ACA, 2014). Since the emergence of multiculturalism in the field of counseling, significant attention has been given to the impact of cultural variables (e.g. race/ethnicity, gender, sexual orientation) in clinical work, research and counselor training (Arredondo et al., 2005; Barden et al., 2017; Fietzer et al., 2018)

Cultural Humility

Originated by Tervalon and Murray-Garcia (1998), *cultural humility* (CH) has emerged in recent years as an important concept for counseling in the multicultural and cross-cultural context. Foronda and colleagues (2016) described cultural humility as "a process of openness, self-awareness, being egoless, and incorporating self-reflection and critique after willingly interacting with diverse individuals" (p. 213). The concept of CH has gained increasing attention in the past few years in professional counseling (Davis, DeBlaere, Brubaker, et al., 2016; Davis et al., 2018; Gafford et al., 2019; Grad, 2019; Hook et al., 2013; Kivlighan & Chapman, 2018; Owen et al., 2018; Wright, 2019) and broadly in the field of counselor education (Hampton et al., 2017; Hook et al., 2016; Watkins et al., 2019; Zhu et al., 2019). Emerging evidence has suggested that CH facilitates therapeutic relationships and is associated with positive therapeutic improvement in counseling culturally diverse clients (Hook et al., 2013; Wright, 2019).

Conceptualizations of Humility

The juxtaposition of "cultural" and "humility" in CH suggests that both aspects are important to the construct. First, CH has roots in the humility literature. The concept of humility has origins in religions and traditions, as various religious leaders are viewed as embodying humility and that humility is cited in various religious text (Bhattacharya et al., 2017; Cuthbert et

al., 2018; Lavelock et al., 2017). The research on humility has grown exponentially as a cross-disciplinary effort in the past two decades, such as in philosophy (e.g., Murphy, 2017), religious studies (Wolfteich et al., 2019), psychology (e.g., Wright et al., 2017; Weidman et al., 2018), medicine (e.g., Huynh & Dicke-Bohmann, 2019), and organizational leadership (Ou et al., 2014; Owens & Hekman, 2016). The field of psychology, in particular, has seen a surge of interests in humility, as propelled by the positive psychology movement and the acknowledgement of humility as a personality dimension (Lee & Ashton, 2004; Peterson & Seligman, 2004; Van Tongeren et al., 2019; Worthington et al., 2017).

While diverse conceptualizations of humility exist across multiple disciplines, there appears to be a general consensus among researchers that humility involves intrapersonal and interpersonal dimensions. Intrapersonally, humility is associated with a relatively accurate self-assessment, such as having a clear sense of one's strengths and limitations and open to changing one's beliefs (Haggard et al., 2018; Kesebir, 2014; Rowatt et al., 2014; Tangney, 2005). Interpersonally, humble individuals present themselves in a modesty fashion, display respects others, and engage in other-benefitting behaviors (Davis, Worthington, & Hook, 2010; Worthington & Ashton, 2018). Furthermore, various subtypes of humility (e.g. intellectual, cultural, religious) have been proposed under the category of general humility (Worthington et al., 2017).

Considered as a pro-social virtue (Wright et al., 2017), humility has been shown to foster positive social relationships. Van Tongeren et al. (2019) discussed three interrelated hypotheses that potentially illustrate the relational benefits of humility: (a) the social-bonds hypothesis states humility is important for the formation, maintenance, and repair of social relationship; (b) the social-oil hypothesis posits that humility serves to prevent the relationship from deterioration by

buffering the effect of negative relational events (e.g., conflicts); (c) the well-being hypothesis suggests that humble individuals may have better relationships and social support, which, in turn, promotes better physical and psychological wellbeing. All three hypotheses have received preliminary empirical evidence. For example, in the organization and management literature, studies have shown that leaders who exhibited humility foster supportive organizational context and enhance team performance through interpersonal modeling and social contagion (Owens & Hekman, 2016). Moreover, Farrell et al., (2015) found that humility promotes a sense of forgiveness in couple relationships and is associated with greater relational satisfaction and mutual commitment.

Clinical Significance of Humility

The significance of humility in the context of counseling and psychotherapy has also been discussed in the literature. Meta-analytic studies have shown that therapist characteristics generally account for five to seven percent of the variances in therapeutic outcome (e.g., Baldwin & Imel, 2013). This seemingly small contribution cannot be neglected considering that less than 60% of the variances in counseling outcome can be attributed to known factors, and that therapeutic relationship, the most robust predictor of therapeutic improvement, explains approximately 12% of the variability in outcome (Norcross & Lamber, 2011). Moreover, given that humility has been shown to foster interpersonal relationships (Van Tongeren et al., 2019), it is likely that humble counselors are also more apt to establish strong working relationship with their clients, thereby further contributing to therapeutic improvement (Davis, Cuthbert, et al., 2017).

Paine et al., (2015) asserted that humility is a “psychotherapeutic virtue” (p.10) that involves counselors’ evolving inclination toward developing accurate understanding of their

strengths and limitations, regulation of self-centered emotions, and cultivating of other-centered emotions in a clinical setting. The authors proposed that practicing humility in a clinical setting may serve to guard against various forms of diversity bias, augment the process of rupture resolution, and foster collaborative care. Although conceptual arguments have been made by various scholars regarding the impact of humility on therapeutic process and outcome (e.g., Paine, 2015; Rowden et al., 2014)), empirical investigation of humility in the clinical setting has been meager, partly due to the lack of an established measure for counselor humility (Davis, Cuthbert, et al., 2017).

Contextualization of Cultural Humility

The second aspect of CH concerns the specifier "cultural." The definition of the term "culture" in the counseling literature is widely inconsistent, ranging from one that is concerned with specific demographic variables (e.g., race/ethnicity, nationality) to a broader one that includes the totality of human ideals, beliefs, values, traditions, and customs (Gerstein et al., 2011). The context in which CH was initially proposed was related to the multicultural counseling movement in the U.S. that challenged the Eurocentric counseling theories and practices (Sue et al., 1982). Multicultural counseling is anchored on the ideals of multiculturalism that mental health professionals should provide culturally relevant, effective, and sensitive interventions to clients with diverse cultural backgrounds (Fowers & Richardson, 1996).

Central to the multicultural counseling movement was the multicultural competencies (MCCs) model proposed by Sue and colleagues (e.g., Sue et al.; 1992). This tri-partite model asserts that the multiculturally competent counselors need to develop *self-awareness* of their own cultural identities and backgrounds, *knowledge* about working with diverse cultural groups, and

specific *skills* to work with culturally diverse clients (Sue et al., 1992). Since the original publication almost three decades ago, the MCCs model has been widely endorsed by many professional organizations as practice guidelines and training standards (e.g. Council for Accreditation of Counseling and Related Educational Programs [CACREP], 2015). Moreover, the model has also stimulated an extensive body of conceptual and empirical literature on the application of MCCs in counseling, teaching, and clinical supervision (e.g., Barden et al., 2017).

Despite its popularity, the MCCs framework has received many critiques over the years. In terms of research, limited empirical evidence exists to support the utility and relevance of the MCCs framework in counseling. For example, meta-analytic studies have shown that MCCs are not consistently correlated with counseling outcome (e.g., Tao et al., 2015). Numerous concerns regarding content and construct validity were found on some of the widely-used measures and the current measurement strategies based on the MCCs model (Drinane et al., 2016). In the practical sense, the concept of MCCs implies that there is an end state of competency that practitioners can arrive at when working with culturally diverse clients. This language can be misleading given that cultural identities are complex and often intersecting; therefore, becoming "competent" in working in all cultural contexts is unrealistic (Hook et al., 2017). Although more recent frameworks, such as the Multicultural and Social Justice Counseling Competencies (MSJCC; Ratts et al., 2016), have expanded MCCs to include the intersection of cultural identities, the language "competency" is still problematic. For example, the fear and anxiety about not appearing competent might lead counselor trainees and practitioners to focus more on their performance and outward behaviors, rather than revealing their blind spots and discomfort that might catalyzed future growth. For these reasons, scholars (e.g., Fisher-Borne et al., 2015; Owen, 2013; Mosher, Hook, Captari, et al., 2017) have called for a shift in the theoretical

framework and language in conceptualizing multicultural counseling that can more accurately reflect the current understanding around cultures and cultural identities.

In critiquing the dominant MCCs model in the training of physicians, Tervalon and Murray-García (1998) originated the term CH and suggested that it be distinguished from the traditional MCCs framework based on several considerations. The authors argued that, unlike the MCCs model which indicates the existence of an endpoint evidenced by a mastery of knowledge and skills, CH emphasizes that a simultaneous process of self-reflection and commitment to the never-ending process of learning. Moreover, CH involves an attitude of tentative knowing. The authors cautioned that the application multicultural knowledge necessitates a consideration of the multi-layered cultural identities of the individual, and that the over-generalization of such knowledge not only is counter-productive, but also may result in a perpetuation of the power imbalance within the therapeutic relationship. Therefore, health care professionals must relinquish the role of expert and, instead, approach the therapeutic relationship from the stance of a learner.

Hook et al. (2013) spearheaded the empirical investigation of CH in the context of counseling and psychotherapy. Several important contributions were made by this study to advance the study of CH. First, compared to Tervalon and Murray-García (1988), who primarily discussed CH in opposition to the MCCs model, Hook et al. (2013) provided a conceptual framework of CH that is grounded in the prior humility literature. Second, the authors specified their definition of culture, which "includes (but not limited to) race, ethnicity, nationality, gender, age, sexual orientation, religion, disability, socioeconomic status, and size" (p. 365). This broad perspective of culture addressed some of the previous critiques on MCCs by acknowledging culture as multi-faceted and multi-layered. Third, Hook et al. (2013) developed

the Cultural Humility Scale (CHS), which measures a counselor's level of CH from the client's point of view. With good reliability and criterion-related validity demonstrated in Hook et al. (2013), the CHS provided an important empirical foundation for the study of CH in the counseling context. In several ensuing studies (e.g., Davis, DeBlaere, Brubaker, et al., 2016), the CHS has been found to significantly predict positive therapeutic process and outcomes.

Statement of the Problem

The study of CH in the context of counseling is at a preliminary stage. A systemic review of the CH literature by Mosher, Hook, Farrell et al. (2017) only located a handful of studies specific to the context of counseling, conducted by a relatively circumscribed team of researchers (Hook et al., 2013, 2016; Owen et al., 2014; 2016, 2018), with homogenous demographic characteristics (e.g., race/ethnicity, gender, nationality). Although conceptual claims have been made that culturally humble counselors are less likely to commit cultural mistakes, more likely to recover from cultural mistakes, and more likely to utilize opportunities of value difference to deepen therapeutic connections, the empirical evidence, particularly quantitative evidence, to support these claims is scarce (Mosher, Hook, Farrell et al., 2017). One of the important factors that may have stymied the quantitative research on humility in the clinical setting was scarcity of psychometrically sound measures (Davis, Cuthbert, et al., 2017).

To date, the CHS (Hook et al., 2013) remains the only existing measure of CH. While demonstrating evidence for good reliability and predictive validity in multiple studies (DeBlaere et al., 2019; Hook, et al., 2013, 2016), the CHS is not without its limitations. For example, there is a lack of evidence for the convergent validity of CHS, as Hook et al. (2013) did not include in their analyses variables that are theoretically similar or distinct from CH to test the convergent or discriminant validity of the measure. Moreover, the conceptual coverage of the CHS is narrow,

as evidenced in only including items representing two of the five content domains of CH (Mosher, Hook, Captari, et al., 2017). Third, the CHS was developed based on the conceptualization of CH as a personality trait, while neglecting to include items that may assess CH in situations of particular cultural salience (Worthington & Allison, 2018). Therefore, a new CH measure that addresses these limitations is likely to be beneficial in further advancing the study of CH in the clinical setting.

Purpose of the Study

The purpose of the study is to develop a client-rated, conceptually and psychometrically sound measure on counselor's CH, entitled the *Cultural Humility and Enactment Scale* (CHES). As such the research questions (RQs) are stated as follows:

RQ1: What is the factor structure of the items on the CHES with a sample of mental health counseling clients?

RQ2: What is the internal consistency reliability of the CHES with a sample of mental health counseling clients?

RQ3: What are the relationships between the CHES scores and CHS scores?

RQ4: What ae the relationships between the CHES scores and the CCCI-R7 (a measure of cultural competence) scores?

RQ5: Do the CHES scores predict the WAI-SR scores (a measure of therapeutic working alliance), after controlling for the CHS scores and the demographic covariate(s)?

Significance of the Study

The CHES presents as an alternative to the CHS, the only existing measure on CH, and addresses the limitations of CHS discussed in the literature. Specifically, the CHES incorporates items that represent broader conceptual domains of CH, demonstrates evidence of convergent

and discriminant validity, and assesses CH using both the trait and state approach. Therefore, the CHES is likely to more accurately and comprehensively measure CH in the context of counseling. Moreover, the CHES, with a more complex factor structure than the CHS, is likely to provide future researchers and practitioners more nuanced information about the underlying dimensions of CH. For example, future researchers may wish to study specific aspects of CH in a clinical setting by examining the relationships between subdomains of CH and other constructs of interests. Clinical supervisors may incorporate the CHES to gain a detailed understanding of their supervisees' enactment and development of CH to guide their supervisory interventions.

Summary of the Study

This study was correlational in nature and adopted a cross-sectional survey design, in which all data were collected at one point in time with the purpose of examining relationships among variables of interests (as indicated in the RQs) without exerting manipulation (Creswell, 2013). The population for the development of CHES consistd of adults over the age of 18 who currently are or have received mental health services from a licensed professional in a clinical setting in the United States. The sample size of this study was 434. All data were collected through web-based self-report survey (i.e., Amazon Mechanical Turk and Qualtrics). The instrumentation procedure adhered to the following steps to ensure the face and content validity of the scale items: (a) clear operationalization of the construct; (b) generating an item pool; (c) determining the format of the measure; (d) conducting an expert review; and (e) inclusion of validity checks. In order to establish construct validity of the CHES, several other measures are included to measure cultural humility (measured by the CHS), cultural competence (measured by the CCCI-R7; Drinane et al., 2016), and therapeutic working alliance (measured by the WAI-SR; Hatcher & Gillaspy, 2006). Factor structure of the CHES was determined by exploratory factor

analyses. Convergent and discriminant validity were determined by conducting bivariate correlation analyses. Predictive and incremental validity were determined by hierarchical multiple regressions. Chapter 3 includes a detailed discussion of the research methodology.

Definition of Key Terms

Culture. While a variety of definitions and conceptualizations of culture exists across various disciplines, in this study, culture is defined broadly as a learned system of meaning influenced by demographic (e.g., age, gender, geographic location), status (e.g., social, economic, educational), and ethnographic (e.g., race/ethnicity, nationality) factors, as well as formal and informal affiliation (Pedersen, 1993). In this sense, culture is considered complex, dynamic, and multifaceted, and is relevant to intersecting cultural identities.

Humility. Humility is a personality characteristic that involves an accurate understanding of one's strengths and limitations, presenting oneself in a modest fashion, and holding an attitude oriented toward benefiting others (Worthington & Allison, 2018). Humility may manifest as a general disposition (i.e., trait) or situationally (i.e., state). Humility is considered to have various subtypes, such as intellectual, cultural, or religious humility, all of which are considered the manifestation of humility in different contexts (Worthington et al., 2017)

Cultural humility (CH). CH involves both intrapersonal and interpersonal domains (Hook et al., 2013). Intrapersonally, culturally humble individuals are open to the multiplicity of cultural values and worldviews and are committed to engaging in critical self-examination and developing cultural awareness; interpersonally, culturally humble individuals have a modest self-representation, acknowledging the limitations in their cultural values and imperfections in their cultural encounters, and value the relationships they build with other individuals (Mosher, Hook, Captari, et al., 2017; Mosher, Hook, Farrell et al., 2017; Zhu et al., 2019).

Enactment of CH. The term enactment denotes a state or a series of states in which CH can be observed via verbal or non-verbal behaviors in a clinical setting. Additionally, the enactment of CH takes place in a particular interpersonal context that involves cultural tensions (Zhu et al., 2019).

Modesty. Modesty involves a moderate and unexaggerated estimation of one's merits, strengths, and achievements, both in terms of intrapsychic reality and interpersonal presentation (Sedikides et al., 2007; Tangney, 2000, 2005). A modest person is likely to give credits to others, downplay one's achievements and resist the temptation to be boastful (Peterson & Seligman, 2004). Although modesty overlaps with humility in terms of accurate self-evaluation, scholarly have typically distinguished humility from modesty due to their other distinct dimensions, such as openness to new ideas and acknowledging limitation (Davis, Worthington, & Hook, 2010).

Counseling. Counseling is a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals (Kaplan, et al., 2014). Despite differences in history, tradition, and emphasis, *counseling*, *psychotherapy*, and *therapy* are often used interchangeably as a type of mental health services by both the professionals and the general public (Hackney & Bernard, 2016). Similarly, the use of the terms *counselor*, *psychotherapist*, and/or *therapist* in this study all refers to a mental health professional who provides counseling services in a clinical setting.

Multicultural and cross-cultural counseling. The term *multicultural* and *cross-cultural* counseling are sometimes used interchangeably due to the ambiguous conceptual boundary, as both highlight the role of culture in counseling clients from different cultural backgrounds (Gerstein, 2012). While sharing many similarities in values and goals, multicultural counseling emphasizes on providing culturally relevant and sensitive interventions for diverse clients in the

U.S. context, whereas cross-cultural counseling concerns more broadly counseling in a cross-national and international context (Gerstein et al., 2011).

Measure, instrument, and scale. These terms are used interchangeably to refer to "a collection of items combined into a composite score and intended to reveal level of theoretical variables not readily observable by direct means" (DeVellis, 2017, p. 30).

Reliability. Reliability is the indicator of the degree to which a measure performs in a consistent and accurate fashion over repeated administration (Bardhoshi & Erford, 2017; DeVellis, 2017). The most common types of reliability estimates include internal consistency, test–retest, alternate forms, and interrater reliability (Bardhoshi & Erford, 2017).

Internal consistency reliability. Internal consistency reliability concerns the interrelatedness (i.e., homogeneity) of items in measuring a single phenomenon (Bardhoshi & Erford, 2017). Common methods to estimate international consistency includes split-half reliability, Kuder-Richardson Formula 20, and Cronbach's alpha (Bardoshi & Erford, 2017).

Validity. Measurement validity refers to the degree to which empirical and theoretical rationale supports the adequacy and appropriateness of interpretation based on the measuring of a particular construct (Hoyt et al., 2006). Common types of validity include content, construct, and criterion-related validity.

Content validity. Content validity is evidenced by the match between scale items and the content domain relevant to the construct being measured (Lambie et al., 2017).

Criterion-related validity. Criterion-related validity indicates the degree to which the scale items has an empirical association with its criterion (Hoyt et al., 2006). *Predictive validity* is a form of criterion-related validity that concerns the correlations with the measured score and future performance (Hoyt et al., 2006). *Incremental validity* is a form of predictive validity that

assesses the extent to which a new psychometric scale will increase the predictive ability beyond what is provided by an existing scale.

Construct validity. Construct validity indicates the degree to which the construct being measured is correlated with other constructs that are theoretically correlated or unrelated (DeVellis, 2017). Two common types of construct validity include convergent (i.e., evidence of similarity between measures of theoretically related constructs) and discriminant validity (i.e., absence of correlation between measures of unrelated constructs).

Chapter 2: Literature Review

Evolution of Humility Research

The research on humility underwent decades of being overlooked before flourishing in recent years (Tangney, 2000, 2005; Worthington et al., 2017). In a review, Tangney (2000) was only able to locate a handful of articles that have included humility as a construct of interests. In the few cases of exception, humility remained tangential to the main research questions, which focused on humiliation, social anxieties, low self-esteem (e.g., Langston & Cantor, 1988). Similarly, Worthington et al. (2017) conducted a search in PsychINFO database and only located 222 publications indexed for "humility" during the 1900-1997 periods; in comparison, a total of 220 indexed publications were found during the 2012-2013 period alone.

Various scholars have discussed the obstacles in the early stages of humility research. First, there was a lack of clear definition of humility in the conceptual and empirical literature. Davis, Worthington, and Hook (2010) noted that humility was frequently described in opposition to its antonyms, such as narcissism, arrogance, and conceit (Rowatts et al., 2006; Tangney, 2005). This approach to defining humility was problematic because the absence of negative qualities does not assure the presence of positive one (Davis, Worthington, & Hook, 2010). In other words, an individual demonstrating no narcissistic qualities may not necessarily embody humility either. Moreover, researchers did not clearly articulate the core of humility or distinguished it from closely-related constructs. For example, humility was claimed to be related to a wide range of intrapersonal and interpersonal qualities, such as openness, modesty, lack of self-focus, empathy, gentleness, respect, gratitude, and forgiveness (e.g., Emmon, 2007; Exline & Geyer, 2004; Sandage, 1999; Sedikides et al., 2007; Tangney, 2000; Templeton, 1997).

Meanwhile, it was not clear which of these qualities constitute the core humility, and which were more peripherally related (Weidman et al., 2018).

A second and related factor that hindered the burgeoning of humility research concerned measurement, as there was no agreed-upon method to measure humility due to the nature of the construct (Davis, Worthington, & Hook, 2010; Rowatt et al., 2006; Tangney, 2005). Traditional self-report approach to measure humility was considered to suffer from serious threat to validity due to the *modesty effect* (Davis, Worthington, & Hook, 2010). Specifically, individuals with low humility may over-report humility due to the tendency to self-enhance, whereas those with high humility may under-report due to the sense that claiming to be humility may present as immodest (Davis, Worthington, & Hook, 2010). Tangney (2005) also noted that the lack of a psychometrically sound assessment tool of humility was likely the consequence of the lack of comprehensive theories and models on humility. More measurement issues are discussed at length in later sections.

Third, the research of humility may have been inadvertently silenced by larger trends and currents in the Western cultures. The concept of humility is innately linked to values and is rooted in philosophical and religious traditions (Tangney, 2000). As an example, Templeton (1997) provided the following conceptualization of humility that involves a clear religious/spiritual dimension:

> Humility represents wisdom. It is knowing you were created with special talents and abilities to share with the world; but it can also be an understanding that you are one of many souls created by God, and each has an important role to play in life. Humility is knowing you are smart, but not all-knowing. It is accepting that you have personal power but are not omnipotent. (p.162)

Tangney (2005) argued that social sciences (e.g., psychology), in order to be recognized as a *bona fide* science, have traditionally steered clear of value-laden topics, and, instead, embraced constructs that can be objectively and factually studied.

Moreover, humility may run counter to some of the basic Western cultural values, such as the emphasis on self-expression, self-confidence, and assertiveness (Li, 2016). This is evident in the fact that notion of humility in both dictionaries and social vernacular frequently involves undesirable qualities, such as holding oneself in low regard, a sense of unworthiness, meekness, lowliness, unimportant, lack of self-esteem, lack of pride, and so on (McArthur, 1998; Tangney, 2000). Etymologically, the word "humility" can be traced back to the Latin term *humilis* or *humus*, which entails the meaning of lowliness or insignificance (Bhattacharya et al. 2017; Rowatt et al., 2006). In contrast, Li (2016) presented evidence that humility was among the most frequently used word in daily spoken Chinese and a highly valued virtue in Confucian-heritage cultures. Similarly, Worthington et al. (2017) discussed that the phenomenon of "Generation ME" in the contemporary U.S. culture, characterized by high self-regard and individualism, contract the very idea of humility, which emphasizes a lack of self-focus.

Despite these obstacles, research on humility has grown exponentially since the turn of the century, particularly in the field of psychology (McElroy-Heltze et al., 2019; Van Tongeren et al. 2019; Worthington et al., 2017). The surge of humility literature seemed to coincide with two large movements. The first one was the positive psychology movement, which provided a platform for the study of various virtues and positive emotional states, such as altruism, courage, gratitude, and forgiveness (Peterson & Seligman, 2004). Humility was considered as a virtue or character strengths in a variety of conceptualizations (Exline et al., 2004; Worthington, 2008; Worthington & Berry, 2005). For example, Worthington and Berry (2005) summarized two

types of virtues, warmth-based and conscientiousness-based virtues, and contended that humility belongs to the former, which aimed at achieving inner peace, comfort, and harmony. Worthington (2008) further described humility as the "quiet virtue," as humble individuals do not often call attention to themselves and engage in unselfish service on behalf of others. Similarly, Exline et al. (2004) considered humility as one of the character strengths essential for well-being and classified humility under "temperance," a cluster of qualities that "protect against excess." (p. 463). Although the research on humility progressed relatively slowly compared to other virtues (Davis, Worthington, & Hook, 2010), the recognition of humility as a virtue substantially contributed to the expansion of the humility literature.

The framing of humility as a virtue has roots in the field of theology and religion (Tangney, 2000; Templeton, 1997). Various religious scholars (Bollinger & Hill, 2012; Porter et al. 2017) have noted rooted that humility is considered universally virtuous in both Eastern and Western traditions, such as Taoism, Buddhism, Hinduism, Judaism, Christianity, and Islam. Lavelock and colleagues (2014, 2017) discussed that many religious traditions consider humility as a *master virtue*, that is, the gateway to other virtues, such as forgiveness and patience. Porter et al. (2017) went so far as to suggest that humility may not be fully appreciated and understood outside the religious context. Indeed, many recent publications on humility as a virtue seemed lie at the intersection of positive psychology, religion and spirituality (Cuthbert et al., 2018; Lavelock et al., 2017; Van Tongeren et al., 2014; Wolfteich et al., 2019)

The second movement that propelled the research on humility occurred in the field of personality psychology. After reexamining the structure of personality lexicon that led to the original "Big Five" personality model, Lee and Ashton (2004) proposed a six-factor HEXACO personality model, with an added honesty-humility (HH) dimension that explains additional

variance in personality structure. The HH dimension is further comprised of four sub-domains, including *sincerity* (i.e. tendency to be genuine), *fairness* (i.e., tendency to avoid fraud and corruption), *greed avoidance* (i.e., tendency to be uninterested in excessive wealth and social status), and *modesty* (i.e. tendency to be modest and unassuming; Ashton et al., 2014; Lee & Ashton, 2004). With the increasing acceptance of the HEXACO model across cultures and languages, humility has also garnered considerable attention and embraced as a personality trait (Rowatt et al., 2006; Weidman, Cheng, & Tracy, 2018).

With the new development discussed above, research on humility in the recent decade has grown exponentially. Worthington and Allison (2018) observed that the publications on humility are "posed to explode," (p. 10), with numerous research teams across multiple disciplines engaged in the study of humility, with many of whom being funded by large-scale grants and other research initiatives.

Definition and Conceptualization of Humility

As was discussed before, one of the reasons the research on humility lagged behind was the lack of an agreement on its definitional core (Davis, Worthington, & Hook, 2010; Paine et al., 2015; Weidman et al., 2018). Furthermore, various subtypes of humility (e.g. intellectual, religious) have been proposed under the category of general humility (Worthington et al., 2017), further complexifying the task of identifying converging components across subtypes. Davis and Hook (2014) acknowledged that the expansion of definition is a natural process in an emerging field of study, while the risk being definitions failing to converge over time.

In the recent decade, some general consensus began to develop over how humility is operationalized. In a concluding commentary to a special issue on humility in the *Journal of Psychology and Theology*, Davis and Hook (2014) observed that researchers across different

disciplines seem to generally agree that humility has *intrapersonal* and *interpersonal* components. The intrapersonal component involves a relatively accurate view of self, manifesting as acknowledging one's limitation, the fallibility of one's beliefs, and having a clear sense of one's strengths and limitations (Haggard et al., 2018; Kesebir, 2014; Rowatt et al., 2014; Tangney, 2005). In comparison, there exists less agreement on what the interpersonal component of humility entails, as various interpersonal qualities have been emphasized, such as other-orientedness (Davis, Worthington, & Hook, 2010), interpersonal modesty (Ashton & Lee, 2004; Rowatt et al., 2006) and lack of superiority (Hook et al., 2013).

More recently, Worthington and Allison (2018), after reviewing a range of definitions put forth by humility researchers, proposed a tri-partite definition of humility (1) an accurate self-assessment; (2) making a modest self-presentation to others; and (3) holding an attitude oriented toward benefiting others. Worthington and Allison (2018) argued that humility comprises all three components and that all three parts are necessary to form the humble character. For example, an individual might have clear understanding of one's strengths and weakness and portray oneself modestly in the presence of others, while having no interest in seeking the best for others during interpersonal occasions. This individual, in Worthington and Allison's definition (2018), would not be considered humble. The conceptualization of humility in this study is most closely aligned with Worthington and Allison's tripartite model.

Trait and State Humility

Another point of debate on conceptualization humility is whether humility is considered a personality *trait* or a *state* (Chancellor & Lyubomirsky, 2013; Kruse et al., 2017; Tangney, 2000, 2005). Tangney (2000) argued that humility can be conceptualized on two different levels: *dispositional* or *situational*. Dispositional humility, or trait humility, can be considered a

component of one's personality, as a relatively enduring disposition across various occasions. In comparison, state humility concerns feelings or experiences of humility in a particular moment, triggered by events that induces a "hypoegoic state," in which one is relatively free from using self-enhancing to satisfy the needs for approval or self-gratification (Davis, McElroy, et al., 2017; Tangney, 2000, 2005). The trait and state approach to conceptualization is not mutually exclusive (Tangney, 2000; Worthington & Allison, 2018); rather, they complement each other in achieving a better conceptual understanding of humility as a multi-faceted construct (Davis, McElroy, et al., 2017).

Conceptualizing humility as a trait or state has major implications for the measurement of humility. Most researchers have adopted the trait approach in developing humility measures (Davis, McElroy, et al., 2017). For example, in a recent systematic review of 22 humility measures, McElroy-Heltzel et al. (2019) found that 19 of them were measuring dispositional humility, whereas only three were designed to measure state humility, with all of them being developed within the past five years. There are many advantages to adopting a trait approach to measure humility. First of all, there is ample evidence to support that humility is a relatively stable quality that tends to display consistently over time (Ashton & Lee, 2004; 2014). Moreover, considering humility as a trait enables researchers to measure humility through a personality judgement framework (Chancellor & Lyubomirsky, 2013; Davis et al., 2011). Specifically, the use of personality judgements asks the target individual's acquaintances (i.e., judge) to infer the target's level of humility based on humility-relevant behaviors. Such a strategy has a strong methodological and theoretical grounding (Funder, 1995) and largely overcome the early critiques on the self-report measurement of humility. Lastly, considering humility as a trait enables researchers to refer to the findings on other personality traits and make

informed hypotheses about the relationships between humility and its predictors and correlates (Davis et al., 2011).

Recently, researchers have increasingly noted the value of a state approach to measure humility (Chancellor & Lyubomirsky, 2013; Davis, McElroy, et al., 2017; Kruse et al., 2017). For example, Chancellor and Lyubomirsky (2013) emphasized that, although humble individuals exhibit cross-situational consistency in their presentations, it is a common experience that people recall specific moments in which they feel particularly humble (e.g., witnessing the birth of a child,). The existence of these moments illustrates that the experience of humility may vary in terms of contextual relevance and may be preceded and/or induced by particular events.

The state approach may complement the prevalent trait approach to investigate humility in several ways. First, the state approach recognizes that all components may not be present at all times (Chancellor & Lyubomirsky, 2013). As Worthington and Allison (2018) proposed, the three required components of humility are accurate self-assessment, modesty, and other-orientation. Utilizing a state approach enables the researchers to study discrete experiences in which some aspects of humility are more salient than others, thus gaining a more nuanced understanding of these momentary rather than only focusing on aggregated observations. Second, the state approach may generate more precise knowledge about the mechanism and process of humility in action (Davis, McElroy, et al., 2017; Kruse et al., 2017). Assuming the variability in people's experiences of humility and humility-relevant behaviors, the state approach may tap into the antecedents, causes, and results of the shift of humility, as well as the relational and circumstantial factors that may color the perception of humility.

Lastly, the state approach, along with the trait approach, may elucidate how humility can be cultivated (Chancellor & Lyubomirsky, 2013). While the trait approach has generated

considerable knowledge on the positive relational outcome correlated with humility, little is known about how humility develops over time (Davis, McElroy, et al., 2017). In contrast, the state approach, through understanding the moment-to-moment shift of humility, may offer insights on intervention strategies that may promote humility (Kruse et al., 2017). In short, the trait and state approach to humility, each representing different theoretical and methodological traditions (e.g., approach to measuring), may work in tandem to advance the research program on humility.

Types of Humility

Various types of humility have been proposed over the last two decades, parallel with the rapid expansion of the humility literature. In the *Handbook of Humility: Theory, Research, and Applications*, a collection of culminating research on humility in various context, Worthington et al. (2017) presented the current discourses on (a) *relational humility*, which concerns one person's view of another person's humility within a relational context; (b) *intellectual humility*, which is humility in the context of different ideas, opinions, and viewpoints; (c) *cultural humility*, which manifest in the context of engaging cultural differences; (d) *religious humility*, which involves the ways that individuals and groups engage around religious beliefs, values, and practices; (e) *political humility*, which is concerned with negotiating and respecting others' political, philosophical, and pragmatic ideas, and (f) *clinician humility*, which concerns the degree to which a counselor/ psychotherapist exhibits humility in a clinical setting.

With the proliferation of the types of humility, what remains unknown is the conceptual relationships between various types of humility, and whether they are subdomains of general humility (Worthington et al., 2017). Davis and Hook (2014) cautioned that, although the conceptual expansion and proliferation of definitions is a natural process through which a field of

study matures, the danger is that various definitions of humilities may fail to converge on a common ground. For example, while various scholars have proposed that the aforementioned types of humility are sub-domains of general humility, limited empirical evidence exists to substantiate this claim (e.g., Davis, Rice, et al., 2016). Moreover, arguments have been made in which one type of humility is a broader construct subsumes other types of humility. For example, political humility and religious humility have been proposed to be sub-types of intellectual humility (Worthington & Allison, 2018). Another example is that cultural humility is sometimes considered a special case of intellectual humility that manifests in cross-cultural occasions (Davis & Hook, 2019). Given that the research on subdomains of humility is still in its infancy, these claims are lacking in empirical evidence (Davis & Hook, 2019)

Worthington and Allison (2018) suggested that the conceptual distinctions among various types of humility should be made from a practical standpoint, i.e., for the purpose of enriching the understanding of humility in various contexts, rather than a hard, philosophical commitment. In other words, the subdomains of humility should be considered tentatively, as the multiplication of constructs may run the risk of committing the *jingle-jangle fallacies*, that is, labeling the same construct different names or labeling different construct same names (Davis & Hook, 2019)

Cultural humility

Cultural humility (CH), as a proposed subdomain of humility, has emerged in recent decades that concerns the manifestation of humility in multicultural and cross-cultural encounters (Hook et al., 2017; Mosher, Hook, Captari, et al. 2017). Tervalon and Murray-García (1998) first proposed the term cultural humility (CH) in the context of medical practice and education. The authors described CH as the life-long process of engaging in self-reflections and

self-examinations as practitioners. They compared the CH with *cultural competence* (CC), a construct rooted in the MCCs framework (Sue, Arredondo, & McDavis; 1992) that has been widely adopted by various health care professions (e.g., counseling, psychology, nursing). Unlike cultural competence, which implies the existence of an endpoint evidenced by a mastery of knowledge and skills, CH emphasizes a simultaneous process of self-reflection and commitment to the never-ending process of learning (Tervalon & Murray-García, 1988)

CH as a novel term was quickly taken up in the field of medicine, nursing, and health science since the seminal work of Tervalon and Murray- García (1998). For example, Chan et al. (2009) discussed application of CH in the context of palliative care. The authors discussed the potential inconsistency of the cultural competence framework and caring for the dying patient and advocated for adopting the CH framework through self-reflection on one's own cultural beliefs about death and addressing the innate power imbalance between the physician and the patient. In another example, Schuessler et al. (2012) conducted a qualitative study with 50 nursing students and found that implementing reflective journaling on cultural issues community partnership experience enhanced students' experience of CH.

More recently, the exploration of CH has been further extended beyond the medical field. For example, Sloane et al. (2018) emphasized that reflecting on the cultural history context of social work practice is critical to developing awareness of blind spots and acknowledging past mistakes in the profession, thereby promoting cultural humility. Choe et al. (2019) found that religious individuals who displayed high CH was associated with less discrimination towards lesbian or gay individuals, after controlling conservatism and religious orientation. Moreover, using a qualitative methodology, Lund and Lee (2015) found that utilizing a community-initiated

service learning within a teacher education program promoted the increased the sense of cultural humility in 10 pre-service teachers.

CH in the Clinical Setting

The application of cultural humility in the context of counseling and psychotherapy was spearheaded by Hook et al. (2013). Through a series of studies, Hook et al. (2013) found that CH positively contributed to therapeutic working alliance, a known robust predictor of positive therapeutic improvement (Wampold & Imel, 2015), above and beyond cultural competence. Moreover, the authors developed the *Cultural Humility Scale* (CHS), a client-observed measure of the therapist's CH. The CHS was the first instrument that intends to measure CH as a distinct construct, as empirical studies prior to this publication typically study CH indirectly through its theoretical-related construct (e.g., Kutob et al., 2013).

Since Hook et al. (2013), there has been a surge of interest in CH in counseling and psychotherapy (e.g., Davis, DeBlaere, et al., 2016; Hook et al., 2016; Owen et al., 2016). In a systemic review of literature up to February 2016, Mosher, Hook, Farrell, et al. (2017) located a total of 54 studies, including journal articles, book chapters, and dissertations, with CH included as a construct of interest. In recent years, the empirical exploration of CH has also been extended to couples (McElroy-Heltzel et al., 2018) and group counseling (Kivlighan & Chapman, 2018) and has yielded promising results. In the next few paragraphs, a brief summary of existing conceptual and empirical findings on CH will be provided, which are categorized into three major areas: (a) definition and conceptual framework of CH; (b) comparison of CH with cultural competence; and (c) contribution of CH to therapeutic process and outcome. As will be discussed in the following sections, the summary of these three research areas provide rationale for the research questions in this study.

Definitions and Conceptual Models of CH

Most CH scholars agree that CH involves both intrapersonal and interpersonal dimensions (Hook et al., 2013; Mosher, Hook, Captari, et al., 2017; Mosher, Hook, Farrell, 2017), a conceptualization consistent with the broader literature on humility. There appears to be some consensus among studies that CH involves an attitude of life-long attitude, a commitment to developing cultural awareness and questioning assumptions, and interpersonal respect, and an other-oriented stance to be open to new cultural experience (Chang et al., 2012; Foronda et al., 2016; Mosher, Hook, Captari, et al., 2017; Tervalon & Murray-García, 1998). Other proposed elements of CH, though not agreed upon among all CH scholars, include fluid-thinking (Fisher-Borne et al., 2015) and vulnerable authenticity (Isaacson, 2014), and a recognition of institutional accountability (e.g., Tervalon & Murray-García, 1998). Incorporating both intrapersonal and interpersonal dimensions, Hook et al. (2017) proposed that a cultural humble counselor is able to have "an accurate perception of their own cultural values as well as maintain an other-oriented perspective that involves respect, lack of superiority, and attunement regarding their own cultural beliefs and values" (p. 29).

A group of researchers (Davis et al., 2018; Owen, 2013; Owen et al., 2011, 2014, 2018) have further contextualized CH as an essential component of a larger theoretical framework, the multicultural orientation (MCO) framework. The MCO is theorized to comprise three pillars: (a) CH, (b) *cultural opportunities*, and (c) *cultural comfort* (Owen, 2013). Among the three pillars, CH is the foundational and organizational virtue, whereas the cultural opportunities and comfort as behavioral expression of CH within the counseling and psychotherapy context (Davis et al., 2018). Specifically, a culturally humble counselor may utilize opportunities to engage the client's salient cultural identities; meanwhile, the counselor's comfort level determines the extent

to which they are able to lean in conversations surrounding cultural identities. Moreover, MCO is considered an extension of the MCCs model (Davis et al., 2018), as the former addresses the numerous conceptual, empirical, and linguistic limitations of the MCCs model that have been raised in the past decades (Huey et al., 2014; Owen et al., 2011; Tao et al., 2015).

A recent grounded-theory study conducted by Zhu et al. (2019) has specifically explored the manifestation of CH in counseling and counselor education. Conceptualizing CH as both a trait and state, Zhu et al. (2019) elicited participants' understanding of CH as a disposition; then, they asked the participants to identify a particular moment in an interpersonal interaction in which CH was enacted and described various elements that contributed to their perception. Based on the participants' responses, the author explicated an emerging theory of CH, which included three core beliefs that describe the dispositional CH: (1) Culture is complex and often subtle; (2) learning about culture is a life-long commitment; and (3) all cultures and cultural beings have values and limitations. These three core beliefs corroborate the intrapersonal and interpersonal dimensions of CH proposed in previous literature. For example, as a culturally humble counselor recognize the complexity of subtlety cultural phenomenon, they are likely to examine their own cultural biases and develop an accurate perception of their cultural values. Similarly, a counselor who recognizes that cultural learning is a life-long commitment is likely to demonstrate interpersonal respect and openness to others, regardless of their cultural identities and backgrounds.

Moreover, Zhu et al. (2019) reported a cyclical process through which CH is enacted situationally through CH-promoting behaviors, such as leaning into the discomfort, prioritizing relationship over self, and displaying authenticity. Among these, the ability to lean into the discomfort, which involves containing defensive reactions while displaying curiosity and desire

for understanding, aligns with the concept of cultural comfort. Meanwhile, prioritizing relationship and displaying one's authentic self during interactions overlap with the concept of cultural opportunities, as these behaviors foster deeper engagement with clients' various cultural experiences. Additionally, the authors argued that culturally humble has a relationally-oriented interpersonal stance, rather than "other-oriented" (Hook et al., 2013), as engaging in CH-promoting behaviors leads to deepened relationship and mutual growth (Zhu et al., 2019).

Taken together, the literature in this area converge on the conceptualization that CH involves intrapersonal (e.g., self-awareness, self-reflection) and interpersonal dimensions (e.g., respect, openness, curiosity, non-defensiveness), though there exists some disagreement on the characteristics of the interpersonal stance of CH (i.e., relational-oriented vs. other-oriented). Table 1 contains a summary of constructs that are conceptually and empirically related to CH. The constructs converged on five conceptual domains, which provide support for the hypothesized underlying factors for the CHES, as is discussed in Chapter 3.

Comparison between CH and Cultural Competence

Since its emergence, CH has been compared with other constructs in the multicultural and cross-cultural field. One of the most heated contention was how CH is (dis)similar to cultural competence (CC)), a core construct of the MCC model that has been broadly embraced in various mental health professions (e.g., ACA, 2014; APA, 2003). Many distinctions between CH and CC has been discussed in the literature (Fisher-Borne et al., 2015; Hampton et al., 2017; Isaacson, 2014; Tervalon & Murray-García, 1998; Yeager & Bauer-Wu, 2013). For example, Yeager and Bauer-Wu (2013) discussed that CC and CH differ in a number of aspects such as view and definition of culture, view on tradition, social context, process of development, and training focus. The authors contended that the goal of CC is to "produce confident, competent

health care providers with a specialized knowledge and skills that can then serve the communities of ethnic or racial minority groups" (p.252), whereas CH focuses on developing self-awareness of one's own culture in order to increase understanding of others. Similarly, Hampton et al. (2017) contended that both CH and CC recognize the salience of cultural identity and the need to address cultural dynamics that exists between the counseling dyad; however, they argued that CC emphasizes on knowledge of other cultures based on observable traits, whereas CH focuses on continuous learning about and openness toward clients' cultural experience.

Table 1

Summary of CH-related Characteristics

Conceptual Domains	Characteristics	References	Humility Measures with Relevant Items
1. Openness to Cultural Multiplicity	Open-mindedness, "not knowing" position, genuine interests and curiosity about other cultural worldviews, recognition of culture as complex and evolving, willingness to change or modify one's cultural perspectives	Choe et al. (2019); Foronda et al. (2016); Hook et al. (2013); Isaacson (2014); McElroy-Heltzel et al., 2019); Ortega & Faller (2011); Owen et al. (2014); Tervalon & Murray-García (1998); Zhu et al. (2019)	EHS[a]; RHS[b]; DHS[c]; CEO-H[d]; BSHS[e]; IHS[g]; CIHS[h]; IH[i]; MIHS[j]; CHS[m]
2. Lifelong Self-examination	Life-long commitment to develop cultural self-understanding, awareness of one's strengths and limitations, acknowledging blind spots, willingness to incorporate feedback	Chang et al. (2012); Danso (2018); Isaacson (2014); Kim (2016); Ortega & Faller (2011); Tervalon & Murray-García (1998); Yeager & Bauer-Wu (2013); Zhu et al., (2019)	EHS; RHS; DHS; BSHS[l]; IHS; CIHS; CHS
3. Interpersonal Modesty	Lack of bragging or showing off, not calling attention to one's self, lack of superiority in interactions, lack of needs to impose power, lack of needs for status	Foronda et al. (2016); Hook et al. (2016); Ortega & Faller (2011); Peterson & Seligman (2004); Tangney (2000, 2009); Zhu et al., (2019)	CEO-H; MIHS
4. Lack of Defensiveness	Acknowledging mistakes, flaws, or missteps during interactions, leaning into discomfort to gain better understanding of cultural misattunement, learning from constructive feedback	Davis et al. (2016); Hook (2014); Owen et al., (2016); Zhu et al. (2019)	EHS; DHS; CEO-H; H-SLS; IH; MIHS; CHS
5. Relational Orientation	Focus on relationship building, valuing relationship as mutually beneficial, attending to other's needs and feelings, displaying empathy and compassion toward others, displaying authenticity	Danso (2018); Grad (2019); Hammell (2013); Hook et al. (2013, 2016); Isaacson (2014); Ortega & Faller (2011); Owen et al. (2016); Yeager & Bauer-Wu (2013); Zhu et al. (2019)	DHS, CEO-H; DDHS[f]; EOHS[k]; IHS; CIHS; MIHS; CHS

Note. [a] Expressed Humility Scale (Owen et al., 2013). [b] Relational Humility Scale (Davis et al., 2011). [c] Dispositional Humility Scale (Landrum, 2011); [d] CEO Humility (Ou et al., 2014); [e] Humility subscale of the Servant Leadership Survey (van Dierendonck & Nuijten, 2011); [f] DDHS = Dual-dimensional Humility Scale (Wright et al. 2018); [g] IHS = Intellectual Humility Scale (McElroy et al., 2014); [h] CIHS = Comprehensive Intellectual Humility Scale (Krumrei-Mancuso & Rouse, 2016); [i] IH = Intellectual Humility Scale (Leary et al., 2017); [j] MIHS = Multidimensional Intellectual Humility Scale (Alfano et al., 2017); [k] EOHS = Experiences of Humility Scale (Davis et al., 2017); [l] BSHS = Brief State Humility Scale (Kruse et al., 2017); [m] CHS = Cultural Humility Scale (Hook et al., 2013).

Other scholars have discussed how CH and CC overlap despite their respective foci (Campinha-Bacote, 2019; Danso, 2018; Hampton et al., 2017; Nazar et al., 2014; Rajaram, & Bockrath, 2014). For example, Campinha-Bacote (2019) argued that CH and CC have a "synergistic relationship", as the CH permeates each of the five components of CC: awareness, skill, knowledge, desire, and encounters. Danso (2018) went so far as to suggest that CH does not contribute more additive value than CC due to being merely a "repacking" of the foundational principles of anti-oppressive practice that undergird the MCC model. However, the empirical literature seems to contradict this claim. For example, in Hook et al.'s (2013) study, participants perception of therapists' CC, as measured by the Cross-Cultural Counseling Inventory-Revised (CCCI-R, LaFromboise et al., 1991), is moderately correlated ($r = .64$, $p < .001$) with perceived CH of therapists; further, through a hierarchical regression analysis, the authors found that CH explained a modest, but significant, amount of variance in therapeutic working alliance, a known predictor of therapeutic outcome (Wampold & Imel, 2015), above and beyond client's perception of their therapist's CC. In other words, CH appears to possess unique conceptual components beyond where it overlaps with CC, as evident by the moderate (approximately 40%) shared statistical variance between the two constructs.

Taken together, the comparison suggests CH, while sharing similarities with CC, has additive components that are unique to the construct. Therefore, CC is included as the variable of interest in this study for the purpose of examining the discriminant validity of the CHES.

Contribution of CH to Counseling Process and Outcome

Ample evidence has emerged in recent years that support the link between CH and a range of therapeutic process and outcome variables. Hook et al. (2013), in their initial study that developed the CHS, found that CH correlated with high quality therapeutic working alliance and

perceived improvement in counseling, both from clients' perspectives. Owen et al., (2014) found that perceived CH was positively associated with the therapeutic working alliance (TWA) and counseling outcome for individuals with strong religious/spiritual identities. More recently, Grad (2019) found that CH was a significant predictor, along with therapeutic presence and attachment anxiety, of therapeutic working alliance when working with childhood complex trauma survivors. Wright (2019) found that humanistic conditions, including positive regard, empathy, and congruence, fully mediated the relationship between CH and positive TWA, illuminating a potential mechanism through which CH contributes to the counseling process.

Moreover, studies have examined the relational benefits of CH, particularly in the presence of negative relational events in counseling, such as microaggressions (Davis, DeBlaere, Brubaker, et al., 2016; Hook et al., 2016; Owen et al., 2018) and disagreement in couple relationship (McElroy-Heltzel et al., 2018; McElroy-Heltzel et al., 2019). For example, Davis, DeBlaere, Brubaker, et al. (2016) found that counselors' CH perceived by clients mediated the relationship between negative emotions due to microaggression and positive TWA and perceived improvement. Similarly, Hook et al. (2016) found that higher CH is associated with lower occurrence of racial microaggression and lessen the negative impact of microaggressions when they do occur. Davis et al. (2018) presented two hypotheses that may explain the relational benefits of CH: (1) the *social bond* hypothesis, which posits that CH enhances the quality therapeutic bond (i.e., TWA), which in term decreases the likelihood of relational ruptures; and (2) the *social oil* hypothesis, which posits that CH buffers the natural deterioration of relationship due to conflicts and natural. Both hypotheses have received some initial support in the context of counseling (Davis et al., 2018; Davis, DeBlaere, Brubaker, et al., 2016; Hook et al., 2016; Owen et al., 2018). In other words, culturally humble counselors may be more aware

of their own assumptions and biases that may harm their relationship with their clients, and also be more attuned to their inevitable missteps that occur during conversations, both of which serve to strengthen the therapeutic bond (Drinane et al., 2017)

The findings in Zhu et al. (2019) provided further insight regarding the impact of CH in negative relational events in counseling. When asked to identify a moment in which CH is enacted, most participants described moments that involve felt discrepancies in terms of cultural beliefs and values during the interaction. This finding seems to suggest that the very perception of CH may be situationally ground in value differences and conflicts. Furthermore, Zhu et al., (2019) found that the enactment of CH in during an interaction may have a mutually beneficial impact, in which the participants of that interaction develop mutual empathy, openness, and receptiveness toward themselves as well as each other. Another study (McElroy-Heltzel et al., 2019), though not specifically in the context of counseling, showed that when one views another individual to be culturally humble during a discussion on a particular issue, they are likely to change their viewpoint on issue and think that their partner has also changed their view.

Taken together, these findings seem to suggest that CH may influence the therapeutic process through promoting mutual understanding, openness, and forgiveness. Therefore, TWA is included as a variable of interest in this study for the purpose of examining criterion-related validity.

Humility Measurement

The challenges with measuring humility have been extensively noted in the literature. Tangney (2000) stating, "…doing research on humility is humbling. Quite possibly, the quest for a reliable and valid measure of humility is even more humbling" (p. 75), highlighting the lack of well-validated measure in the early stages of humility research. Almost two decades later, the

challenge has shifted to what is called an “embarrassment of riches” (p. 393; McElroy-Heltzel et al., 2019). Due to the growing number of humility measures and proposed sub-domains of humility, the field of humility research is now faced with definitional and measurement sprawl. After reviewing a range of humility measures, Worthington and Allison (2018) pointed out that some of the most used humility measures seem to have confounded and inconsistent definitions, thus creating a conceptual muddle when it comes to reviewing and interpreting the results across studies.

There exist four general approaches when it comes to measuring humility: (a) self-report measures, (b) social comparisons of self to others; (c) implicit association test of humility versus arrogance, and (d) other-report measures, each with its respect strength and limitations (Davis, Worthington, & Hook, 2010). First, the self-report approach has the longest tradition and has received the most skepticism (Davis, Worthington, & Hook, 2010; Tangney, 2000). As human beings have the natural tendency to self-enhance, self-report humility is particularly subject to distortion, a phenomenon described as the modesty effects as mentioned before (Davis, Worthington, & Hook, 2010). Due to this concern, Tangney (2000) claimed that “humility may represent a rare personality construct that is simply unamenable to direct self-report methods” (p. 78). However, others have argued there exists little evidence to show that self-reports of humility are actually biased (Hill et al., 2017). For example, Ashton et al. (2014), through a detailed examination of the current research on the HEXACO Humility-Honesty (HH) scale, reported that the HH factor does not differ significantly from other personality factors in terms of score distribution, demonstrates moderate agreement between self- and other-report, and shows weak loadings on social desirability biases. Therefore, despite the warnings from humility scholars,

self-report measures of humility remain a popular approach (Hill et al., 2019; McElroy-Heltzel et al., 2019; Worthington & Allison, 2018).

The second approach is to utilize social comparisons of self to others to measure humility. This adapted self-report approach asks the participants rate themselves against a reference group. For example, Davis et al. (2011) employed a round-robin design, in which each participant rated the humility of all group members, including themselves. The self-enhancement of humility was determined by incorporating both the participants' self-insights (i.e., discrepancy between self-reports and other-reports) and social comparisons (i.e., discrepancy between how participants compared themselves to others). The third approach utilized the *implicit association test* (IAT), a computer-based method commonly used to study constructs that are prone to distortion due to impression management or social desirability (Davis, Worthington, & Hook). For example, Rowatt et al. (2006) developed the Implicit Association Test of Humility Versus Arrogance (IAT-HA), which measures participants' reaction times to pairings of self with humble words and contrasts this with participants' reaction times to pairings of self with arrogant words. Despite the novelty, few humility measures have been developed over the years based on the social comparison or IAT approach, due to concerns about temporal stability and convergent and discriminant validity (Davis, Worthington, & Hook, 2010; McElroy-Heltzel et al., 2019).

The last approach uses *other-report* in measuring humility. Davis, Worthington, and Hook (2010) proposed that that humility can be conceptualized as relationship-specific personality judgement, in which an observer assesses a target person's humility through his or her cumulative experiences with the target person's humility-related qualities. Applying Funder's (1995) realistic accuracy model (RAM) of personality judgements, Davis, Worthington, and Hook (2010) asserted that four requirements must be met for an observer to accurately judge

humility: (1) in some relationship context, the target must express behavior that is relevant to the trait of humility; (2) the judge must observe the behavior; (3) the judge must detect the behavior; (4) the judge must correctly utilize the detected behavior (and not misuse irrelevant behavior).

Based on the above proposed requirements, Davis, Worthington, and Hook (2010) discussed four moderators that may influence the validity of assessing humility as a personality judgement: (1) *judge*: some observers will be more able to perceive humility due to being attuned to emotions and intentions of others; (2) *target*: individuals who are more authentic and consistent across relationship are easier to judge than those who focus on impression management; (3) *trait*: some personality traits (e.g., humility) may be easier to be observed in negative cases (e.g., self-oriented, immodest); and (4) *information*: observers who know the target person for a long period of time and across a variety of relationships and roles are better able to judge humility. The observer-rating approach to assessing humility has gained increasing attention over the past decade (e.g., Hook et al., 2013; Davis et al., 2011). The advantage of this approach is bypassing the self-enhancement/modesty effect associated with self-report humility. However, concerns about validity still exist. For example, it is difficult to determine whether someone possesses the requisite cognitive, affective, and motivational components by only measuring external behaviors (Wright et al., 2018). Moreover, weak relationships have been found between self-report and informant-rated measure of humility (e.g., Rowatt et a. 2016).

Measuring Cultural Humility

As was noted before, the CHS (Hook et al., 2013), appears to be the only existing measure on CH. Through a series of four studies, Hook et al. (2013) developed a 12-item, client-rated, measure of therapist's CH and explored various types of reliability and validity of CHS. Specifically, in the pilot study, the authors utilized an analogue design to provide preliminary

evidence that perceptions of a therapist's level of humility in relation to an individual's cultural background is important for establishing strong therapeutic relationships. Next, in study 1, the authors created a list of 32 initial CHS items based on literature review and review by 12 experts who have published scholarly work in the field of multicultural counseling. After recruiting 472 undergraduate students to complete the questionnaire, the authors conducted an exploratory factor analysis (EFA) and determined that CHS is consisted of two factors: (a) positive other-oriented characteristics and (b) negative characteristics reflecting superiority and making assumptions. Additionally, a hierarchical regression revealed that CH was significantly correlated with therapeutic working alliance, after controlling for other variables, such as race, and gender.

In study 2, Hook et al. (2013) utilized another independent sample of 134 adults who are currently attending counseling to validate the refined CHS scale. A confirmatory factor analysis (CFA) was conducted, which replicated the 2-factor structure of CHS; further, the authors found that client perceptions of a therapist's CH explains a modest but significant amount of variance in the working alliance, above and beyond client-perceived therapist's CC. Finally, in Study 3, the authors included therapeutic improvement as one of the outcome variables to further establish the criterion validity. Using yet another independent sample of 120 adults recruited from Amazon's Mechanical Turk website, the authors conducted mediation analysis and found that CH was positively correlated with therapeutic improvement, mediated by working alliance.

Overall, the CHS appears to be a reliable measure. The internal consistency reliability of the CHS was good for the full scale ($\alpha = .93$) and two subscales ($\alpha = .93$ and .90) in the original study (Hook et al., 2013) and has been consistently high (from .86 to .94) in several of published studies that have utilized CHS (e.g. Davis, Deblaere, Brubaker, et al., 2016; Hook et al., 2016;

Owen et al., 2014). Moreover, there is some evidence for the concurrent validity, as the CHS measure was found to be correlated strongly with MCCs, with the correlation coefficient ranged from .60 to .75 (DeBlaere et al., 2019; Hook, et al., 2016). Predictive validity has been consistently supported, as the measure correlated strongly with working alliance (*r*s greater than .70; Davis, Deblaere, Brubaker, et al., 2016; Grad, 2019; Hook et al., 2013) and therapeutic improvement (*r*s ranged from .56 to .63; Hook et al., 2013, 2016, Owen et al., 2016).

Despite the initial evidence, the CHS is not without limitations. To begin, some researchers have noted the limited evidence for the construct validity of the measure (McElroy-Heltzel et al. 2019). In the original study, Hook et al. (2013) did not include in their analyses variables that are theoretically similar or distinct from CH to test the convergent or discriminant validity of the newly developed measure. For example, some humility researchers have argued that CH might be the manifestation of intellectual humility in the cultural domain (Davis & Hook, 2019). Other scholars have articulated that CH overlaps but is conceptually distinct from modesty (e.g., Tangney, 2000). Currently, the relationships (or lack thereof) between the CHS and these constructs have not been empirically explored extensively. Moreover, due to the lack of other prior measurement on CH, there was a lack of evidence for the convergent validity of the CHS. This limitation will be addressed in the development of the CHES by including the CHS to examine convergent validity of the CHES and including CC to examine discriminant validity.

Second, some researchers have critiqued that the CHS seems narrow in its conceptual coverage, thereby raising concerns about the content validity of the measure. Mosher, Hook, Farrell, et al. (2019) summarized that CH literature converges on several intrapersonal and interpersonal domains, including a life-long commitment cultural learning, critical self-

examination and self-awareness, interpersonal modesty and respect, egalitarianism/lack of superiority, and other-oriented stance. Based on this conceptualization, the CHS primarily focuses on the interpersonal aspect ("e.g., my therapist is respectful"), with few items assessing the intrapersonal aspect of CH (Davis et al., 2018). Moreover, CH, as a proposed sub-domain of humility, is likely to share the core content domains of general humility. In their respective systematic reviews of extent humility and measure, Both Davis and Hook (2014) and McElroy-Heltzel et al. (2019) noted the CHS primarily focuses on domains of openness , lack of superiority, and other-orientation, while not focused on interpersonal modesty, accurate self-perception, and willingness to admit mistakes. In terms of the five conceptual dimensions of CH outlined in Table 1, the CHS is comprised of items assessing the domains of "openness to cultural multiplicity" and "Relational orientation," while lacking items that assess the domains of "critical self-examination," " interpersonal modesty," and "lack of defensiveness."

The relatively narrow conceptual coverage of the CHS may be a result of the authors adopting a highly stringent item retention criterion (i.e. primary factor loading greater than .70). Furthermore, the CHS was developed prior to the existence of an established body of literature on CH specific to the counseling context. In fact, the experts who participated in the item review process were those who have expertise on MCCs, rather than CH (Hook et al., 2013). Since then, a comprehensive conceptual framework of CH has begun to emerge, consisting of its core conceptual components (Mosher, Hook, Farrell, et al., 2019), antecedents (e.g., counselor's characteristics; DeBlaere et al., 2019), behavioral, affective, and cognitive correlates (e.g., holding discomforts; Zhu et al., 2019), relational sequelae (e.g., buffering relational rupture; Owen et al., 2016), and process of development (e.g., Zhu et al., 2019). Therefore, this study will

incorporate the recent advancement of research on CH in the past several years in the development of the CHES to more comprehensively measure CH as a construct.

Third, the CHS was developed based on the conceptualization of CH as a trait, or "a virtue or disposition" in the authors' words (p. 354; Hook et al., 2013). Indeed, the prompt and items in the CHS appear to elicit the respondents' global assessment of their therapist's general demeanors in cross-cultural milieus, rather than acts and interactions that are situation-specific. However, Worthington and Allison (2018) noted that CH can be an act (i.e. exhibiting humility-relevant behaviors), state (i.e., temporary condition in which one is focused on doing acts of humility), and trait (i.e., one acts humbly across situations and relational contexts). In other words, the experience of CH may be contextual, as it may manifest more during interactions in which certain cultural values and identities are particularly salient for the participants (Owen et al., 2014; Yakushko et al., 2009). Therefore, relying on the global assessment of CH may miss important contextual information that could be otherwise strong indicators of CH. For example, Zhu et al. (2019) found that the perception of CH is most salient in moments that involve value differences or relational conflicts. Specifically, the salience of CH during an interaction may increase or decrease dependent upon the perceived difference and discrepancies in participants' cultural values and worldviews. Hence, to address the limitation of lacking in contextual assessment in the CHS, this study will include prompts and items that assess the manifestation of CH in value-laden moments, in addition to a global assessment of CH.

Taken together, the CHS, despite the evidence for its reliability and criterion-related validity, has limitations regarding its conceptual grounding, content and construct validity. The development of the CHES will address these limitations by incorporating the state perspective in conceptualizing CH, including items that represent broader and more comprehensive conceptual

dimensions, and examining the convergent and discriminant validity of the scale. As was previously discussed, measuring humility is faced with various challenges (e.g., Davis, Worthington, & Hook). In order to adopt a conceptually and empirically sound strategy in developing CHES, the researcher will provide a brief review and critique of the instrumentation strategies utilized in recently-developed humility measures.

Instrumentation Strategies of Current Humility Measures

In this section, the researcher provides a review of the instrumentation strategies of humility measures that have been developed in the past decade (i.e., from 2009 to 2019). A list of humility measures was compiled after consulting three recent reviews of humility measures (Davis & Hook, 2014; Hill et al., 2017; McElroy-Heltzel et al., 2019), as well as conducting a search of published articles in multiple database using the keyword "humility measure" or "humility scale". A total of 14 humility measures were located, including six measures on trait humility, two on state humility, four on intellectual humility, one on religious humility, and one on CH (the CHS). Rather than being exhaustive, the list is compiled with the purpose of representing the recent trends in developing humility measures.

Table 2 presents a summary of the various aspects of the instrumentation strategies employed in recent humility measures. In reviewing the recent measures, it became evident that one of the major limitations across studies lies in the insufficient justifications for the methodological decisions that were made, such as the sampling strategies, survey format, and method for factor determination. Therefore, in the following paragraphs, a brief summary and critique of each methodological aspect regarding instrumentation is provided, with the implications for the development of the CHES also discussed.

Table 2

Summary of Instrumentation Strategies of Recent Humility Measures

Trait Humility Measures

Humility Scale	Mtd of Assm		Item Generation			Scale Type	Development Sample (N)	Factor Determination	Establishing Reliability		Establishing Validity		
	S[a]	O[b]	LR[c]	ER[d]	PT[e]				IC[f]	T-R[g]	C[h]	D[i]	CT[j]
Expressed Humility Scale (Owen et al., 2013)		X	X	X		5-point Likert	UG[k] (N = 164)	EFA-N/A-N/A	X	X	X	X	
Relational Humility Scale (Davis et al., 2011)		X	X			5-point Likert	UG (N = 300)	EFA-ML-OB	X		X	X	
Dispositional Humility Scale (Landrum, 2011)	X		X	X	X	5-point Likert	UG (N = 341)	EFA-N/A-OB	X		X	X	
CEO Humility (Ou et al., 2014)		X	X	X		6-point Likert	UG (N = 276)	EFA-PAF-OB	X		X	X	
Humility subscale of the Servant Leadership Survey (van Dierendonck & Nuijten, 2011)		X	X			6-point Likert	Online (N = 668)	EFA-N/A-OB	X				X
Dual-dimensional Humility Scale (Wright et al. 2018)	X		X			7-point Likert	Mturk (N = 1513)	EFA-PCA-OT	X	X	X	X	X
Intellectual Humility Scale (McElroy et al., 2014)		X	X			5-point Likert	Mturk (N = 213)	EFA-PAF-OB	X		X	X	
Comprehensive Intellectual Humility Scale (Krumrei-Mancuso & Rouse, 2016)	X		X	X	X	5-point Likert	Mturk (N = 380)	EFA-PAF-OB	X	X	X	X	
Intellectual Humility Scale (Leary et al., 2017)	X		X			5-point Likert	MTurk (N = 300)	EFA-PAF-N/A	X		X	X	X

Trait Humility Measures

Humility Scale	Mtd of Assm		Item Generation			Scale Type	Development Sample (N)	Factor Determination	Establishing Reliability		Establishing Validity		
	S[a]	O[b]	LR[c]	ER[d]	PT[e]				IC[f]	T-R[g]	C[h]	D[i]	CT[j]
Multidimensional Intellectual Humility Scale (Alfano et al., 2017)	X		X			7-point Likert	UG (N = 442)	EFA-N/A-OB	X		X	X	X
Spiritual Humility Scale (Davis, Hook, et al., 2010)		X	X			5-point Likert	UG (N = 300)	EFA-ML-N/A	X		X	X	X
Cultural Humility Scale (Hook et al., 2013)		X	X	X	X	5-point Likert	UG (N = 472)	EFA-PCA-OB	X				X

State Humility Measures

Experiences of Humility Scale (Davis et al., 2017)	X		X	X		5-point Likert	UG (N = 200)	EFA-PAF-OB	X		X	X	
Brief State Humility Scale (Kruse et al., 2017)	X		X		X	7-point Likert	Mturk (N = 202)	CFA	X		X	X	X

Note. [a] Self-report. [b] Observer-rating. [c] Literature review. [d] Expert review. [e] Pilot testing. [f] Internal consistency reliability. [g] Test-retest reliability. [h] Convergent validity. [i] Discriminant validity. [j] Criterion-related validity; [k] Undergraduate students

Method of Assessment. There appears to be an even split of the use of self- vs. other-report method in recent humility measures, potentially reflecting a balanced view in the current stage of humility research that both methods have values. As was discussed before, concerns have been raised regarding the utilization of self-report due to the proposed "modesty effect"; meanwhile, the other-report method relies on the inference of the target individual's internal affect, cognition, and motivation based on external behaviors, which may be colored by the respondent's perception. In this study, the other-report and the relational humility framework (Davis et al., 2011) is adopted in measuring CH.

Item Generation. Three types of strategies are typically used to increase the face valid of the initial items for the surveyed humility measures. First, a literature review was conducted in all studies prior to the development of the scales to present different extant conceptualizations humility, including its major conceptual domains. Most studies clearly stated their conceptual framework of humility as informed by their literature review, which guides their item generation process. Second, the second strategy is to conduct expert review, that is, inviting content experts who are outside of the research team to engage in ranking of rating of the items to determine the degree to which the initial items represent the content domain, as well as the clarity, conciseness, readability, and redundancy (Worthington & Whittaker, 2006). Expert review is considered an effective way to increase content validity in measurement development (Lenz & Wester, 2017). Less than half (n = 6) of the identified studies utilized expert review, ranging from 3 to 18 experts. However, the specific goals and tasks associated with the expert reviews were often not provided in the study. Moreover, in some cases, the reviewers did not seem to possess sufficient subject expertise to judge the validity of the items (e.g., use of "master's students who are familiar with the literature.") Thirdly, four studies utilized pilot study to further reduce redundant

or ineffective items, particularly when the initial item pool was large (e.g., 187 initials items in Krumrei-Mancuso & Rouse, 2016). In this study, the initial items for CHES will be generated through a thorough literature review and a panel of experts with published records on CH.

Scale Type. All surveyed measures utilized Likert-type format, consistent with the broader psychological and educational research (Lozano et al., 2008). The number of response categories ranged from five to seven, with the majority using a 5-point rating scale, anchored from "strongly disagree" to "strongly agree." Although the justifications for the number of categories is typically not provided in the survey studies, this practice is in line with recent reviews that found the range of number for optimal reliability and validity lies between four and seven (e.g., Lee & Paek, 2014; Lozano et al., 2008). Further, Weijters et al. (2010) suggested that 7-point rating scales should be reserved for college student population, who are likely to have higher cognitive skills and experiences with questionnaires, whereas 5-point scales are more appropriate for the general population.

While the overwhelming majority of the recent measures used odd-number categories (e.g., 5-point, 7-point Likert scale), a small number of measures have even-number categories (Ou et al., 2014; van Dierendonck & Nuijten, 2011). Ou et al. (2014) noted that the 6-point format was selected based on the characteristics of their participants (i.e., Chinese individuals) who have been shown to select the midpoint due to cultural norms. In addition to cultural considerations, various scholars (Chyung et al., 2017; Leung, 2011) have noted 6-point scales is more likely to increase variance in data by eliminating the midpoint and produce data that meets the normality assumptions, when compared to 5-point and 7-point scales; moreover, 6-point scales have found to have equivalent reliability and criterion related validity when compared to

its counterparts (Leung, 2011). Informed by these findings, 6-point Likert-scale is selected as the scale format for the CHES with the purpose of increasing variance and normality of the data.

Sample for Initial Testing. Eight of the surveyed studies utilized undergraduate students, typically recruited from psychology courses in exchange for course credits, as their initial sample for testing the factor structure. While a common practice in social science, Sears (1986) cautioned that reliant on the college student sample may result in a narrow or biased data set due to some of characteristics of this population, such as less-crystalized attitudes, less-formulated sense of self, less stable personality disposition and peer relationships, and emotionally-based judgements. The other six studies utilized samples recruited from online platforms, such as the Amazon Mechanical Turk (*MTurk*; Kruse et al., 2017). Mturk has gained increasing utilization in social science research in the recent decade and been considered having several advantages, such as relatively inexpensive, more representative of the general population, and efficiency in data collection (Buhrmester et al., 2018). In a recent study specific to psychotherapy, Thompkins (2019) found that data generated through the Mturk sample is generally comparable to another clinical sample recruited through traditional methods (e.g., flyers, reminders to clinicians), with similar participants characteristics, clinical characteristics, and psychometric properties. Therefore, Mturk seems appropriate for the purpose of this study.

The sample size varied across surveyed studies, from 164 to 1513, with the majority of the studies falling in the range from 200 to 400 for their initial factor analysis. Several studies have cited the general guideline of a minimum ratios of participants to items (ranged from 5:1 to 10:1; Gorsuch, 1983; Tinsley & Tinsley, 1987) for the justification of their sample size. However, Worthington and Whittaker (2006) provided four general considerations in determining the minimal sample size for EFA (a) Sample sizes of 300 or larger are generally

sufficient; (b) sample sizes of 150-200 are likely to be sufficient when communalities are greater than .50; (c) smaller sample sizes may be adequate when communalities are greater than .60 or factors are more saturated; and (d) sample sizes less than 100 or fewer than 3:1 participant-to-item ratios are generally inadequate. In most surveyed studies, the discussion of sample size was not specific to the characteristics of the data. Additionally, no studies have utilized SEM-based approaches to determine the minimum sample size. Therefore, the determination of adequate sample size will be based on simultaneously consulting the "rule-of-thumbs" guidelines in the literature, typical sample sizes in recent measurement studies, and the SME-based approaches.

Factor Structure Determination. All but one studies relied on EFA to determine the initial factor structure of the measures. EFA is a statistical method commonly used in the initial stage of scale development to reduce data into smaller sets of summary variables and identify underlying dimensions (i.e. factors) of the data set (Watson, 2017). Studies typically tested the factorability of the data by conducting the Kaiser–Meyer–Olkin (KMO) test and the Bartlett test of sphericity. In terms of factor extraction methods, seven studies reported using either *principal-axis factoring* (PAF) or *maximum likelihood* (ML) method, two used *principal components analysis* (PCA), and the other five did not specify the extraction methods. Kahn (2006) noted that the use of PCA is less desirable in EFA, as it aims to find linear combinations to account for all variance among measured variance rather than identifying common factors. Therefore, PAF and ML are more preferable methods in EFA. Moreover, most studies (n = 9) utilized oblique factor rotation methods, which is consistent with most conceptualizations of humility as having inter-related content domains.

Establishing Reliability. All surveyed studies reported Cronbach's α coefficient as an indicator for internal consistency reliability. Three studies (e.g., Krumrei-Mancuso & Rouse,

2016) reported test-retest (i.e., temporal stability) reliability to provide further evidence for the psychometric properties for the measures. Given that that purpose of this study is to develop and initially validate the CHES and does not involve multiple stages of data collection, only the internal consistency reliability will be explored.

Establishing Validity. In addition to ensure content validity during the item generation phase, all studies sought to provide evidence for the construct and/or criterion-related validity for their measures. Regarding construct validity, almost all studies included variables that considered conceptually related or distinct from their main construct of interests to test the convergent or discriminant validity. Self-report humility measures commonly included social desirability to test discriminant validity (e.g., Krumrei-Mancuso & Rouse, 2016; Kruse et al., 2017; Wright et al. 2018), and narcissism and other types of humility for convergent validity (e.g., Alfano et al., 2017; Krumrei-Mancuso & Rouse, 2016; Kruse et al., 2017). Other-report humility measures commonly included variables such as agreeableness and modesty (McElroy et al., 2014; Ou et al., 2014; Owen et al., 2013) to test convergent and discriminant validity, with the specifics depending on the conceptual framework. With regards to criterion-related validity, some studies sought to connect humility with psychological wellbeing (e.g., Wright et al., 2018) or relational benefits (e.g., Davis et al., 2011). Therefore, in this study, both construct (i.e., convergent and discriminant) and criterion-related (i.e., predictive and incremental) validities will be explored.

In summary, informed by the review and critique of the instrumentation strategies, the other-report approach will be utilized in the development of the CHES. Both literature review and expert will be utilized to generate the initial item pool. Five-point Likert-type rating scale seems most appropriate when the developmental sample is the general public. Mturk will be

utilized as an appropriate platform to recruit samples for the initial testing. Either ML or PAF is an appropriate extraction method, depending on the data normality, and oblique rotation seems the most appropriate factor rotation method in this study. The internal consistency reliability will be explored, indicated by the Cronbach's α coefficient. Lastly, both construct and criterion-related validity will be assessed in the development of the CHES.

Chapter 3: Methodology

Chapter 3 presents the research methods utilized to develop the Cultural Humility and Enactment Scale (CHES) and examine the psychometric properties of the CHES with a sample of mental health counseling clients. The methods will be discussed in the following sections: (a) research design, (b) population and sample, (c) data collection, (d) instrumentation procedures, (e) research questions and hypotheses, and (f) statistical analyses.

Research Design

This study is correlational in nature and utilizes a cross-sectional survey design, in which all data were collected at one point in time with the purpose of examining relationships among variables of interest without exerting manipulation (Creswell, 2013). Cross-sectional survey design is appropriate for examining attitudes, beliefs, and opinions (Creswell, 2013) and is commonly adopted in initial instrument development (DeVellis, 2017). The study aims to examine the variables within the construct of CH. In assessing relevant types of validity of the CHES, variables of MCCs and therapeutic working alliance were also be examined in relation to CH.

Participants and Sampling Methods

The population of interest for developing the CHES consists of adults who currently are or have received mental health services from a licensed professional in a clinical setting in the U.S. To be included in this study, the participants must (a) be 18 years of age or older; (b) be currently receiving or have received in the past counseling/psychotherapy services from a licensed and/or certified mental health professional, including, but not limited to, mental health counselors, marriage, couple, and family therapists, clinical social worker, counseling/clinical psychologist, and psychiatrists; (c) have received a minimum of three sessions with the identified

licensed mental health professional; and (d) have received counseling/psychotherapy service in a clinical setting, including, but not limited, to university counseling centers, outpatient clinics, hospitals, community-based facilities, and private practice.

The definition of "mental health services" utilized in this study broadly refers to counseling and/or psychotherapy, given that these two terms are often used interchangeably both in the general public and in the health care system (Hackney & Bernard, 2017). Similarly, a broad definition of mental health professionals is adopted to reflect that counseling and psychotherapy is currently practiced by a wide range of licensed and/or certified professionals as identified above. A minimum of three sessions are deemed necessary. Meta-analytic research suggested that the therapeutic alliance begins to stabilize in the third session, thereby suggesting the establishment of a deepened bond between the client and the therapist (Ardito & Rabellino, 2011; Gelso, 2014). According to the relational humility framework (Davis et al., 2011), having at least three sessions of therapeutic contact is likely to provide the observer (i.e., client) adequate information to make an informed personality judgement about the target individual (i.e., mental health professional).

All data in this study were collected online. The participants were recruited via (a) Amazon Mechanical Turk (MTurk); and (b) social media websites. MTurk is a crowdsourcing platform that connects researcher with qualified individuals who are willing to complete the requested survey for a small monetary compensation. Mturk has gained increasing utilization in social science research in the past several years as an effective and relatively inexpensive method to collect quality data (Buhrmester et al., 2011, 2018; Thompkins, 2019). Mturk has also been utilized as the primary sampling methods in several instrumentation studies on humility (Table 1). Buhrmester et al. (2011) demonstrated that providing compensation as low as 2 cents per

survey was a sufficient motivation for the participation of short and medium survey. A compensation level of 50 cents per participation is considered appropriate for the purpose of this study given the length of the survey (15-20 minutes), specific inclusion criteria, and the need for a relatively large sample size for factor analysis.

Additionally, social media platforms were used as another sampling source to increase the diversity of the sample and reduce the potential bias from exclusively recruiting participants from Mturk. An announcement will be disseminated on various social media platforms (e.g., Reddit, Facebook, Twitter, Craigslist) with a brief description of the study and a link to an online survey on the Qualtrics (2013) survey management website. Participants who completed the Qualtrics survey can elect to enter a lottery with a chance to receive a $25 Amazon gift card.

Sample Size

In determining the appropriate sample size for the purpose of factor analysis, the researcher adopted three strategies as recommended in the literature. First, the EFA literature recommends a few general guidelines for the minimal sample size (DeVellis, 2017). Specifically, Worthington and Whittaker (2006) suggested that a sample size of 300 are generally sufficiently for EFA and a smaller size may also be sufficient when communalities are generally high. Meanwhile, it is generally recommended that the participant: item ratio is 5:1 to 10:1 (Gorsuch, 1983; Tinsley & Tinsley, 1987). Based on the literature review, it was hypothesized that the CHES will consist of five latent dimensions, which leads to approximately 40 initial items for CHES, with eight to ten items per dimension. Moreover, items in previous humility have been found to demonstrate moderately high communalities (most items have factor loadings higher than .70). Therefore, using these guidelines, a sample size of 400 is most ideal, which enables a participant-to-item ratio of 8:1 to 10:1. Second, as was discussed in the previous chapter, most

recent humility measures utilized a sample size in the 200-400 range when performing initial factor analysis (Table 1).

Third, recent studies have utilized the principles of structural equation modeling (SEM) in determining the minimal sample size for EFA (e.g., Klainin-Yobas et al., 2016). Specifically, using the method developed by MacCallum et al. (1996), an adequate sample size can be calculated with (a) desirable power level of .80, (b) statistical significance level of .05, (c) root mean square error of approximation (RMSEA) = .05, and (d) a known value for the degree of freedom. According to MacCallum et al. (1996), degree of freedom equates to the number of data points (i.e., variances and covariances) minus the unknown parameters. Specifically, the number of data points is calculated using the formula $p*(p+1)/2$, where p represents the number of observed variables (e.g., initial CHES items). The number of parameters can be determined by examining the hypothetical measurement models (five common factors, each with 8-10 indicators), which equates to 95. Therefore, the degree of freedom in this study would be 725 (40*41/2 – 95). Using MacCallum et al.'s (1996) methods and a web-based R software made available by Preacher and Coffman (2006), the minimal adequate sample size for this study would be at least 196. The autogenerated codes for web-based R program were attached as Appendix I. Considering all the criteria discussed above, the researcher adopted the most conservative criterion and determined the target sample size to be 400. Furthermore, considering the concerns about data quality associated with Mturk and social media, the researcher followed the recommendation put forth by Thompkins's (2019) to collect twice as many as the targeted number of responses in order to ensure both sufficient power and data quality. Therefore, a total of 800 responses were attempted.

Additionally, an *A Priori* power analysis (Cohen, 1988) was conducted using G*Power Version 3.1 (Faul et al., 2007) to determine the minimal sample size for regression analyses. The result indicated that a minimum sample size of 73 participants is required to achieve a medium effect size (d = .15) in linear multiple regression with three predictors, when α = .05 and 1-β = .80. Taken together, the target sample size of 400 was deemed adequate to perform all statistical analyses in this study.

Data Collection

The author obtained approval from Syracuse University Institutional Review Board (IRB) prior to collecting any data (Appendix J). Upon receiving the IRB approval, an announcement of recruitment was posted on the Mturk platform with a description of the study and information about the survey. Once the participants gave consent to the study, they were directed to the survey packet, which includes a general demographic questionnaire, the CHES, the CHS (Hook et al., 2013), the CCCI-R7 (Drinane et al., 2016), and the WAI-SR (Hatcher & Gillaspy, 2006). The packet consisted of 77 assessment items and takes 10-15 minutes to complete. The participants were automatically compensated 50 cents by MTurk upon successful completion of the survey packet. The recruitment announcement on social media platforms shared similar content to the Mturk announcement, with the additional request for the recipients to disseminate the information to other individuals who may fit the inclusion criteria. The recruitment announcement included a link to the Qualtrics survey packet, which, identical to the Mturk version, included an informed consent form, a demographic questionnaire, and the four measures. After completing the survey, the participants could choose to voluntarily submit their name and contact information to be entered into a lottery to win a $25 Amazon card.

A total of three reminders were sent on Mturk and social media platforms. The data collection phase ended when the combined sample from the three sources reach twice the target sample size (i.e., 800), following the recommendation in the literature (Buhrmester et al., 2018).

Instrumentation Procedures

To aid the process of developing a measure with sound face and content validity, a stepwise procedure in scale development (DeVellis, 2017) was consulted in developing the initial items for the CHES.

Step 1: Clear Operationalization of the Construct

The literature suggests that CH is consisted of multiple intrapersonal and interpersonal content domains (Hampton et al., 2017; Mosher, Hook, Captari, et al., 2017; Davis et al., 2018) and can be conceptualized both on a trait and state level (Worthington & Allison, 2018). Based on the previous conceptual and empirical literature on CH, it is hypothesized that CH will have five underlying and interrelated dimensions: (a) Openness to cultural multiplicity, (b) Lifelong self-examination, (c) Interpersonal modesty, (d) Lack of defensiveness, and (e) Relational orientation (Table 1). Informed by previous literature (Foronda et al., 2016; Mosher, Hook, Captari, et al., 2017; Zhu et al., 2019), the first three domains are more relevant in the global assessment of CH as a general disposition, whereas the latter two domains of CH are more relevant in particular value-laden moments. As such, the CHES included items assessing CH both as a dispositional quality and in situations that involve value difference.

Step 2: Generating an Item Pool

The initial item pool for CHES was created using three strategies. First, a thorough review of the extant conceptual and empirical literature on CH was conducted to determine the content domains as hypothesized above. Items were then created to substantiate each domain in

accordance with the literature. Second, a review of recently-development humility measure was conducted, with a focus on identifying items that are related to the five hypothesized domains of CH in this study. Those items were then modified to reflect the specificity of CH in the cross-cultural context. Third, a previous grounded-theory study of CH conducted by the researcher (Zhu et al., 2019) was consulted, as it appears to be the only qualitative study of CH in the counseling and counselor education context. Specifically, after reviewing all interview transcripts, participants' quotes related to the hypothesized content domains were extracted and rephrased into sample items, with all identifying information removed. The combination of the three strategies discussed above was to ensure that each content domain is adequately described and that initial items are adequately reflective of the construct of CH in the clinical setting. Both positively and negatively worded items were included, and a moderate level of redundancy across items was permitted to ensure content saturation.

Step 3: Determining the Scale Format

As was discussed before, most humility measures utilized a Likert-type rating scale, anchoring with five to seven response categories. Chuyung et al. (2017) discussed that fewer categories are more appropriate for the general population, whereas more categories may be advantageous for populations with higher cognitive complexity and experiences with survey questionnaires. Moreover, there is evidence to suggest that 6-point Liker-type scale is more likely to generate data that meet the normality assumption (Leung, 2011). Chyung et al. (2017) also suggested that including midpoints in the scale may result in respondents utilizing the midpoint as a *dumping ground* for responding to unfamiliar or ambiguous items. Considering that the characteristics of the sample of this study is likely to resemble that of the general

population, a six-point Likert-type scale was deemed most appropriate, ranging from 1 “strongly disagree” to 6 “strongly agree.”

Step 4: Conducting an Expert Review

A panel of four experts was assembled to review the initial items to maximize the content validity of the CHES. Experts were considered qualified if they have at least one published article on the subject of cultural humility. Experts who have extensive experiences with instrument development were also consulted. Experts were asked to provide specific evaluation of the relevance, clarity, conciseness, and readability of the items, as well as the comprehensiveness of the scale in its conceptual coverage. The expert review survey, including a recruitment letter, instructions, and an evaluation form, is included as Appendix C. A total of four experts agreed to participate in reviewing the instrument. The final version of the CHES consisting of 40 items (negatively worded when applied) is attached as Appendix A.

Step 5: Inclusion of Validity Checks

Previous research (Buhrmester et al., 2018; Chandler et al., 2014) has suggested that utilizing web-based self-report survey may encounter several types of threat to research validity, such as identity fraudulence (i.e., participants representing their identities in order to meet the inclusion criteria), inattention (i.e., not providing cognizant responses), nonnaiveté (i.e., completing the survey more than once), and dishonest responses. Although these threats are common in all self-report survey, the use of technology, such as MTurk and Qualtrics, may bring unique challenges, as well as opportunities, to address these challenges. Therefore, several types of validity checks were implemented in this study. First, to address the nonnaiveté concern, both Mturk and Qualtrics system offer option to disallow users from the same account/IP address to take the survey more than once. Additionally, Mturk allows the researcher to apply qualification

filters such as geographic locations and workers approval rating (i.e., cumulative percentage that a particular Mturk worker's responses were approved as valid). The geographic filter was set as "United States" and the workers approval rating was set at above 95%. Second, to address identity fraudulence, several pre-screening questions were included in the Demographic questionnaire to determine that the respondents have indeed met the inclusion criteria. For example, participants will be asked to type the first name of the mental health professionals who they worked with.

Third, several *attention check* questions were randomly distributed in the assessment packet in order to gauge whether the participants are providing cognizant answers. An example of attention-trap question is to ask the respondent to select a particular answer (e.g., "somewhat disagree") as the response to the item. Failure to respond as instructed will indicate that the respondent is inattentive and will result in the removal of this respondent. Lastly, to address the dishonesty concern, respondents who had an unreasonably short completion time (i.e., two minutes) will be eliminated from the data set. An additional question was added in the end of survey that asked the participants to explicitly affirm the accuracy of their response. Utilizing these strategies have been shown in the literature to increase the validity of Mturk and other web-based survey research (e.g., Lowry et al., 2016).

Measures

Three measures were administered as a part of the assessment packet, in addition to the CHES, to establish evidence for validity. Permissions were obtained from the authors regarding the use of following measures (Appendix H).

Cultural Humility Scale. The Cultural Humility Scale (CHS; Hook et al., 2013) is utilized in this study to establish the convergent validity of the CHES. The CHS is a 12-item

client-rated measure of therapist's CH. The measure contains two subscales: positive other-oriented characteristics (e.g., "My therapist is open to seeing things from my perspective") and negative characteristics reflecting superiority and making assumptions (e.g., "My counselors acts superior"). Participants are instructed to "indicate the extent to which you agree or disagree with the following statements about your counselor." rate each item on a five-point Likert-type rating scale ranging from 1 ("strong disagree") to 5 ("strongly agree"). The CHS has demonstrated good internal consistency reliability, with Cronbach's alpha coefficient for the full scale ranging from .86 to .97 across multiple studies (Hook et al., 2013; Hook, Ferrell, et al., 2016; Owen et al., 2014). The Cronbach's alpha for the CHS full scale in this study was .93. The CHS showed concurrent validity with established measures of multicultural competencies, and predictive validity in terms of therapeutic working alliance (Davis et al., 2016; Grad, 2019; Hook et al., 2013) and therapeutic improvement (Hook et al., 2013, Owen et al., 2016). The CHS is attached as Appendix E.

Cross-Cultural Counseling Inventory. Cultural competence (CC) is measured by the 7-item version of the Cross-Cultural Counseling Inventory (CCCI-R7; Drinane et al., 2016). The CCCI-R7 is a revised version of the original 20-item CCCI-R (LaFromboise et al., 1991), which measures cross-cultural counseling skills, sociopolitical awareness, and cultural sensitivity. 1992). Sample items include "My counselor values and respects cultural difference," "My counselor is aware of his or her own cultural heritage," and "My counselor sends message that are appropriate to me based on my cultural heritage." Participants rate each item on a 6-point scale, ranging from 1 ("strongly disagree") and 6 ("strong agree"). While used extensively in the literature to measure MCCs, Drinane et al. (2016) noted concerns regarding content and construct validity of the CCCI-R. The authors eliminated 13 items that were noted by a panel of

experts as having problematic content validity and retained the 7-item version. An EFA of the CCCI-R7 indicated a one-factor solution and high factor loadings (all above .63). The CCCI-R7 has demonstrated high internal consistency reliability (Cronbach's alpha coefficient above .90) and moderate correlation with working alliance (r = .48; Drinane et al., 2016) as evidence for discriminant validity. The Cronbach's alpha for the CCCI-R7 in this study was .93. The CCCI-R7 is attached as Appendix F.

Working Alliance Inventory – Short Form Revised. The therapeutic working alliance (TWA) is measured by the Working Alliance Inventory – Short Form Revised (WAI-SR; Hatcher & Gillaspy, 2006). The WAI-SR is a 12-item version that reflect Bordin's (1979) conceptualization of client-therapist agreement on therapeutic goals, tasks, and the emotional bonds. Sample items include "___ and I are working towards mutually agreed upon goals" "What I am doing in therapy gives me new ways of looking at my problems" and " ___ and I respect each other." Participants were instructed to think about their therapists and rate the items on a 5-point rating scale ranging from 1 ("seldom") and 5 ("always"). The psychometric properties of the WAI-SR have been well established through numerous studies, with high internal consistency (Hatcher & Gillaspy, 2006) and convergent validity with other alliance measures (Falkenström et al., 2015; Munder et al., 2010). While the WAI-SR consists of three subscales, the total score is used for the purpose of this study, with higher scores indicating stronger perceptions of the working alliance. The WAI-SR is attached as Appendix G.

A demographic questionnaire (Appendix D) was constructed for the purpose of this study that included questions of the participants' age, gender identity, race/ethnicity, sexual orientation, religious affiliation, educational level, and international status. Participants were asked to identify a licensed and/or certified mental health professional with who they have had at

least three sessions. For the purpose of validity check, participants were then asked to indicate the last name and profession of the mental health professional and the number of sessions they have had with the person.

Research Questions and Hypotheses

Guided by the main purpose of the study to develop a client-rated, empirically and statistically sound measure on counselor's CH, the research questions (RQs) and corresponding hypotheses are stated as below:

RQ1: What is the factor structure of the items on the CHES with a sample of mental health counseling clients?

Based on previous literature, it was hypothesized that the CHES will have a five-factor structure, which includes (a) cultural self-awareness and accurate self-assessment, (b) openness to multiplicity, (c) interpersonal modesty, (d) acknowledging mistakes/lack of defensiveness, and (e) relational orientation. Moreover, it was hypothesized that the CHES will entail factors representing both dispositional and situational CH.

RQ2: What is the internal consistency reliability of the CHES?

It was hypothesized that the CHES will demonstrate a moderate to high internal consistency reliability, with Cronbach's alpha greater than .70. Moreover, it was expected that the each CHES factor will exhibit moderate to high internal consistency reliability estimates, with Cronbach's alphas greater than .70.

RQ3: What is the relationship between the CHES scores and CHS scores?

Considering that CHES and CHS are both measures of CH, and that CHES has a broader conceptual coverage than the CHS, it is hypothesized that the CHES and CHS total scores will have a moderate to strong correlation, with the correlation coefficient in the range from .60

to .80. Moreover, it was also hypothesized that the factors/subscales of the two measures may have moderate to strong correlations, with the correlation coefficients in the range from .60 to .80.

RQ4: What is the relationship between the CHES scores and the CCCI-R7 scores?

Given that previous literature has indicated that CH and CC are related but distinct construct, it is hypothesized that the CHES and CCCI-R7 total scores will have moderate correlations, with the correlation coefficient in the range from .40 to .60. Moreover, it was also hypothesized that the factors of the CHES and the CCCI-R7 may have moderate correlations.

RQ5: Does the CHES scores predict the WAI-SF scores, after controlling for the CHS scores?

It was hypothesized that the CHES total score will significantly predict the WAI-SF scores, above and beyond the variances explained by the CHS total score as well as the demographic covariates (i.e., gender and race). Moreover, it was hypothesized that some of the CHES factors may significantly predict the WAI-SF scores, above and beyond the variances explained by the CHS subscales as well as the demographic covariates.

Statistical Analyses

Before conducting an EFA, it is important to determine the factorability, that is, whether the data collected are suited for factor analysis (Watson, 2017). Specifically, the inter-item correlations need to be examined to ensure that the correlation coefficient *r* is not too low (i.e., items not presenting the same construct) or too high (i.e., potential issues for multicollinearity). Therefore, items with an *r* value lower than .20 or higher than .80 were excluded from further analysis. Furthermore, two widely-accepted statistical tests were performed to examine the factorability of the data. First, the Kaiser-Meyer-Olkin (KMO) aims to produce an index based on the strength of relationship among variables based on zero-order and partial correlations, with

index value ranging between 0 and 1. Higher number of the KMO value representing greater factorability and sampling adequacy. The literature has suggested that a KMO test value greater than .60 indicates acceptable factorability (Watson, 2017; Yong & Pearce, 2013). Second, the Bartlett's test of sphericity estimates the degree to which the intercorrelation matrix of the data comes from a population in which the variables are unrelated. The rejection of a null hypothesis in the Bartlett's test (*p* value less than .05) indicates that the variables are sufficiently correlated for an EFA to be performed.

To answer **RQ1** and **RQ2**, EFAs were conducted. EFA is a common analytic approach to identify the number of dimensions (i.e., factors) underlying a group of variables or items (Watson, 2017). EFA, as an exploratory and inductive method, is appropriate when the researcher does not have enough conceptual evidence to determine the number of factors underlying the data and will need to rely on a data-oriented method. For this reason, EFA is deemed as appropriate for the purpose of this study.

EFAs were performed with Mplus Version 8.4, developed by Muthen and Muthen (2017). *Maximum Likelihood parameter estimates with robust standard errors* (MLR) is selected as the factor extraction method. Although PCA has been one of the popular extraction methods in recent humility measures, such as the CHS (Hook et al., 2013), the EFA literature has noted that PCA is a less desirable method in EFA, as it is programmed to partition out common variance among measured variance, rather than the shared variance (Watson, 2017). Moreover, the EFA literature indicated that ML is more appropriate when data is relatively normally distributed (Watson, 2017). Another consideration was that ML has been shown to work well with continuous data, whereas other types of extraction methods (e.g., weighted least square mean and variance; WLSMV) may work better with categorical data (Garrido et al., 2016).

However, Rhemtulla et al. (2012) demonstrated that categorical variables can be treated as continuous variable with MLR estimation when there are six or more categories. Since the 6-pointed Likert scale is the adopted format in this study, the researcher proceeded with using MLR as the estimation method.

A range of factor retention criteria discussed in the literature were adopted to aid the determination of the number of factors to retain. First, Kaiser's Eigenvalue-greater-than-one rule was considered, as factors with Eigenvalue value (EV) below 1.0 is considered unstable factors and explained less shared variance than a single variable (DeVellis, 2017; Worthington & Whittaker, 2006). Second, the *scree test* (Cattell, 1966) was used to locate a break in the descending size of Eigenvalues, after which the remaining values tend to level off horizontally (Worthington & Whittaker, 2006). Third, *parallel analysis* (Horn, 1965) was used to compare whether the Eigenvalue produced by the actual data set is greater than that computed from a random data set of the same size and number of variables (Watson, 2017).

In addition to the above criteria that are more traditionally used, a model selection perspective was discussed by Preacher et al. (2013), who recommended using the root mean square error of approximation (RMSEA), a model fit indicator, as a factor retention criterion. Specifically, the smallest number of factors for which the lower bound of the RMSEA 90% confidence interval (RMSEA.LB) drops below .50 indicated the number of factors to be retained. Lastly, the conceptual interpretability of the factors was also considered. Worthington and Whittaker (2006) noted that EFA is a combination of empirical and subjective methods and that researcher should only retain a factor that can be meaningfully interpreted. Therefore, the hypothesized five-factor structure of the CHES was considered along with other data-driven criteria. Literature has pointed out that different strategies may lead to divergent decision

regarding how many factors to retain (Henson & Roberts, 2006). For examples, many scholars have pointed out that the EV > 1 rule may overestimate the number of factors, whereas the Scree test may be too conservative (Henseon & Roberts, 2006; Schmitt, 2011). Therefore, multiple criteria were considered in this study regarding factor retention.

Factor rotation was conducted after extraction to maximize high loadings and minimize low loadings of the items, in order to the interpretability of the factors extracted and retained. *Oblique rotation* is selected as the factor rotation methods. Worthington and Whittaker (2006) noted that orthogonal rotation is appropriate when the set of factors underlying the construct of interest are assumed to be unrelated, whereas oblique rotation is appropriate when factors are assumed or known to be related. Therefore, the determining of rotation method should be done consulting both prior theory and data. Given that the content domains of CH have been considered inter-related, and that subscales of recently-developed humility measures typically share moderate correlation (e.g., Davis et al., 2017; Hook et al., 2013), oblique rotation was considered most appropriate in this study. Among various oblique rotation methods, *CF-Equamax* was selected as it is well-suited for complex factor structure (i.e., large cross-loading magnitudes) and initial measure development phase (Schmitt & Sass, 2010)

After the factor structure was determined and factors were rotated, items were selected to represent each factor. Two general criteria were considered when it comes to item deletion or retention. First, communality estimate of each item will be examined, with communality value between .40 and 1.0 typically indicating item retention (Watson, 2017; Worthington & Whittaker, 2006). Second, factor loadings will be considered. Specifically, items with primary loading lower than .32 were deleted (Watson, 2017). Items with strong cross loadings on two or more factors were assigned to the factors associated with the highest loading, given that the

factor loading is at least .10 greater than the next highest factors; otherwise, the item was deleted (Watson, 2017). After the deletion of each item, a new EFA was conducted to ensure that the factor structure remained stable.

The last step was to optimize the scale length. Worthington and Whittaker (2006) recommended that at this stage researchers may trim non-essential items to achieve a balance between reliability and optimal scale length. Specifically, when a factor contains more than the desired number of items, researchers may delete items with (a) the lowest factor loading, (b) the highest cross loading, (c) the least contribution to the internal consistency of the scale, and/or (d) the lowest conceptual consistency with other items loaded on the factor. Following the finalization of the scale, each factor was named based on a review of all items to ensure that the name accurately and fully reflects the conceptual information embedded.

To answer **RQ3** and **RQ4**, bivariate correlations were used to determine the relationship between the CHES scores and CHS scores and with the CCCI-R7 scores. Specifically, a series of Pearson's product-moment correlations were performed between the CHES (total score) and CHS (total score), between the CHES (total score) and CCCI-R7 (total score), as well as between the factor scores of the CHES with both the CHS (total score) and the CCCI-R7(total score) respectively. Before conducting the analysis, the author examined the normality, outliers, linearity, and homoscedasticity to ensure that the statistical assumptions were not violated. Specifically, univariate and multivariate normality were assessed through examining the skewness and kurtosis index and using a probability-probability plot. Multicollinearity was assessed through tolerance, Variation Inflation Factor (VIF), and the correlation matrix. Outliers, linearity, and homoscedasticity were examined using scatterplot to visually check the data point

and whether the data and the standardized residuals of the variables were distributed on a relatively straight line.

To answer **RQ5**, a hierarchical multiple regressions (HMR) was used to determine whether the CHES scores predict the WAI-SR total scores (predictive validity), after controlling the CHS scores (incremental validity). Before the regression analysis, the author examined whether the statistical assumptions are met, including outliers, normality, linearity, and homoscedasticity. The procedures for checking these assumptions were identical to those in the previous step. An HMR is conducted with the WAI-SR scores as the criteria variable. Gender and race/ethnicity were considered covariates in predicting the working alliance according to previous literature (Grad, 2019; Hook et al., 2013), and therefore are entered in Step 1, the CHS scores were entered in step 2, and the CHES scores were entered in step 3.

Chapter 4: Results

Chapter four presents the results of the five research questions (RQs) investigated in this study.

RQ1: What is the factor structure of the items on the CHES with a sample of mental health counseling clients?

RQ2: What is the internal consistency reliability of the CHES with a sample of mental health counseling clients?

RQ3: What is the relationship between the CHES scores and CHS scores?

RQ4: What is the relationship between the CHES scores and CCCI-R7 scores?

RQ5: Does the CHES scores predict the WAI-SR scores, after controlling for the CHS scores?

The data were analyzed primarily using *Mplus* Version 8.4 (Muthén & Muthén, 1998-2017). The IBM SPSS Version 25.0 was also used in a complementary manner to conduct analyses and/or produce graphic representations not available in Mplus.

Descriptive Statistics

A total of 816 responses on the online Qualtrics survey were recorded, of which 457 were from MTurk and 359 from social media platforms (e.g., Reddit, Facebook, Twitter, Craigslist). For Mturk responses, a series of filters were applied before data analyses to ensure data quality (Buhrmester et al., 2011, 2018). First, 154 incomplete responses (less than 85% progress rate of completing the main instrument) were removed from the data set, resulting in 303 remaining responses. Second, 29 responses that did not meet the inclusion criteria (i.e., age, session number) were removed from the data, resulting in 274 remaining responses. Finally, six responses were removed due to failing any of the validity checks (i.e., unreasonably short

completion time, fraudulence check, and two attention checks) embedded in the survey, resulting in 268 final responses eligible for further analyses. The same data cleaning procedures were applied to responses gathered from social media platforms, resulting in 166 final responses eligible for further analyses. Therefore, the final dataset comprised a total of 434 valid responses, combining both sampling sources with comparable data quality (58.6% qualified responses from Mturk and 46.2% from social media). The targeted sample size was achieved according to the previous chapter.

Participants Demographics

Participant ages in this study ranged from 18 to 74 (Mean = 36.58, Median = 30, SD = 12.73). Participants' other demographic characteristics are summarized in Table 3. Consistent with prior literature that indicates recruiting online sample is advantageous in diversifying the participant pool (Buhrmester et al., 2018), the sample for this study is diverse in terms of age, gender, race/ethnicity, sexual orientation, education, employment status, and marital status. The participants demographic characteristics in the current study, particularly in terms of gender and race/ethnicity are comparable to more diverse than prior studies specific to the counseling context. For example, the development sample in Hook et al. (2013) consisted of 434 undergraduate students, of whom 68.4% identified as female and 40.9% identified as non-White, whereas 68% current sample identified as female or other gender minority and 32.9% as non-White. Given that gender and race were found to be predictors of therapeutic working alliance (Grad, 2019; Hook et al., 2013), gender and race will be included as covariates in the regression analyses for RQ5.

Table 3

Participants Demographic Characteristics

Demographic Category	Total (*n*)	Percentage

Gender (*N* = 434)		
Female	271	62.4%
Male	139	32.0%
Transgender	9	2.1%
Prefer to self-describe	15	3.5%
Race/Ethnicity (*N* = 433)		
American Indian or Alaskan Native	2	.5%
Asian	52	12%
Black or African American	32	7.4%
Hispanic or Latina/o	35	8.1%
Native Hawaiian or Other Pacific Islander	3	.7%
White	291	67.1%
Biracial or Multiracial	11	2.5%
Prefer to self-describe	7	1.6%
Sexual Orientation (N = 433)		
Heterosexual/straight	321	74.1%
Homosexual/lesbian/gay	24	5.5%
Bisexual	58	13.4%
Pansexual/omnisexual	18	4.2%
Prefer to self-describe	12	2.8%
Education (N = 432)		
Some high school, no diploma	5	1.2%
High school/GED	34	7.8%
Some college credits/no degree	70	16.1%
Associate degree	51	11.8%
Bachelor's degree	163	37.6%
Master's degree	95	21.9%
Doctoral-level degree	14	3.2%
Employment status (N =433)		
Employed full-time	278	64.2%
Employed part-time	65	15.0%
Not working	24	5.5%
Retired, notworking	12	2.8%
Retired, working part-time	6	1.4%
Student	32	7.4%
Prefer to self-describe	16	3.7%
Marital Status (*N* = 433)		
Divorced	44	10.2%
Married	149	34.4%
Single	204	47.1%

Separated	12	2.8%
Widowed	9	2.1%
Prefer to self-describe	31	4.7%
Disability Status (N = 434)		
Identified with disability	134	30.9%
Identified without disability	300	69.1%

Treatment Context

In addition to demographic backgrounds, participants also reported in what context they received mental health counseling, including the treatment setting, therapist's professional title, and number of sessions they have received. Overall, participants receive counseling from a broad range of treatment settings and licensed mental health professionals (summarized in Table 4). The most common treatment setting in which the participants received counseling was outpatient clinic (49.1%); the most common professional titles encountered were mental health counselors and psychologists (both were 27.2%). Furthermore, the number of sessions reported by participants ranged from 3 to 750 (Mean = 31.58, Median = 10). Participants were instructed to provide an estimate if they were unsure of the exact number.

Table 4

Treatment Context

Treatment Context	Total (*n*)	Percentage
Treatment Setting (*N* = 434)		
Outpatient Clinic	213	49.1%
Hospital	23	5.3%
Community-based agency	81	18.7%
College counseling center	36	8.3%
School	7	1.6%
Other	74	17.1%
Therapist's Title (*N* = 434)		
Social Worker	53	12.2%
Mental Health Counselor	118	27.2%
School Counselor	11	2.5%

Marriage and Family Therapist	44	10.1%
Psychologist	118	27.2%
Psychiatrist	57	13.1%
Not aware of professional title	33	7.6%

Descriptive Statistics of the CHES

The descriptive statistics of the CHES items, including means, standard deviations, skewness, kurtosis, and missing values were attached as Appendix K. The covariance matrix for all CHES items was attached as Appendix L. All CHES items exhibited skewness and kurtosis estimates within the acceptable range (absolute skewness < 2.0 and absolute kurtosis <2.0; Watkins, 2018), indicating the recommendation for univariate normality was met. Multivariate normality of the CHES items were examined by the protocol provided by Korkmaz et al. (2014), which indicated that the assumption of multivariate normality was not met. Therefore, the use of MLR estimation is supported by the data characteristics. Lastly, all missing values were recoded as "-99". Potential issues with missing data were addressed by the default setting of Mplus to use the full information available from the data set, rather than deletion, replacement, or similar response pattern imputation. (Muthen & Muthen, 2017). The relative strengths of the full-information approach against other approaches to missing data in factor analysis was supported by simulation studies (e.g., Enders & Bandalos, 2001).

RQ1: Factor Structure

Exploratory Factor Analysis (EFAs) were conducted to determine the factor structure of the CHES. Since the CHES consists of both dispositional (n = 25) and situational items (n = 15), two separate EFAs were conducted with set of items before an EFA with the full set of items was conducted.

Dispositional CH

The first 25 items assess CH on a dispositional level; therefore, an EFA was conducted to explore the underlying dimensions of dispositional CH. Before proceeding to the primary analysis, a number of statistical assumptions associated with EFA were examined. First, the linearity assumption was determined by examining the scatterplots of all variables. No non-linear relationships were found between variables. Second, univariate normality was not violated, reflected by the mild skewness (absolute value ranging from .38 to 1.303), and kurtosis (absolute value ranging from .062 to 1.492) estimates. Third, multicollinearity was evaluated by examining whether the Tolerance value is greater than .10 and the VIF value less than 10. A collinearity diagnostic of the dispositional CH variables generated acceptable Tolerance (ranging from .320 to .813) and VIF (ranging 1.230 to 3.523), indicating no significant concern with multicollinearity.

Finally, factorability was determined by first inspecting the correlational matrix to see whether the absolute value of the inter-item correlation coefficient *r* for each item was not too low (<. 20, indicating items not presenting the same construct) or too high (>. 80, indicating concerns multicollinearity). Upon examining the correlational matrix, only Item 21 ("My counselor shows off their knowledge on cultural issues.") displayed consistently low correlations (*r* ranging from .057 to .224) with other variables, with the absolute value of all but three coefficients greater than .20 and the remaining 22 coefficients below .20. Moreover, two *a priori* analyses (i.e., the KMO measure of sampling adequacy and Bartlett's test of sphericity) were conducted to assess factorability. A KMO test value greater than .60 and the rejection of a null hypothesis in the Bartlett's test ($p < .05$) indicates that the set of items have acceptable factorability. For items assessing dispositional CH, the KMO test value was .959 and the

Bartlett's test was statistically significant (χ^2 = 6711.229, *df* = 300, $p < .001$), indicating excellent factorability.

An EFA was then conducted using MLR as estimator and CF-Equamax as the rotation method. Given that there were three hypothesized construct dimensions associated with dispositional CH, a series of model (i.e., 1-factor, 2-factor, 3-factor, and 4-factor) was tested using Mplus. To determine the number of factors in the preferred model, the following factor retention criteria were consulted (a) Kaiser's Eigenvalue-greater-than-one rule; (b) Scree test; (c) Parallel analysis; and (d) model fit indices (e.g., RMSEA). Among these criteria, the Kaiser's rule, Scree test, and parallel analysis were based on the Eigenvalue of the extracted factor, whereas the last criterion was proposed from a model selection perspective (Preacher et al., 2013). A number of model fit indices were provided by Mplus, including Chi-square test of model fit, RMSEA, comparative fit index (CFI), Tucker-Lewis index (TLI), and Standardized Root Mean Square Residual (SRMR). Although all indices convey meaningful information, whether the lower bound of the 90% confidence interval (90% CI) for the RMSEA (RMSEA.LB) drops below .05 was considered an important indicator of factor selection in this study (Preacher et al., 2013). The probability of the RMSEA value being less than .05 is reported as $RMSEA^{p05}$ in the results.

With the dispositional items, an EFA with MLR estimator extracted two factors with EVs greater than one (10.95 and 3.41) and an additional factor just below the threshold (.94). Scree test and parallel analysis both favored a two-factor solution (Figure 1 & 2). When examining from a model selection perspective, the one-factor solution resulted in the following model indices: $\chi 2$ = 1563.5 (*df* = 275, $p < .001$), RMSEA = .10 (90% CI [.10, .11], $RMSEA^{p05} < .001$), CFI = .72, TLI = .70, SRMR = .11. The literature generally suggested CFI and TLI values

greater than .90 and .95 can be considered to reflect acceptable and excellent fit to the data, and that SRMR value less than .08 generally indicates acceptable fit. (Hu & Bentler, 1999). Therefore, the one-factor solution did not produce acceptable model fit.

Figure 1

Scree Plot for CHES Dispositional Items

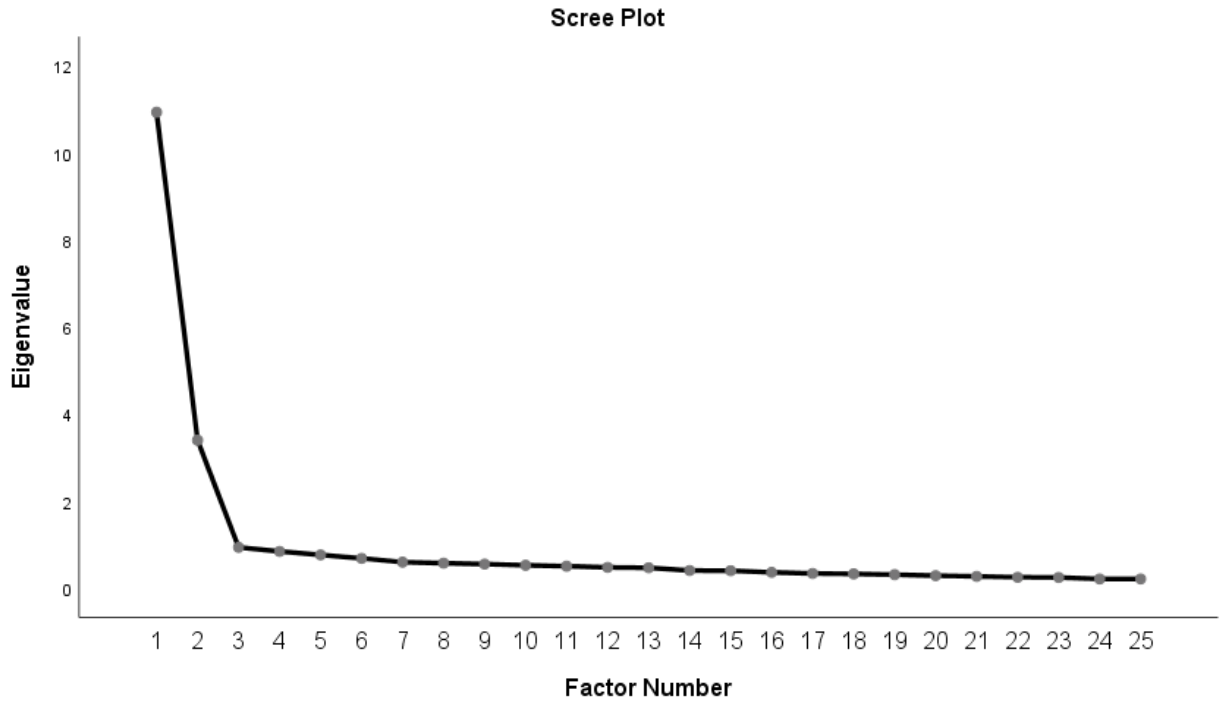
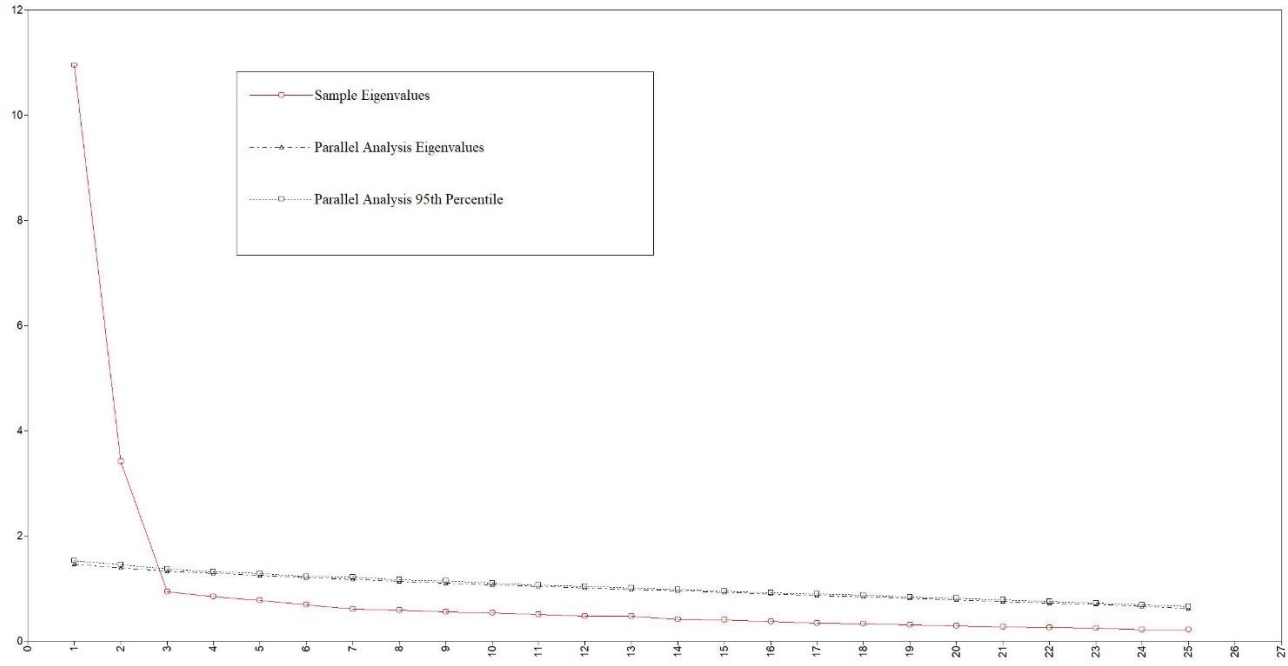


Figure 2

Parallel Analysis for CHES Dispositional Items



In comparison, the 2-factor solution demonstrated a significantly better fit: $\chi 2$ = 441.7 (*df* = 251, $p < .001$), RMSEA = .04 (90% CI [.04, .05], $RMSEA^{p05}$ = .983), CFI = .96, TLI = .95, SRMR = .03. According to the Preacher et al. (2013), the smallest number of factors for which RMSEA.LB drops below .50 should be chosen as the retained number of factors. Considering all factor-retention criteria, the 2-factor solution seemed most preferred. With regards to interpretability, the items corresponding to each extracted factor were moderately consistent with our substantive theory (Table 1). The extracted factors and their associated items are presented in Table 5. The inter-factor correlation between Factor 1 and 2 was moderate (r = -.39, $p < .05$). As is shown in Table 5, all dispositional CH items were loaded on the two extracted factors. Based on the associated items and prior literature (summarized in Table 1), Factor 1 and 2 are labeled as *Cultural Reflexivity and Openness* and *Cultural Superiority*. These two factors largely aligned with the conceptual domains, as Factor 1 corresponds with "Lifelong self-examination," and "Openness to cultural multiplicity," and Factor 2 with "Interpersonal modesty" (Table 1).

Table 5

EFA with the 25 Items Assessing Dispositional CH

Item (When approaching cultural topics, my counselor…)	Factor		Est. Resid.
	1	2	
Factor 1: Cultural Reflexivity and Openness			
Item 16 - Is willing expand their cultural view(s).	.76		33
Item 8 - Enjoys discussing ideas of different cultures.	.75		.38
Item 15 - Is open to corrective feedback for their cultural views.	.75		.35
Item 3 - Is open to changing their views on cultural issues.	.74		.40
Item 5 - Is interested in my cultural views.	.70		.32
Item 14 - Seeks corrective feedback for their cultural views.	.69		.58
Item 1 - Is open to exploring cultural topics.	.69		.36
Item 11 - Is willing to examine their own biases.	.69		.49
Item 4 - Is curious about what my culture means to me.	.68		.48
Item 12 - Recognizes the limitation of their cultural views.	.66		.58
Item 17 - Recognizes their biases.	.65		.51
Item 6 - Is open to cultural views that are different from their own.	.64		.41
Item 9 - Asks clarifying questions about cultural issues when they are uncertain.	.61		.59
Item 2 - Is willing to see things from my perspective.	.57		.44
Item 18 - Has a clear understanding of their own cultural views.	.52		.63[a]
Item 21[b]- Shows off their knowledge on cultural issues.	.35	(.29)	.87[a]
Factor 2: Cultural Superiority			
Item 23 - Imposes their cultural views on me.		.84	.33
Item 24 - Makes me feel like my cultural views are inferior.		.78	.40
Item 22 - Is arrogant about their cultural views.		.77	.31
Item 20 - Prioritizes their cultural views over mine.		.74	.46
Item 19 - Pretends to know something when they have no idea.		.73	.37
Item 13 - Is oblivious to their own biases.		.72	.46
Item 25 - Patronizes me in discussing cultural views.		.70	.55
Item 10 - Has a stereotypical view of my culture.		.70	.48
Item 7 - Is rigid in their cultural beliefs.		.67	.51
Eigenvalue	10.95	3.41	
% of Variance Explained	44.06	13.68	

Note. [a] Items with large estimated residual (i.e., low communality after extraction). [b] Items with cross-loading issues.

Among the 25 items, Item 21 (“Shows off their knowledge on cultural issues.”) showed issues with cross-loading, as it had a factor loading of .35 with Factor 1 and .29 with Factor 2. Watson (2017) suggested that items with close cross loadings (difference < .10) on two or more

factors should be deleted to increase discriminant validity between factors. Additionally, both Item 21 and Item 18 (“Has a clear understanding of their own cultural views.”) had large residual estimates after extraction (greater than .60), indicating that they shared low communality (i.e., less than .40) with other variables and may warrant removal (Watson, 2017; Worthington & Whittaker, 2006). In addition to these concerns, Item 21 had significantly lower primary loading (.35) compared to other items that are loaded on the same factor.

Another issue noted when examining the factor-item correspondence was regarding the phenomenon of *method effect* (Chyung et al., 2018). In reviewing empirical evidence, Chyung et al. (2018) suggested that the mixed use of positively and negatively worded items may result in categorization by item-wording difference, rather than conceptual difference, therefore posing threat to construct validity. Through examining the item loadings in Table 5, the categorization of several items may have been influenced by the method effect. For example, Item 13 “Is oblivious to their own biases” was strongly loaded (.70) on Factor 2 (“Cultural Superiority”) rather than its intended domain “lifelong self-examination”, which corresponds to Factor 1 (“Cultural Reflexibility and Openness). In fact, Item 17 (“Recognizes their biases) was intended to be the approximate polar opposite to Item 13 but was strongly loaded (.65) on Factor 1. Furthermore, these two conceptually opposite items only had small to medium negative correlation (r = -.35, p < .001). Moreover, Item 7 (“Is rigid in their cultural beliefs.”) and Item 10 (“Has a stereotypical view of my culture.”) are also conceptually closer to the domains represented by Factor 1 but were loaded on Factor 2 through the EFA procedure. These discrepancies may have echoed the concerns put forth by Chyung et al. (2018), who recommended against the simultaneous use of positively and negatively worded items in scale development, due to concerns with reliability and validity. Given that the purpose of the current

stage was to reveal the substructure of the dispositional component of the CHES, all decisions regarding item retention were postponed until later stages.

Situational CH

The same protocol outlined in the previous section was applied to analyzing the last 15 items assessing situational CH. Linearity assumption was met, as no non-linear relationships were found by examining the scatterplots of all variables. The normality assumption was met due to acceptable skewness (absolute value ranging from .196 to 1.129) and kurtosis estimates (absolute value ranging from .040 to 1.516). No concern with multicollinearity was identified due to acceptable Tolerance (ranging from .327 to .480) and VIF values (ranging from 1.576 to 3.053). Upon examining the correlational matrix, no variable showed excessively low or high correlations in a consistent pattern with other variables. The KMO test value was .96 and the Bartlett's test was statistically significant (χ^2 = 6711.229, *df* =300, p < .001), suggesting excellent factorability.

An EFA was conducted with the 15 situational CH items using MLR as estimator and CF-Equamax rotation. Although two conceptual domains were hypothesized to be associated with situational CH (Table 1), a variety of model (i.e., 1- to 5-factor solution) were tested based on the rationale that characteristics of dispositional CH may overlap with those of situational CH. The EFA produced two factors with EVs greater than one (8.07 and 1.74). Scree test and parallel analysis both favored a two-factor solution (Figure 3 & 4) based on eigenvalues.

Figure 3

Scree Plot for CHES Situational Items

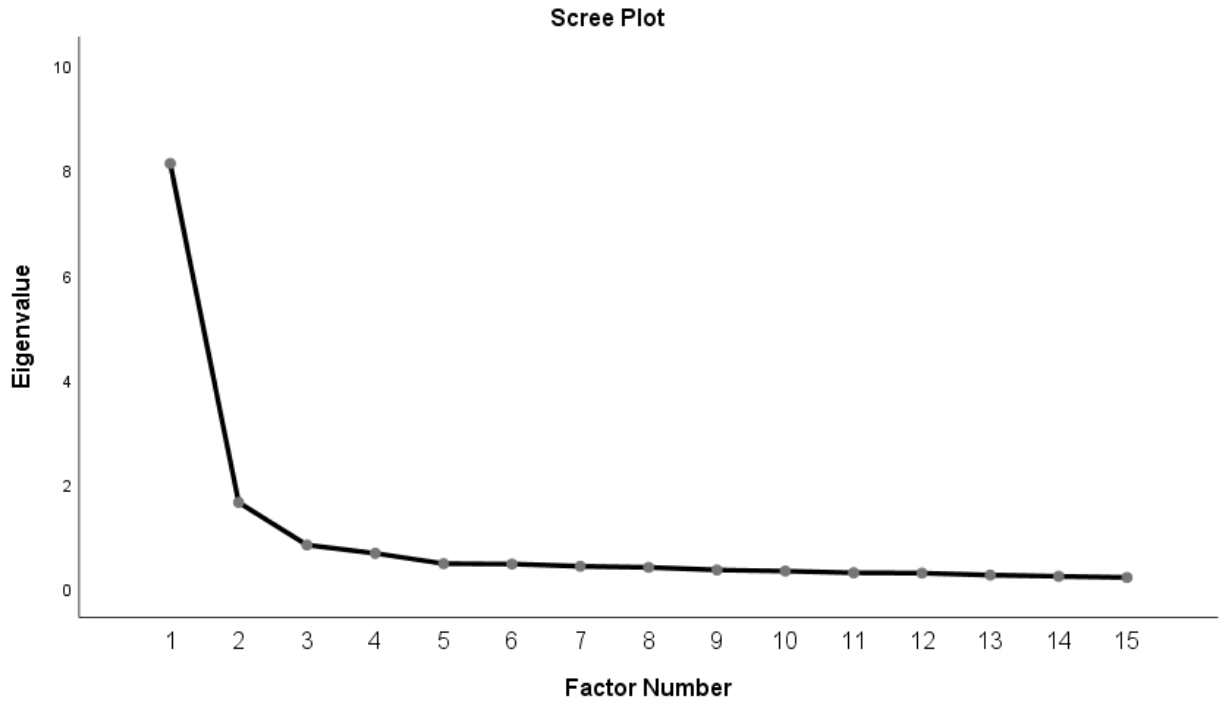
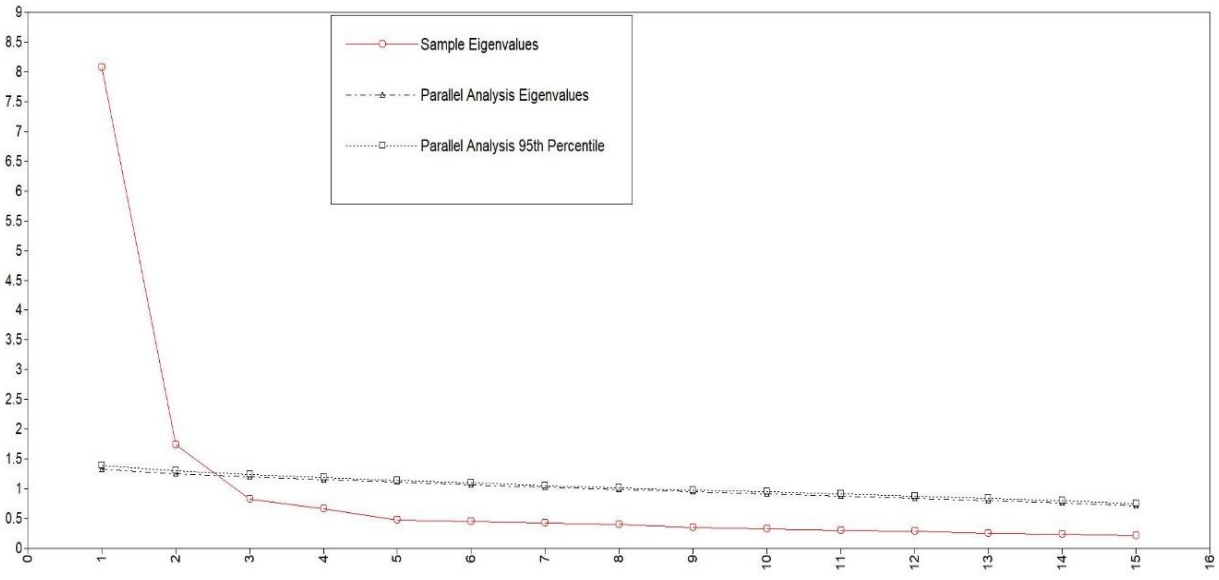


Figure 4

Parallel Analysis for CHES Situational Items



Upon inspecting the model fit indices, the one-factor ($\chi 2$ = 466.5, *df* = 90, $p < .001$, RMSEA = .10 (90% CI [.09, .10], $RMSEA^{p05} < .001$), CFI = .84, TLI = .82, SRMR = .08) did not produce acceptable fit. The two-factor solution produced significantly better fit ($\chi 2$ = 201.1, *df* = 76, $p < .001$, RMSEA = .06 (90% CI [.05, .07], $RMSEA^{p05}$ = .033), CFI = .95, TLI = .93, SRMR = .03) but was still less than ideal, particularly in terms of the RMSEA, as the probability of the RMSEA value below .05 was only 3%. The 3-factor solution ($\chi 2$ = 92.3, *df* = 63, $p < .001$, RMSEA = .03 (90% CI [.02, .05], $RMSEA^{p05}$ = .983), CFI = .99, TLI = .98, SRMR = .02) showed RMSEA.LB that met the criteria suggested by Preacher et al. (2013). The discrepancy between the EV-based perspectives and model selection perspective warranted further consideration, as the third factor in the 3-factor solution has an EV of .82, indicating low factor stability, and is only loaded with three variables, which is lower than the minimal number of four suggested by the literature (Watson, 2017). However, the researcher decided that retaining the 3-factor solution was advantageous based on the consideration that over-extracting in this stage of analysis may reveal the correlations between items to a finer degree and that strongly correlated factors may collapse when the full set of items are analyzed. Therefore, the 3-factor solution is presented in Table 6, and the factor correlation matrix in Table 7. Note that there is a strong (r = .66, $p < .05$) correlations between Factor 3 and 5, indicating potential merging in a later stage.

Table 6

EFA with the 15 items Assessing Situational CH

Item (In moments of cultural tension, my counselor)	Factor			Est. Resid.
	3	4	5	
Factor 3: Leaning-in				
Item 31 - Wants to understand my cultural view(s) better.	.74			.27
Item 30 - Seeks to understand my cultural view(s) better.	.68			.30
Item 34 - Collaborates with me.	.61			.30
Item 27 - Listens to my cultural view(s).	.58			.31
Item 35 – Makes me feel valued in our relationship.	.56			.33

Item 29 - Admits when they made mistakes.	.55			.40
Item 32 - Makes room for me to have a different cultural perspective.	.53			.32
Factor 4: Negative Interaction				
Item 26 - Is defensive when their cultural view(s) are challenged.		.77		.36
Item 28 - Tries to justify their cultural view(s).		.67		.60[a]
Item 33 - Minimizes my cultural view(s)		.67		.41
Item 38 - Is uncomfortable to talk about our conflict.		.67		.43
Item 40 - Avoids having dialogues about our conflict.		.68		.55
Factor 5: Attunement				
Item 39 - Has authentic dialogue with me about our conflict.			.84	.30
Item 36 - Is attentive to how I feel about our conflict.			.77	.29
Item 37 - Empathizes with how I feel about our conflict.			.73	.33
Eigenvalue	8.07	1.74	0.82	
% of Variance Explained	54.2	11.0	5.5	

Note. [a] Items with large estimated residual (i.e., low communality after extraction)

Table 7

Situational CH Factor Correlation Matrix

Factor	3	4	5
3. Leaning-in	---	-.41	.66
4. Negative Interaction		---	-.43
5. Attunement			---

Note. All correlations significant at .05 level.

The EFA results of the situational CH items also appeared to be impacted by the item-wording difference. Specifically, Factor 4 ("Negative Interaction") appeared to be a *method factor* (Chyung et al., 2018) loaded with all negatively worded items across two hypothesized conceptual domains ("Lack of defensiveness" and "Relational orientation"). For example, Item 40 ("Avoid having dialogues about our conflict") was hypothesized to be conceptually opposite to Item 30 ("Has authentic dialogue with me about our conflict"). However, these two items created under the same conceptual domains only share medium negative correlation (r = -.37, $p < .001$) and were loaded on two separate factors. Due to the potential method effect, Factor 4

seemed to represent of a range of negative aspects of CH, rather than a singular aspect, which is the ideal outcome of EFA. This phenomenon will be discussed in the next chapter.

CHES – Combined Dispositional and Situational CH

After the two EFAs that revealed the sub-structures of the dispositional and situational CH items, an additional EFA was conducted with the full set of CHES items. Before proceeding to main analysis, all statistical assumptions were examined. The univariate normality assumption was met due to previous examination of all individual items. Linearity assumption was met, as no non-linear relationships were found by examining the scatterplots of all variables. No concern with multicollinearity was identified due to acceptable Tolerance (ranging from .27 to .80) and VIF values (ranging from 1.25 to 3.47). Upon examining the correlational matrix, Item 21 ("My counselor shows off their knowledge on cultural issues."), again, displayed consistently low correlations (*r*s ranging from .045 to .224) with other variables, with the absolute value of all but three coefficients greater than .20 and the remaining 37 coefficients below .20. Additionally, Item 21 also has an initial communality .20, suggested a small shared variance with other items. Therefore, Item 21 was removed from further analyses. The KMO test value was .97 and the Bartlett's test was statistically significant (χ^2 = 12365.60, *df* =780, p < .001), suggesting excellent factorability.

An EFA was conducted with 39 remaining items. A variety of models (i.e., 1- to 5-factor solution) were tested based on the rationale that a total of five factors may emerge from the two factors representing dispositional CH and three factors representing situational CH. The EFA produced three factors with EVs greater than one (17.97, 4.19, and 1.38). Scree test supported a three-factor solution (Figure 5), and the result of parallel analysis was ambivalent between a two- and three-factor solution (Figure 6).

Figure 5

Scree Plot for CHES (39 items)

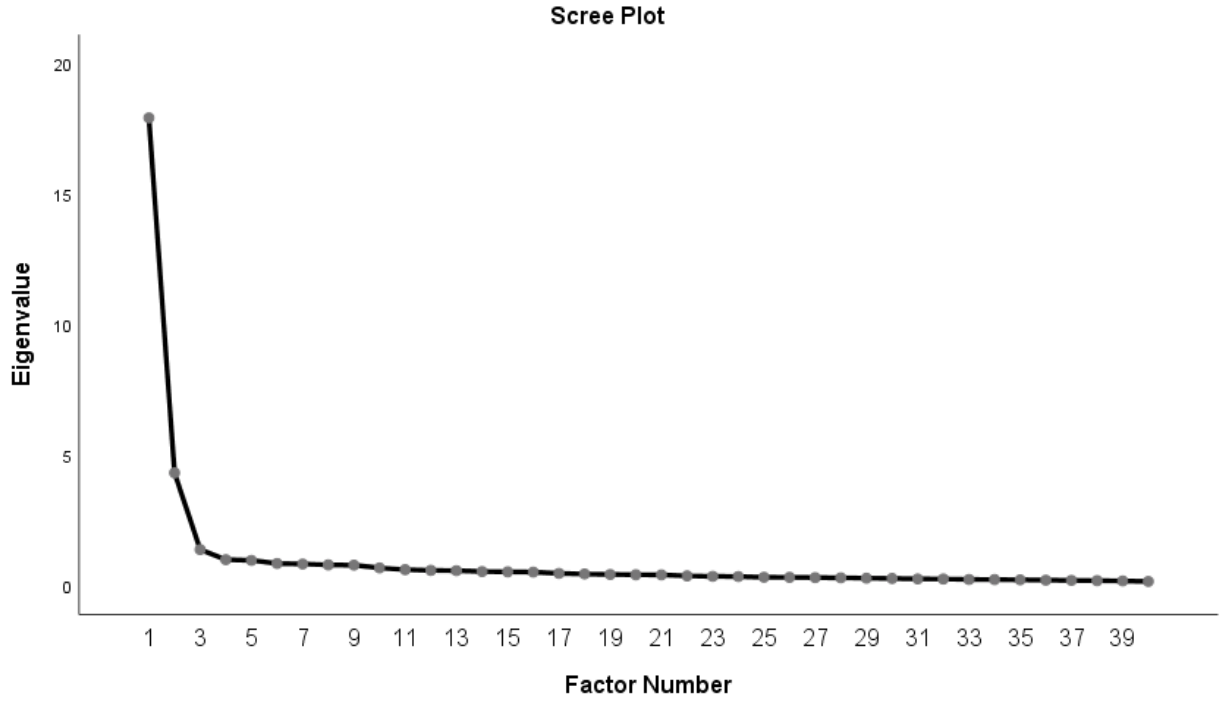
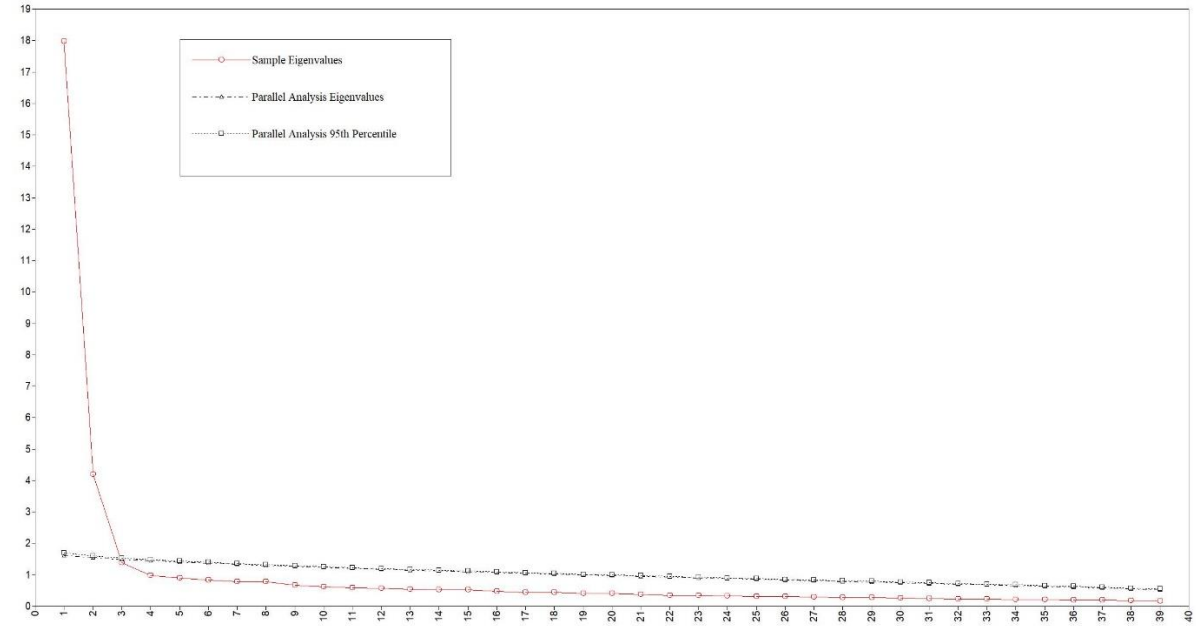


Figure 6

Parallel Analysis for CHES (39 items)



Upon inspecting the model fit indices, the 1-factor solution ($\chi 2$ = 2920.7, *df* = 702, *p* < .001, RMSEA = .09 (90% CI [.08, .09], $RMSEA^{p05}$ < .001), CFI = .74, TLI = .72, SRMR = .10) did not produce acceptable fit. The 2-factor solution showed improved fit indices: $\chi 2$ = 1458.5, *df* = 664, *p* < .001, RMSEA = .05 (90% CI [.05, .06], $RMSEA^{p05}$ = .127), CFI = .91, TLI = .90, SRMR = .40, still with concerns related to RMSEA.LB, CFI, and TLI. However, the 3-factor solution demonstrated an excellent fit: $\chi 2$ = 1165.4, *df* = 627, *p* < .001, RMSEA = .04 (90% CI [.04, .05], $RMSEA^{p05}$ = .990), CFI = .94, TLI = .92, SRMR = .03. Considering all factor retention criteria, the 3-factor solution is selected for the 39-item CHES.

A number of criteria recommended in the EFA literature (Mvududu & Sink, 2013; Watson, 2017; Worthington & Whittaker, 2006) were implemented for removing items that performed less than satisfactorily: (1) Factor loading with the primary factor is greater than .32; (2) Factor loading with the primary factor at least .10 greater than the secondary factor (i.e., strong cross loading); and (3) Low (.40) communality estimate after extraction (equivalent to .60 residual estimate or greater). According to these criteria, Item 18 (“Has a clear understanding of their own cultural views.”), Item 28 (“Tries to justify their cultural views.), and Item 40 (“Avoids having dialogues about our conflict.”) were identified with communality estimates lower than .40. Moreover, Item 2 (“Is willing to see things from my perspective.”), Item 29 (“Admits when they made mistakes.”), Item 30 (“Seeks to understand my cultural view(s) better.”) and Item 31 (“Wants to understand my cultural view(s) better.”) were identified with strong cross-loadings on two or more items. These seven items were removed one at a time, after which a new EFA was run to ensure that the same factor structure was replicated.

An EFA was performed with the remaining 32 items produced a 3-factor solution with an improved model fit compared to the initial EFA: $\chi 2$ = 727.7, *df* = 403, *p* < .001, RMSEA = .04

(90% CI [.04, .05], $RMSEA^{p05}$ = .989), CFI = .95, TLI = .94, SRMR = .03. The final 3-factor solution is presented in Table 8, and the inter-factor correlation matrix in Table 9. The three extracted factors cumulatively explained 62.5% of variance. Figure 7 illustrates the relationship between the factors representing dispositional CH, situational CH, and full CHES items. Specifically, Factor A (labeled as "Cultural Teachability") largely corresponds with Factor 1 (denoted with color orange) for dispositional CH; Factor B (labeled as "Cultural Superiority and Disrespect") is a result of merging Factor 2 (denoted with color blue) for dispositional CH and Factor 4 (denoted with color green) for situational and CH; Factor C is a result of merging Factor 3 (denoted with color yellow) and 5 (denoted with color grey) for situational CH.

Figure 7

Relationships Among Extracted Factors and Items between Subsets and Full CHES

Table 8

EFA with the 32-items CHES

Item	Factor Loadings			Est. Resid.
	A	B	C	
Factor A: Cultural Teachability				
Item 3 - Is open to changing their views on cultural issues.	.72			.37
Item 16 - Is willing expand their cultural view(s).	.68			.32
Item 15 - Is open to corrective feedback for their cultural views.	.66			.36
Item 8 - Enjoys discussing ideas of different cultures.	.65			.39
Item 14 - Seeks corrective feedback for their cultural views.	.63			.56
Item 12 - Recognizes the limitation of their cultural views.	.58			.57
Item 5 - Is interested in my cultural views.	.57			.32
Item 1 - Is open to exploring cultural topics.	.57			.36
Item 6 - Is open to cultural views that are different from their own.	.55			.41
Item 17 - Recognizes his/her biases.	.53			.52
Item 4 - Is curious about what my culture means to me.	.52			.48
Item 11 - Is willing to examine their own biases.	.52			.48
Item 9 - Asks clarifying questions about cultural issues when they are uncertain.	.46			.59
Factor B: Cultural Superiority and Disrespect				
Item 23 - Imposes their cultural views on me.		.78		.34
Item 22 - Is arrogant about their cultural views.		.73		.29
Item 26 [a] - Is defensive when their cultural view(s) are challenged.		.71		.40
Item 19 - Pretends to know something when they have no idea.		.71		.35
Item 24 - Makes me feel like my cultural views are inferior.		.69		.40
Item 10 - Has a stereotypical view of my culture.		.68		.47
Item 7 - Is rigid in their cultural beliefs.		.67		.50
Item 13 - Is oblivious to their own biases.		.66		.46
Item 20 - Prioritizes their cultural views over mine.		61		.48
Item 33 [a] - Minimizes my cultural view(s).		.60		.44
Item 25 - Patronizes me in discussing cultural views.		.53		.49
Item 38 [a] - Is uncomfortable to talk about our conflict.		.49		.57
Factor C: Other-oriented Engagement				
Item 39 [a] - Has authentic dialogue with me about our conflict.			.88	.31
Item 36 [a] - Is attentive to how I feel about our conflict.			.83	.30
Item 37 [a] - Empathizes with how I feel about our conflict.			.83	.32

Item 32 [a] - Makes room for me to have a different cultural perspective.			.51	.35
Item 27 [a] - Listens to my cultural view(s).			.49	.34
Item 35 [a] - Makes me feel valued in our relationship.			.48	.37
Item 34 [a] - Collaborates with me.			.46	.37
Eigenvalue	14.8	3.75	1.35	
% of Variance Explained	46.4	11.9	4.24	

Note. [a] Items that were hypothesized to assess situational CH

Table 9

Factor Correlation Matrix for EFA with 32-item CHES

Factor	A	B	C
A. Cultural Teachability	---	-.27	.56
B. Cultural Superiority and Disrespect		---	-.46
C. Other-oriented Engagement			---

Note. All correlations significant at .05 level.

A final step in the EFA is to optimize scale length. The EFA literature (e.g., DeVellis, 2017; Worthington & Whittaker, 2006) suggested eliminating items that (a) have the lowest factor loading, (b) have the highest cross loading, (c) the least contribution to the internal consistency of the scale, (d) the lowest conceptual consistency with other items loaded on the factor, and/or (e) redundancy. No items were identified as having issues with insufficient factor loading or strong cross-loading according to previous procedures. A reliability test was conducted with all 32 items, with all negatively worded items reverse coded. The internal consistency reliability estimate (Cronbach alpha) was .96 with the 32 CHES items. Upon examining the item-scale statistics, eliminating any individual item will always result in a decrease of Cronbach's alpha below the .96 level, indicating that each item contributes meaningfully to the reliability of the scale. Hence, no item was identified due to lacking contribution to reliability. Lastly, Item 38 ("Is uncomfortable to talk about our conflict.") was eliminated due to the lack of conceptual consistency with other items loaded on Factor B. Item 7

("Is rigid in their cultural beliefs) and Item 13 ("Is oblivious to their own biases.") were eliminated from Factor B based on the consideration that they are loaded on Factor B (rather than Factor A) potentially due to the method effect rather than conceptual consistency. Meanwhile, Item 10 ("Has a stereotypical view of my culture."), though suspected to be impacted by the method effect, was retained on Factor B as it fits under the Factor label ("Cultural Superiority and Disrespect) and was largely consistent with other items loaded on the same factor.

A total of 29 items were retained in the final version of CHES. A final EFA was conducted to ensure that the same factor structure can be replicated after the final trimming of the scale. The results replicated a three-factor solution (EVs =13.8, 3.4, 1.3), explaining a total of 64.1% variance. Model fit was excellent: $\chi 2$ = 592.5, *df* = 322, $p < .001$, RMSEA = .04 (90% CI [.04, .05], $RMSEA^{p05}$ = .963), CFI = .95, TLI = .94, SRMR = .03.. The final 29-item version CHES is presented in Table 10.

Based on the final 29-version CHES, the total score of the CHES was calculated, with items in the CHES Factor B reversely coded. The ratings of the CHES total score did not differ on the basis of sampling source (p = .147) or race/ethnicity (p = .127). However, there was a small but significant Mean difference (-5.40, p = .035) in the ratings of the CHES total score between individuals who identified as male (N = 139, M = 127.0, SD = 24.5) and female and gender minorities (N = 295, M = 132.4, SD = 25.0)

Table 10

Cultural Humility and Enactment Scale Final 29-item Version

Dimension	Items (Factor Loadings)
Cultural Teachability	Item 3 - Is open to changing their views on cultural issues. (.70) Item 16 - Is willing expand their cultural view(s). (.69) Item 15 - Is open to corrective feedback for their cultural views. (.64) Item 8 - Enjoys discussing ideas of different cultures. (.64) Item 14 - Seeks corrective feedback for their cultural views. (.62)

	Item 12 - Recognizes the limitation of their cultural views. (.56)
	Item 5 - Is interested in my cultural views. (.56)
	Item 1 - Is open to exploring cultural topics. (.56)
	Item 6 - Is open to cultural views that are different from their own. (.54)
	Item 17 - Recognizes his/her biases. (.52)
	Item 4 - Is curious about what my culture means to me. (.51)
	Item 11 - Is willing to examine their own biases. (.51)
	Item 9 - Asks clarifying questions about cultural issues when they are uncertain. (.45)
Cultural Superiority and Disrespect	Item 23 - Imposes their cultural views on me. (.81)
	Item 22 - Is arrogant about their cultural views. (.75)
	Item 19 - Pretends to know something when they have no idea. (.73)
	Item 24 - Makes me feel like my cultural views are inferior. (.73)
	Item 26 [a] - Is defensive when their cultural view(s) are challenged. (.72)
	Item 10 - Has a stereotypical view of my culture. (.70)
	Item 33 [a] - Minimizes my cultural view(s). (.62)
	Item 20 - Prioritizes their cultural views over mine. (.61)
	Item 25 - Patronizes me in discussing cultural views. (.56)
Other-oriented Engagement	Item 39 [a] - Has authentic dialogue with me about our conflict. (.88)
	Item 36 [a] - Is attentive to how I feel about our conflict. (.84)
	Item 37 [a] - Empathizes with how I feel about our conflict. (.82)
	Item 32 [a] - Makes room for me to have a different cultural perspective. (.50)
	Item 27 [a] - Listens to my cultural view(s). (.48)
	Item 35 [a] - Makes me feel valued in our relationship. (.46)
	Item 34 [a] - Collaborates with me. (.45)

Note. [a] Items that were hypothesized to assess situational CH

RQ2: Internal Consistency Reliability

Cronbach's alpha (α) was computed to assess the internal consistency reliability the CHES. The Cronbach's α for the initial 40-item version (N = 434) was .96. For the final 29-item version of the CHES, the Cronbach's α (N =434) was .96. In terms of the internal consistency reliability for each factor, the Cronbach's α was .94 for Factor A ("Cultural Teachability"), .92 for Factor B ("Cultural Superiority and Disrespect"), and .92 for Factor C ("Other-oriented Engagement"). These results suggested excellent internal consistency reliability for the CHES full scale and the three dimensions.

RQ3: Relationship between the CHES and CHS

Bivariate correlations were conducted to determine the relationships between the CHES and CHS on the scale-, factor-, and item-levels. As the CHES and CHS are both intended to measure CH, it was hypothesized that variables within the CHES and CHS will share moderate to strong correlations (i.e., convergent validity).

Before proceeding to the correlation analysis, all statistical assumptions associated with bivariate correlations were examined. Data normality was checked by inspecting the absolute value of the skewness and kurtosis estimates. All CHS variables exhibited moderate skewness (ranging from .28 to 1.75) and kurtosis estimates (ranging from .01 to 2.50), indicating acceptable univariate normality. Furthermore, univariate normality for all CHES variables were examined previously during the EFA procedures. Therefore, the normality assumption was not violated. To examine the homoscedasticity and linearity, scatterplots were generated to visually inspect the standardized residuals and pattern of associations for each individual variable. No concern with homoscedasticity and linearity was identified.

Bivariate correlations were conducted using (a) CHES full scale, (b) CHES Factor A, (c) CHES Factor B, (d) CHES Factor C, (e) CHS full scale, (f) CHS positive subscale, and (g) CHS negative subscale. The relationships between variables are presented in Table 11.

Table 11

Correlations, Means, Standard Deviations among CHES and CHS Variables

Variables	1	2	3	4	5	6	7
1. CHES Full Scale (29 item)	-						
2. CHES Factor A Cultural Teachability (13 items)	.89	-					
3. CHES Factor B Superiority and Disrespect (9 items)[a]	.80	.49	-				

4. CHES Factor C Other-oriented Engagement (7 items)	.89	.76	.60	-			
5. CHS Full Scale (12 items)	.84	.67	.76	74	-		
6. CHS Positive (7 items)	.83	.74	.62	.79	.90	-	
7. CHS Negative (5 items)[a]	.68	.47	.75	.54	.90	.62	-
Mean	130.6	56.5	41.8	32.4	48.5	30.0	18.5
Standard Deviation	24.9	12.1	10.0	7.0	10.0	5.6	5.6
Cronbach's α	.96	.94	.92	.92	.93	.94	.89

Note. All correlations were significant at the .01 level (2-tailed).

[a] Reverse coded, with higher scores indicating higher CH.

As hypothesized, the CHES and CHS scores share medium to strong correlations, indicating good convergent validity between the two scales. Specifically, the CHES and CHS total scores have strong (r = .84, p < .01) correlations, sharing approximately 70% of the variance. On the factor/subscale level, the correlations were moderate to strong, with the coefficient being .79 between CHES Factor C (Other-oriented Engagement) and CHS Positive subscale, .75 between CHES Factor B (Cultural Superiority and Disrespect) and CHS Negative subscale, .74 between CHES Factor A (Cultural Teachability) and CHS Positive subscale, .62 between CHES Factor B and CHS Positive subscale, .54 between CHES Factor C and CHS Negative subscale, and .47 between CHES Factor A and CHS Negative subscale.

To further illustrate the relationship between the CHES and CHS, an EFA (MLR estimator and CF-Equamax rotation) was conducted with the 29 CHES items and 12 CHS items combined. Five factors were identified with EVs equivalent to or greater than one (19.7, 4.0, 1.5, 1.2, and 1.0). The 3-factor solution demonstrated an acceptable fit: $\chi 2$ = 1509.0, df = 700, p < .001, RMSEA = .05 (90% CI [.05, .06], $RMSEA^{p05}$ = .227, CFI = .92, TLI = .90, SRMR = .03). In this solution, the first factor corresponded to the CHES Factor A; the second factor

corresponded to the CHES Factor B and CHS Negative scale combined; the third factor corresponded to the CHES Factor C and CHS Positive scale combined. The 5-factor solution demonstrated an excellent fit: $\chi 2$ = 983.8, *df* = 625, $p < .001$, RMSEA = .04 (90% CI [.03, .04], $RMSEA^{p05}$ = 1.000), CFI = .96, TLI = .95, SRMR = .02), with each extracted factor largely corresponds to the original factor/subscale. The inter-factor correlations matrix is presented in Table 12. These results suggest that the CHES and CHS, though converging on some dimensions, can still be distinguished statistically. In other words, although the CHES and CHS have good convergent validity (particularly between CHES Factor B and CHS Negative and between CHES Factor C and CHS Positive), they are still distinct measures. In particular, the CHES Factor A seems to be a non-overlapping dimension with the CHS. In conclusion, the CHES demonstrated good convergent validity with the CHS, which is intended to measure the same constructs; meanwhile, the CHES Factor A ("Cultural Teachability") seems to be a unique dimension not overlapping with the CHS.

Table 12

Factor Correlation Matrix for the EFA with the CHES and CHS Combined Items

Factors	1	2	3	4	5
1. CHES Factor A	-				
2. CHES Factor B	-.16	-			
3. CHES Factor C[a]	.48	-.38	-		
4. CHS Positive	.47	-.39	.59	-	
5. CHS Negative[a]	-.25	.59	-.38	-.46	-

Note. All correlations significant at .05 level.

[a] Not corresponding exactly to the original factor/subscale due to item crossovers

RQ4: Relationships between the CHES and CCCI-R7

Bivariate correlations were conducted to determine the relationships between the CHES and CCCI-7 on the scale-, factor-, and item-levels. As the CHES and CHS are intended to measure two related but distinct constructs (CH and CC), it was hypothesized that variables within the CHES and CHS will share small to medium correlations.

All statistical assumptions were examined before bivariate correlations were conducted. All CCCI-R7 variables exhibited moderate skewness (absolute value ranging from .79 to 1.46) and kurtosis estimates (absolute value ranging from .13 to 1.96), indicating acceptable univariate normality. To examine the homoscedasticity and linearity, scatterplots were generated to visually inspect the standardized residuals and pattern of associations for each individual variable. No concern with homoscedasticity and linearity was identified.

Bivariate correlations were conducted using (a) CHES full scale, (b) CHES Factor A, (c) CHES Factor B, (d) CHES Factor C, and (e) CCCI-R7. The relationships between variables are presented in Table 13. The correlations between the CHES and CHS variables were medium to strong, which deviates slightly from the hypothesis. Specifically, the CHES and CHS total scores have strong ($r = .85$, $p < .01$) correlations, sharing approximately 72% of the variance. Furthermore, the correlation coefficients between the CCCI-R7 and CHES factors were .81 for Factor C, .79 for Factor A, and .60 for Factor B.

Table 13

Correlations, Means, Standard Deviations among CHES and CCCI-R7 Variables

Variables	1	2	3	4	5
1. CHES Full Scale (29 items)	-				
2. CHES Factor A Cultural Teachability (13 items)	.89	-			
3. CHES Factor B Superiority and Disrespect (9 items) [a]	.80	.49	-		

4. CHES Factor C Other-oriented Engagement (7 items)	.89	.76	.60	-	
5. CCCI-R7 (7 items)	.85	.79	.60	.81	-
Mean	130.6	56.5	41.8	32.4	33.13
Standard Deviation	24.9	12.1	10.0	7.0	6.6
Cronbach's α	.96	.94	.92	.92	.93

Note. All correlations were significant at the .01 level (2-tailed).

[a] Reverse coded, with higher scores indicating higher CH.

To further illustrate the relationship between the CHES and CCCI-R7 on the item level, an EFA (MLR estimator and CF-Equamax rotation) was conducted with the 29 CHES items and 7 CCCI-R7 items. Four factors were identified with EVs greater than one (17.7, 3.39, 1.35, 1.1). The 3-factor solution demonstrated an acceptable fit: $\chi 2$ =1129.9, df = 525, p < .001, RMSEA = .05 (90% CI [.05, .06], $RMSEA^{p05}$ = .267), CFI = .92, TLI = .91, SRMR = .03. The first two extracted factors corresponded exactly to the CHES Factor A and B respectively and the third extracted factors corresponded to the CHES Factor C and CCCI-R7 combined. In comparison, the 4-factor solution showed an improved fit: $\chi 2$ = 860.8, df = 492, p < .001, RMSEA = .04 (90% CI [.04, .05], $RMSEA^{p05}$ = .999), CFI = .95, TLI = .94, SRMR = .03. In this solution, the first two extracted factors corresponded exactly to the CHES Factor A and B respectively, the third factor corresponded largely to the CHES Factor C, and the last factor corresponded largely to the CCCI-R7. The inter-factor correlation matrix is presented in Table 13. These results suggested that the CHES and CCCI-R7 converge on the conceptual domains represented by the CHES Factor C ("Other-oriented Engagement"). However, the factors primarily representing dispositional CH (i.e., Factor A and B) seem to distinguish the CHES from CCCI-R7 (divergent validity). In conclusion, the results, though illustrating medium to strong correlations between

the two measures, provided some evidence to support the discriminant validity of the CHES from the CCCI-R7.

Table 14

EFA with CHES and CCCI-R7Combined Factor Correlation Matrix

Factors	1	2	3	4
1. CHES Factor A	-			
2. CHES Factor B	-.21	-		
3. CHES Factor C[a]	.50	-.41	-	
4. CCCI-R7[a]	.58	-.39	.59	-

Note. [a] The factors do exactly match the original factor/scale due to item crossovers

RQ5: Predictive Validity of the CHES

A hierarchical multiple regression was used to determine whether the CHES scores predict the WAI-SR scores that assess clients perceived working alliance, above and beyond the variance explained by the CHS scores. Before the regression analysis, all statistical assumptions were examined, including normality, linearity, and homoscedasticity. The WAI-SR variables showed acceptable univariate normality, evidenced by moderate skewness (absolute value ranging from .294 to .810) and kurtosis estimates (absolute value ranging from .283 to 1.232). To examine the homoscedasticity and linearity, scatterplots were generated to visually inspect the standardized residuals and pattern of associations for each individual variable. No concern with homoscedasticity and linearity was identified. Moreover, all CHES and CHS variables were inspected with regards to normality, linearity, and homoscedasticity. Therefore, no statistical assumptions were violated. The mean, standard deviation, and intercorrelations with all scales and subscales/factors are presented in Table 15. Moreover, gender was dummy coded with "male" assigned with a value of "0" and all other responses assigned with a value of "1." Similarly, race/ethnicity was dummy coded with "White" assigned with a value of "0" and all

other responses assigned with a value of "1." The point-biserial correlation coefficients were not significant between the WAI-SF scores and gender (r_{pb} = -.013, n = 422, p = .798) or race/ethnicity (r_{pb} = .008, n = 422, p = .869). However, gender was entered in the subsequent regression analyses as it was found to be a significant (p = -.035) covariate of the CHES scores.

A hierarchical multiple regression was conducted. The dependent variable was the WAI-SR total scores. For the predictors, gender and race/ethnicity (both dummy coded) were entered in Block 1, the CHS total scores in Block 2, and the CHES total scores in Block 3. A collinearity diagnostic test of all entered variables generated acceptable Tolerance (ranging from .292 to .998) and VIF (ranging 1.002 to 3.464), indicating no significant concern with multicollinearity.

Table 15

Intercorrelations of the CHES, CHS, and WAI-SR scores

Variable	1	2	3	4	5	6	7	8
1. CHS full scale (12 items)	-							
2. CHES Factor A (13 items)	.89	-						
3. CHES Factor B (9 items)	.80	.49	-					
4. CHES Factor C (7 items)	.89	.76	.60	-				
5. CHS Full Scale (12 items)	.84	.67	.76	74	-			
6. CHS Positive (7 items)	.83	.74	.62	.79	.90	-		
7. CHS Negative (5 items)	.68	.47	.75	.54	.90	.62	-	
8 WAI-SR Full Scale (12 items)	.76	.69	.56	.72	.74	.77	.57	-
Mean	130.6	56.5	41.8	32.4	48.5	30.0	18.5	45.1
Standard Deviation	24.9	12.1	10.0	7.0	10.0	5.6	5.6	11.5
Cronbach's α	.96	.94	.92	.92	.93	.94	.89	.96

Note. All correlations were significant at the .01 level (2-tailed).

Overall, the hypothesis was supported (Table 16). The demographic variables entered in Block 1 did not predict a significant portion of variance in the dependent variable. The CHS entered in Block 2 was a strong (β = .74) significant predictor of the WAI-SR score, and the three variables collectively predicted approximately 54% of the variance. In Block 3, the CHES (β = .44, p < .001) and CHS (β = .38, p < .001) were both significant predictors. With the addition of the CHES total score in Block 3, all the predictors accounted for an additional 6% of the variance in the WAI-SR score, compared to Block 2. Moreover, among all the variance explained, the CHES contributes the largest amount of unique variance (6%) compared to other variables. Additionally, gender also emerged as a significant predictor both in Block 2 (β = -.09, p = .007) and Block 3 (β = -.10, p = .002). The correlation coefficients for gender were small and with negative signs, indicating that those who self-identified as gender minorities (e.g., female, transgendered person) tend to report higher WAI-SR. Using G*Power Version 3.1 (Faul et al. 2007), *a post-hoc* power analysis (Cohen, 1988) was conducted for the increased variances due to the inclusion of the CHES total score. The results showed a medium effect size (Cohen's f^2 = .15) and sufficient power (1- β = 1.00).

Table 16

Hierarchical Regression with CHES & CHS Total Score Predicting WAI-SR

Predictors	R^2/Adj. R^2	ΔR^2	B/β	*Sig.*	sr^2
Block 1	.00/.00	.00		p = .798	
Gender[a]			-.30/-.01	p = .798	.00
Block 2	.54/.54***	.54***		p < .001	
Gender			-2.15/-.09**	p = .007	.01
CHS total score			.84/.74***	p < .001	.54
Block 3	.61/.60***	.06***		p < .001	
Gender			-2.32/-.10**	p = .002	.01

CHS total score	.43/.38***	$p < .001$	.05
CHES total score	.20/.44***	$p < .001$	.06

Note. [a] Variable dummy coded with "male" assigned a value of "0" and all other responses assigned a value of "1."

** $p < .01$. *** $p < .001$

An additional hierarchical regression was conducted, using the CHS subscales and the CHES factors as the predictors, in lieu of the full scales (Table 17). A collinearity diagnostic test of all entered variables generated acceptable Tolerance (ranging from .277 to .998) and VIF (ranging 1.002 to 3.613), indicating no significant concern with multicollinearity. The results showed that both the CHES Factors A ($\beta = .18$, $p < .001$) and C ($\beta = .19$, $p = .001$) were still significant predictors, after controlling for the CHS subscales and demographic variables, whereas the CHES Factor B was not a significant predictor ($\beta = .04$, $p = .390$). Using G*Power Version 3.1 (Faul et al. 2007), *a post-hoc* power analysis (Cohen, 1988) was conducted for the increased variances due to the inclusion of the factor scores of the CHES. The results showed a small effect size (Cohen's $f^2 = .10$) and sufficient power (1.00).

In conclusion, these results suggest that the CHES scores, both on the scale and factor level, uniquely predict the WAI-SR scores, above and beyond the variance explained by the CHS.

Table 17

Hierarchical Regression with CHES and CHS (Subscales/Factors) Predicting WAI-SR

Predictors	R^2/Adj. R^2	ΔR^2	B/β	Sig.	sr^2
Block 1	.00/.00	.00		$p = .798$	
Gender[a]			-.30/-.01	$p = .798$	.00
Block 2	.59/.59***	.59***		$p < .001$	
Gender			-1.85/-.08	$p = .014$	.01

CHS Positive			1.36/.66***	$p < .001$	.27
CHS Negative			.32/.16***	$p < .001$	.01
Block 3	.63/.63***	.04***		$p < .001$	
Gender			-1.81/-.07*	$p = .016$	.01
CHS Positive			.81/.40***	$p < .001$	.05
CHS Negative			.24/.11*	$p = .013$	.01
CHES Factor A			.16/.18***	$p < .001$	.01
CHES Factor B			.05/.04	$p = .376$	.00
CHES Factor C			.30/.19**	$p = .001$	.01

Note. [a] Variable dummy coded with "male" assigned a value of "0" and all other responses assigned a value of "1."

* $p < .05$. ** $p < .01$. *** $p < .001$

Summary

In this chapter, the results to all RQs in the current were presented. Table 18 contains the RQs, hypotheses, and the extent to which each hypothesis was supported by the results.

Table 18

Summary of Research Questions, Hypotheses, and Findings

RQ	Hypotheses	Hypothesis Testing	Findings
1	a. CHES will have a five-factor structure.	Partially supported	a. The CHES has a three-factor structure: (a) Cultural Teachability; (b) Cultural Superiority and Disrespect; and (c) Other-oriented Engagement. The three factors entailed items assessing all five hypothesized dimensions.
	b. The CHES will include factors representing both dispositional and situational CH.	Supported	b. The first two factors represented the dispositional qualities of CH, whereas the third factor represented characteristics of CH in value-laden situations.
2	a. The CHES will demonstrate a moderate to high internal consistency reliability, with Cronbach's alpha greater than .70.	Supported	a. The Cronbach's α for the CHES 29-item version was .96.
	b. Each CHES factor will have moderate to high internal consistency reliability estimates, with Cronbach's alphas greater than .70.	Supported	b. The Cronbach's αs for the CHES factors were .94 for Factor A, .92 for Factor B ("Cultural Superiority and Disrespect"), and .92 for Factor C ("Other-oriented Engagement").
3	a. The CHES and CHS total will have a moderate to strong correlation, with the correlation coefficient in the range from .60 to .80.	Partially supported	a. The CHES and CHS total scores have strong correlations (r = .84, p < .01).
	b. The factors/subscales of the CHES and CHS will have moderate to strong correlations	Partially supported	b. The correlations between the CHES factors and CHS subscales were moderate to strong, with the coefficient being in the range from .47 to .79 (ps < .01). Additionally, the CHES and CHS primarily converge on the dimensions represented by the CHES Factors B and C, but not Factor A.
4	a. The CHES and CCCI-R7 total scores will have moderate correlations, with the correlation coefficient in the range from .40 to .60.	Partially supported	a. The CHES and CHS total scores have strong (r = .85, p < .01) correlations.

	b. The CHES factors and the CCCI-R7 will have moderate correlations.	Partially supported	b. The correlations coefficients between the CCCI-R7 and CHES factors were .81 for Factor C, .79 for Factor A, and .60 (all *p*s < .01) for Factor B. Additionally, the CHES and CCCI-R7 primarily converge on the dimensions represented by the CHES Factor C, but not Factors A or B.
5	a. The CHES total score will significantly predict the WAI-SF scores, above and beyond the variances explained by the CHS total score and demographic covariates.	Supported	a. The CHES total score was a significant (β = .44, p < .001) predictor, above and beyond the variances explained the CHS total score (β = .38, p < .001) and gender.
	b. Some of the CHES factors will significantly predict the WAI-SF scores, above and beyond the variances explained by the CHS subscales and demographic covariates.	Supported	b. CHES A (β = .18, p < .001) and C (β = .19, p = .001) were significant predictors, after controlling for the CHS subscales and gender, whereas the CHES Factor B was not a significant predictor (β = .04, p = .376).

Chapter 5: Discussion

In Chapter 5, the researcher discusses the results in light of the literature summarized in Chapter 2. Furthermore, the limitations, and methodological contributions of the study, as well as the implications for counseling, counselor education, and future research are discussed.

RQ1: Factor Structures of the CHES

Through a series of EFAs, the final structure of the CHES was determined to contain three factors: (a) Factor A "Cultural Teachability", (b) Factor B "Cultural Superiority and Disrespect", and (c) Factor C "Other-oriented Engagement." In terms of conceptual meanings, Factor A measures counselors' willingness to change, expand, and examine their cultural views and assumptions, with openness and inquisitiveness toward cultural issues; Factor B measures counselors' sense of superiority and arrogance in their cultural positioning (or lack thereof); Factor C, an factor that only includes situational CH items, measures counselors' ability to empathically engage their clients in moments that involve value difference and conflicts. The finalized CHES contains items covering all the conceptual domains considered relevant to CH in the literature (Table 1). As was discussed in Chapter 2, the CHS (Hook et al., 2013) has been critiqued for having narrow conceptual coverage (Davis et al., 2018; Mosher et al., 2017) and lacking in consideration of the situational aspects of CH (Hook et al., 2013; Worthington & Allison, 2018). In comparison, a major strength of the CHES is its comprehensiveness in assessing CH across multiple conceptual domains and on both dispositional and situational levels. For researchers and practitioners, the CHES provides a broader, richer, and more nuanced assessment of CH for counselors and supervisees than the previous measure.

There were some discrepancies between the resultant 3-factor structure of the CHES and the hypothesized 5-factor structure. The discrepancy may indicate that the boundaries between

the conceptual domains relevant to CH (Table 1) was artificially drawn and may not represent a clear distinction from a statistical perspective. For example, one might argue that an openness to cultural multiplicity (i.e., Domain 1) naturally leads to a life-long commitment to cultural learning and self-examination (i.e., Domain 2). In fact, the EFAs with dispositional CH items indicate that Domain 1 and 2 may share considerable conceptual similarity, as a 3-factor solution produced two strongly correlated factors ($r = .72$, $p < .001$) and several items with issues with cross-loading that are otherwise strongly loaded on the combined factors. This result indicates the need for more empirical studies to articulate the core components of CH.

Some scholars (e.g., Danso, 2018) have critiqued that CH seems lacking in conceptual clarity and definitional unanimity across studies. For example, Hook et al. (2013) defined CH as having intrapersonal and interpersonal dimensions; however, the distinction between these two dimensions may be ambivalent. An individual who's open to cultural multiplicity is likely to be both self-reflective (intrapersonally) and displaying curiosity and interest toward others (interpersonal). In fact, this was reflected in the result in the current study that Domain 1 and 2 merged into a single factor. Therefore, Hook et al.'s (2013) definition, though semantically useful, does not contribute substantially to better conceptual clarity of the construct.

In comparison, the factor structure achieved in the current study illustrated three relatively distinct clusters of characteristics: (a) willingness to reassess and change one's cultural viewpoints; (b) lack of superiority and arrogance in one's cultural positioning; and (c) engaging in other-oriented behaviors in moments of cultural conflicts. The categorization has heuristic value and is aligned with some of the more recent theoretical models of CH. For example, Zhu and colleagues (2019) reported a grounded theory of CH, which articulated three core beliefs possessed by culturally humble individual: (a) Culture is complex and often subtle; (b) Learning

about culture is a life-long commitment; (c) All cultures and cultural beings have values and limitations. The second and third core beliefs correspond well to the construct dimensions represented by the CHES Factor A and B. Furthermore, Zhu et al. (2019) reported that culturally humble individuals tend to display openness, respect, empathy, and authenticity during moments of value discrepancy, which is captured by the CHES Factor C. Similarly, the results aligned with a model of CH by Foronda (2019), who asserted that enacting CH entails a flexible mindset, a balanced focus on the other and self during interactions, and a perspective that all human beings hold equal value. The results in the current study provided empirical support for the conceptual models of CH put forth by Zhu et al. (2019) and Foronda (2019) and call for future empirical investigation.

As described in Chapter 4, the factor structure of the CHES was achieved through a sequential analytical protocol that aimed to articulate the substructures of the dispositional and situational CH subsets before proceeding to examine the full structure of the CHES. The methodological decision was made based on the consideration that the CHES entails two distinct instructions prompting the participants to assess the CH of their therapists globally (i.e., "When approaching cultural topics, my counselor ...") and in situations where CH may be particularly salient (i.e., "In moments of cultural conflict, my counselor…"). In addition, the items assessing dispositional CH were primarily informed by the conceptual domains of "openness to cultural multiplicity", "lifelong self-examination," and "interpersonal modesty," whereas items assessing situational CH were created based on the domains of "lack of defensiveness" and "relational orientation" (Table 1). Although dispositional and situational CH are not two distinct constructs (Worthington & Allison, 2019), conducting separate EFAs has the advantages of illustrating

relationships between dispositional and situational set of items, both on the subset and individual items level.

The results from the sequential analyses supported the theoretical assumption that CH can be both dispositional and situational, while retaining the conceptual consistency between both aspects as a construct (Worthington & Allison, 2018). As visually represented in Figure 6, the substructure largely remained intact after the combined analyses, with several occasions in which items merged into different factors. The relative stabilities of factor structures across different stages of analyses indicate that items representing dispositional and situational CH represent relatively distinct counselor characteristics; meanwhile, the moderate to strong inter-factor correlations (Table 9) indicate that dispositional and situational CH should not be treated as two distinct constructs. As Zhu and colleagues (2019) discussed, CH is perceived to be consistently displayed regardless of situation; meanwhile, the more an individual enacts CH during cultural conflicts by leaning into the discomfort and authentically engaging in conversations, the more one is likely to develop CH as a quality. In other words, dispositional CH is a summary of one being consistently observed as culturally humble in salient situations. The results in this study supported combining the dispositional and situational perspectives in measuring CH, since achieving dispositional CH is considered a never-ending process (Tervalon & Murray-García, 1988) and one cannot sustain the state of humility indefinitely (Worthington & Allison, 2018).

The results also provide some clarifications regarding the counselor characteristics that tend to manifest dispositionally and those more salient during cultural conflicts. For example, a few situational CH items were found to merge into a different factor after the combined analyses, including Item 26 (“My counselor is defensive when their cultural views are challenged.”), Item 33 (“My counselor minimizes my cultural”), and Item 38 (“My counselor is uncomfortable to

talk about our conflict.") All these three items were originally loaded on Factor 4 ("Negative Interaction") within the situational CH subset. This result has several implications. For instance, merging of situational CH items into Factor B ("Cultural Superiority and Disrespect") indicates that characteristics such as non-defensiveness and valuing other individuals' cultural views may be better conceptualized as dispositional qualities, rather than specific to situations that involve cultural conflicts. For example, Van Tongeren et al. (2019) discussed that culturally humble individuals are generally able to regulate egoistic motives so that they can present their ideas in a modest, respectful, and non-defensive manner. Therefore, the loading of items 26 and 33 on Factor B may indicate that these items reflect dispositional qualities rather than those specific to moments involving value difference. However, an alternative explanation is that these items may have been erroneously loaded on Factor B due to the method effect (Chyung et al., 2018).

The results on factor structures elucidated potentially problematic items and rationale for future modifications of the CHES. When EFAs were conducted with the situational CH items, the results included two factors labeled as "Leaning-in" and "Attunement" respectively. Compared to the hypothesized domains of "lack of defensiveness" and "relational orientation" on which the items were developed, these two factors seem to more clearly represent the clusters of characteristics engaged by therapists that reflect CH in moments of conflict. Specifically, the results seemed to indicate that culturally humble counselors may display two distinguishable clusters of behaviors: (a) demonstrating willingness to collaboratively explore the cultural conflicts; and (b) emotional attunement and connection with the clients. These two factors share strong correlation ($r = .66$, $p < .001$) and collapsed into a combined factor (Factor C "Other-oriented Engagement") during the EFAs with the full set of items. This combined factor is consistent with what Foronda (2016, 2019) referred to as *Supportive Interactions*, which are

behaviors that lead to positive interpersonal outcome during cultural conflicts. Upon examining the factor loadings, items in the first cluster (items 39, 36, and 37) have factors loadings greater than .80, whereas items in the second cluster (items 32, 27, 35, and 34) have lower loadings less than .55. The noticeable gap between the strength of the factor loadings of the two clusters indicates that Factor C may be better conceptualized as having two sub-factors. Given that the combined factors, similar to the concept of supportive interactions, seem to entail idiosyncratic behaviors, future researchers may wish to further explore whether this factor can be further substantiated and potentially divided into subfactors.

Another phenomenon identified during data analyses was the method effect (i.e., the loading of items due to wording difference rather than conceptual distinction). As was illustrated in Chapter 4, several dispositional CH items (i.e., item 7, 10, and 13) that are negatively worded to reflect conceptual domains 1 and 2 in Table 1 were strongly loaded on Factor B representing Domain 3. Additionally, the EFAs with situational CH produced a method factor loaded with all negatively-worded items hypothesized to represent domain 4 and 5. As Chyung et al. (2018) point out, the combined use of positively- and negatively-worded items, contrary to the traditional notion of strengthening the rigor of instrumentation, may pose threat to construct validity and reduce the interpretability of factors emerged from EFA.

A closer examination of the factor structure of the CHS (Hook et al., 2013) indicates that the instrumentation process of the CHS may also have been impacted by the method effect. Specifically, the CHS consists of two factors (a) positive other-oriented characteristics; and (b) negative characteristics reflecting superiority and making assumptions. When examining the items loaded on these two factors, the second factor, in particular, consists of items that reflect idiosyncratic conceptual meaning, including a lack of modesty (Item 3 “My counselor assumes

he/she already knows a lot." and Item 10 "My counselor is a know-it-all"), inaccurate self-assessment (Item 11 "My counselor thinks that he/she understands more than he/she actually does."), superiority (Item 6 "My counselor acts superior."), and lack of inquisitiveness (Item 8 "My counselor makes assumption about me."). The potential method effect within both the CHES and CHS indicates that future researchers may want to avoid mixing the positively- and negatively-worded items in developing humility measures to guard against potential threats to reliability and validity.

RQ2: Reliability of the CHES

Overall, the CHES has excellent internal consistency reliability, as the Cronbach's alpha was .96 for the full scale, and .94, .92, and .92 for the CHES Factors A, B, and C respectively with the current sample. The research also examined the contributions of all the 29 final items to internal consistency reliability and found that deleting any items will result in a decrease in the Cronbach's alpha below the .96 level. These results suggest that the CHES has excellent internal consistency reliability and that all of its items contribute meaningfully to its reliability. In addition to the reliability estimates, all CHES final items are sufficiently correlated with each other but without excessively high correlation coefficients implying multicollinearity (i.e., absolute value ranging from .20 to .80). Moreover, the internal consistency reliability estimates of the CHES is equivalent to other trait humility measures, such as the CHS (Hook et al., 2013) and the Relational Humility Scale (Davis et al., 2011) and significantly higher than state humility measures, such as the Brief State Humility Scale (Kruse et al., 2017) and Experiences of Humility Scale (Davis et al., 2017). This result suggests that combining both the dispositional and situational CH approach did not hinder the overall reliability of the CHES.

Moreover, the CHES items share moderately high initial communalities (i.e. between .40 and 1.0) and high communalities after extractions. In other words, the CHES items share adequate variance and that the extracted factors sufficiently explained the shared variance among the retained items. These results further support the conceptual consistency of the CHES on the item level. Lastly, the CHES factors A, B, and C are determined by 13, 9, and 7 items respectively, which are considered over-determined according to the minimum number of four items per factor recommended in the literature (Mvududu & Sink, 2013; Watson, 2017). The overdetermination indicates that the CHES factors have a stable structure and are represented by a sufficient number of items. In total, there is ample evidence on the item, factor, and scale levels to support the internal consistency reliability of the CHES. It should be noted that other types of reliability (e.g., temporal stability, interrater) of the CHES were not examined in this study. Therefore, future research should continue to accumulate other types of reliability evidence for the CHES.

RQ3 & RQ4: Construct Validity of the CHES

Both convergent and discriminant validity (Hoyt et al., 2006) of the CHES were explored. Specifically, the research examined the relationship between the CHES (including its factors) and the CHS and CCCI-R7 with which the CHES is theoretically expected to converge (i.e., convergent validity) and/or diverge (i.e., discriminant validity).Within the internal structure of the CHES, there were moderate correlations (rs = -.27, .56, -.46, $p < .001$) between factors (Table 9), and strong correlations (rs = .89, .80, .89, $p < .001$) between the CHES total score and scores for each factor (Table 11). These results suggest that, although the factors collectively represent a higher-order construct (i.e., CH), they can still be distinguished from each other (i.e., discriminant validity). Given the good reliability estimates and the overdeterminations, each

CHES factor has the potential to be used as a standalone subscale to measure a salient dimension of the CHES.

Relationship between the CHES and CHS

Since the CHS is an existing measure of CH and has been empirically supported (Hook et al., 2013), it was hypothesized that the CHES scores and CHS scores will share medium to strong correlations. The hypothesis was supported, because the total scores of the two measures were strongly correlated ($r = .84$, $p < .001$), indicating approximately 70% shared variance. Furthermore, there were medium to strong correlations between the subscale/factors of the two measures, with the strongest correlation between the CHES Factor C and the CHS Positive subscale ($r = .79$, $p < .001$) and the lowest between the CHES Factor A and CHS Negative subscale ($r = .47$, $p < .001$).

The correlational evidence for convergent validity between the CHES and CHS was further corroborated by an EFA combining the 29 CHES items and the 12 CHS items. The combined EFA produced a 3-factor solution with an acceptable model fit, which includes an intact CHES Factor A, a merged factor from CHES Factor B and the CHS Negative subscale, and another merged factor from the CHES Factor C and CHS Positive subscale. The merging pattern corresponds to the strengths of correlations between subscales/factors (Table 11) as well as their conceptual labels (i.e., “Positive other-oriented characteristics” and “Other-oriented Engagement,” “Negative characteristics reflecting superiority and making assumption” and “Cultural Superiority and Disrespect”). While the 3-factor solution was acceptable in the combined EFA, the 5-factor solution demonstrated a superior model fit, in which each extracted factor largely corresponds to the original subscale/factor in the CHES and CHS. Taken together,

there is strong evidence to support the convergent validity of the CHES, while remaining a unique measure.

An important finding to support the distinctness of the CHES was that Factor A ("Cultural Teachability") did not converge with any CHS subscales in the combined EFA, suggesting that it may be a crucial conceptual dimension of CH that was not adequately assessed by the CHS. The limited conceptual coverage of the CHS has been noted in the literature (Davis & Hook, 2014; McElroy-Heltzel et al., 2019; Mosher et al., 2017), particularly in the areas of willingness to self-examine and admit mistakes, which corresponds to the conceptual domain represented by the CHES Factor A. Table 19 provides a conceptual comparison between the CHES and CHS. Previous literature on intellectual humility has found a perceived willingness to reassess or change one's viewpoint when presented with an alternative perspective (McElroy-Heltzel et al., 2019). Therefore, the findings in the current study may echo the overlapping aspects of CH and intellectual humility discussed in the broader humility literature (Davis & Hook, 2019). Future researchers may further utilize the CHES to explore the relationships between CH and other types of humility.

Table 19

Conceptual Comparison between the CHES and CHS

Conceptual Domains	**Sub-themes**	**Number of Items**	
		CHS	CHES
Cultural Teachability (CHES Factor A)	Interest/curiosity	4	5
	Openness to correction	1	5
	Self-examination	0	3
Cultural Superiority and Disrespect (CHES Factor B)	Superiority	1	3
	Disrespect	2	3
	Arrogance/Immodesty	3	3
Other-oriented Engagement (CHES Factor C)	Empathic interactions	0	3
	Mutuality/collaboration	1	4

Relationship between the CHES and CCCI-R7

The literature has indicated that cultural competence (CC) and CH are two related but distinct constructs (Fisher-Borne et al., 2015; Hampton et al., 2017; Yeager & Bauer-Wu, 2013). For example, Hampton et al. (2017) discussed that, while both CH and CC acknowledge the salience of cultural identity and the need to address cultural dynamics that exists between the counseling dyad, CC emphasizes on knowledge of other cultures based on observable traits, whereas CH focuses on continuous learning about and openness toward clients' cultural experience. Therefore, it was hypothesized that the CHES scores and the CCCI-R7 scores, included in this study to measure CC, would share moderate correlations.

The result showed stronger correlations between the two measures than expected. Specifically, there was a strong correlation between the CHES and CCCI-R7 total scores (r = .85, p < .001), and the correlation coefficient between the CCCI-R7 and the CHES factors was .81 (Factor C), .79 (Factor A), and .60 (Factor B). Furthermore, an EFA with all CHES final items and CCCI-R7 items combined resulted in a 3-factor solution with an acceptable fit, with two intact CHES factors (Factor A and Factor B), and a new factor merged from CHES Factor C and the CCCI-R7. Lastly, the 4-factor solution, which demonstrated a superior model fit, was largely able to differentiate the items from the CHES and CCCI-R7 (Table 14). These results indicated that the CHES and CCCI-R7, though sharing moderate to strong correlations between their aggregated scores, appear to be assessing different conceptual aspects.

The EFA with combined CHES and CCCI-R7 items suggest that these two measures appear to converge on the dimension representing behavioral characteristics in moments of cultural salience, rather than the dimensions representing the dispositional qualities (i.e., Factor A and B). These results echoed the discussion in the literature (Danso, 2018; Fisher-Borne et al.,

2015;) that the CC focuses demonstrating observable behaviors, whereas CH can be conceptualized as a general orientation and the counselor's way of being (Hook et al., 2013; Mosher et al., 2017; Tervalon & Murray Garcia, 1998). Upon examining each individual item within the CCCI-R7, several items appear to be focused on demonstrable interpersonal behaviors (e.g., Item 1 "My counselor acknowledges and is comfortable with cultural differences," Item 3 "My values and respects cultural differences," Item 4 "My counselor demonstrates knowledge about my culture," and Item 7 "My counselor is at ease talking with me."). Meanwhile, no item appears to assess intrapersonal qualities such as openness, continuing self-examination, modesty, and lack of superiority, which are essential to the perception of CH (Mosher et al., 2017). However, it should be noted that the CCCI-R7 (Drinane et al., 2016) implemented in this study was a shortened version of the CCCI-R (LaFromboise et al., 1991) and has not been tested extensively in the literature. Therefore, it is likely the CCCI-R7 does not fully capture all the conceptual domains of CC as indicated by the MCC framework (Sue et al., 1992). Moreover, it should be noted that the CCCI-R7 was sequenced directly after the CHES in the survey, which may have led to participants' responding in similar manners to both instruments.

The comparison between CH and CC is a heatedly contested issue, with some scholars advocating for their distinctions (Fisher-Borne et al., 2015; Hampton et al., 2017; Yeager & Bauer-Wu, 2013), while others discussing their similarities and compatibilities (Campinha-Bacote, 2019; Danson, 2018). There has also been discussion around whether one construct is subsumed by (Danso, 2018; Mosher et al., 2017) or the extension of the other (Davis et al., 2018). Although no single study can resolve such a controversial issue, the results in the current study seem to provide some insights. For example, a tentative conclusion is that culturally humble counselors also tend to be culturally competent, and vice versa, as indicated by the

moderate to strong correlations between the CHES and CCCI-R7 scores. However, one should not assume that CH and CC are conceptually equivalent, as two measures only appear to converge on one conceptual domain. Hence, future researchers may explore the possibility of a higher-order construct under which both CC and CH are subsumed; in other words, CC and CH may each reflect a crucial aspects of counselors' general ability to manage cross-cultural interactions.

RQ5: Criterion-related Validity

The therapeutic working alliance (TWA, as measured by the WAI-SR) was included as a criterion variable to explore the predictive validity of the CHES. The results, as presented in Table 16 and 17, indicated that CHES scores accounted for a modest amount of variance in the WAI-SR scores, above and beyond the variance explained for by the CHS scores. Moreover, the CHES total score was a stronger predictor (β = .45) than the CHS total score (β = .36, both *p*s < .001) and accounted for more unique variance (7%) than the CHES total score (4%) in the final regression equation (Table 16). When the factor scores were used instead, the CHES Factor A (β = .18) and Factor C (β = .19, both *p*s < .001) were still significant predictors after controlling for the CHES scores, while the CHES Factor B was not a significant predictor (Table 17). This result corroborated with the finding that the CHES Factor A represents a unique dimension not assessed by the CHS. The predictors combined explained more than 60% of the variance in the WAI-SR scores, indicating strong predictive power of CH, collectively assessed by the CHES and CHS. Overall, there was strong evidence to support the predictive and incremental validity for the CHES, both on the full scale and individual factor level. Future studies should continue to explore the criterion-related validity of the CHES by including other counseling process or

outcome variables (e.g., therapeutic improvement) and utilize statistical methods (e.g., structural equation modeling, SEM) to better account for measurement error.

Participant Characteristics and Sampling Methods

The findings of the study need to be interpreted in light of the sampling methods and the characteristics of the participants, who are recruited from Mturk and social media. The literature (e.g., Buhrmester et al., 2011, 2018) has suggested that using crowdsourcing sampling, such as Mturk, has the advantage of recruiting a sample that is more representative of the general population (i.e., external validity) compared to a sample recruited from a single setting (e.g., undergraduate psychology course). Echoing this perspective, the sample in the current study was comparable to the undergraduate student sample in Hook et al. (2013) in terms of gender and race/ethnicity, but more diverse regarding age, sexual orientation, employment status, among other categories. The strength of a diverse sample was that a wide range of perspectives as informed by participants' values and life experiences could be reflected in the data. Moreover, in a meta-analysis, Walter et al. (2019) found the data obtained from Mturk has a comparable level of internal consistency estimates with those obtained from conventional sources. This finding was echoed in the current study, as the internal consistency estimates for all instruments were consistently high (above .90), despite the relatively short survey completion time (approximately 10 minutes on average) and the rapid speed of data collection (responses reached 400 within one week of study announcement on Mturk).

Several issues regarding the use of Mturk and social media (e.g., identity fraudulence, dishonesty and nonnaivete) discussed in the literature were also identified in the current study. To address these concerns, a variety of validity checks were implemented, including geographic filters, approval rating filters, prescreening questions, and attention check questions (see Chapter

3 for a detailed description). Implementing these validity checks, though improving data quality, may have negatively impacted the survey completion rate. For example, applying the survey completion filter (85%) resulted in the removal of 154 Mturk responses, equivalent to 33.7% of the total response. It is possible that the length of the survey (90 items) may have discouraged some participants from completing the entire survey. Further, when all filters were applied, the percentage of qualified responses was 58.6% for Mturk and 46.2% for social media. Given the relatively low rate of qualified responses, it seemed most prudent to follow Thompkins's (2019) recommendation to collect twice the size of the targeted sample size in order to ensure both sufficient power and data quality. However, it is unknown whether the participants whose responses were qualified differed from those who were disqualified in this study.

Another point of contention of utilizing Mturk is regarding the level of compensation. Previous research (e.g., Buhrmester et al., 2011) indicated that compensation levels of two cents, 10 cents, and 50 cents per response did not significantly impact data quality, though lower compensation may be associated with decreased speed of data collection, particularly for longer surveys. In the current study, the higher compensation level (i.e., 50 cents) was selected based on considering the survey length (approximately 15 minutes) and the specificity of the target population (i.e., experience with counseling/psychotherapy). Given the lack of experimental control on conditions such as compensation level, it is unknown the extent to which the compensation level may have impacted the data quality in this sample. Moreover, Chandler and Shapiro (2016) noted that the respondent should be compensated on the level of 10 cents per minute (equivalent to $1.5 for a 15-minute survey) based on ethical concerns balancing fair payment and avoiding coercively high incentives. Future researchers should more extensively explore the issue of compensation in using Mturk.

Lastly, although Mturk has been noted to possess many advantages as a sampling method and gained increased attention to social science research in the past decade (Buhrmester et al., 2018), its uptake in the counseling field has been limited. For example, a search using the keywords “Amazon Mechanical Turk” or “Mturk” in the *Measurement and Evaluation in Counseling and Development*, a flagship journal in measurement development in counseling, yielded only two results. The lack of utilization of Mturk in counseling research presents challenges for the current study, such as lack of prior literature guidance and concerns about comparability with other studies. In addition to utilizing Mturk, the researcher also relied on social media platforms (e.g., Reddit) as a supplementary sampling source. Prior research has indicated that data collected from Mturk and social media have comparable clinical characteristics (Casler et al., 2013) and thus may be combined for analytic purpose (Trub & Barbot, 2019). Although not a focus of this study, the researcher did not find a systematic difference ($p = .147$) in the rating of perceived CH based on sampling sources, lending support to the combined sampling source. However, future researchers should further explore the utilization of Mturk in research specific to the context of counseling and psychotherapy.

Limitations

The researcher utilizes a cross-sectional survey design. The study, therefore, is correlational in nature. Therefore, no causal conclusions can be drawn from the results. For example, while CH was a strong predictor of the working alliance, the direction of the relationship is unknown; in other words, the case that a strong therapeutic working alliance led to a favorable perception of CH cannot be ruled out in the current study. Moreover, all data in this study were collected at one point in time, rather than multiple points or longitudinally. Participants’ responses were based on an aggregated perception of their current or past

counselors/psychotherapists at one specific time. Therefore, it is unknown whether the single point of data collection was able to accurately represent the participants' perception of CH. For example, for participants who did not have a cultural conflict with their therapist, their responses to both dispositional and situational sections of the CHES may change after an incident involving value conflicts took place in the therapeutic setting. Therefore, future researchers may wish to utilize a research design that can better account for temporal change of perceived CH and identify potentially factors.

A second limitation is with regards to the sampling method in the study. Although the researcher was able to recruit a large number (N = 434) of participants with diverse demographic characteristics, the sampling method of using Mturk and social media platforms are still in early stages when it comes to conducting clinical research (Walter et al., 2019). Despite the many advantages associated with using crowdsourcing- and social media-based sampling methods (Buhrmester et al., 2018; Chandler et al., 2014), the generalizability (i.e., external validity) of the results based on internet-based samples remain unexplored. An additional challenge relevant to using internet-based samples is the quality of self-report data obtained through online surveys. To address the concerns about data quality in online surveys discussed in the literature (e.g., identity fraudulence, inattention, nonnaiveté, dishonest response; Buhrmester et al., 2018; Chandler et al., 2014), a variety of validity checks (as discussed in Chapter 3) were implemented throughout the survey, and responses that did not pass the validity checks were eliminated from the data analyses. The relatively low rate of valid responses (53.2%) echoed the concerns about data quality in the current study. Despite the researcher's best efforts to safeguard against these concerns, it remains to be explored in future research whether using online sampling method

(e.g., Mturk) can produce reliable and valid results comparable to those obtained from traditional sampling methods.

A relevant limitation was regarding data collection. The online survey includes a demographic questionnaire and a total of four measurements (in the sequence of the CHES, CCCI-R7, CHS, and WAI-SR), which results in 90 survey items in total. Moreover, the first three measures, particularly the CHES and the CHS, contain items that are semantically similar. Therefore, some participants may have felt fatigued and repetitive while completing the survey, thereby resulting in less cognizant responding. Although the researcher has made efforts to include relatively brief measures and estimated the completion time to be approximately 10-15 minutes, future researchers should endeavor to design survey that necessitates shorter completion time, particularly given the characteristics of online samples (Buhrmester et al., 2018; Chandler et al., 2014).

Lastly, several limitations with regards to the 29-item CHES have been noted throughout the process. First, there was a discrepancy between the number of factors retained in the final solution and the number of hypothesized conceptual domains considered relevant to CH. Several domains were merged (e.g., Domain 1 and Domain 2; Table 1) during the EFAs. Furthermore, the CHES Factor C seems to contain two clusters of items that may be potentially differentiated through modifications to the scale. Therefore, the conceptual distinctions between domains or factors are preliminary given the exploratory nature of this study. Future researchers may wish to modify the CHES items and examine whether the factor structure in the current study can be replicated. Second, the method effect was suspected to impact the EFA results, which poses potential threat to the reliability and validity of the measure. Future researchers should avoid mixing the positively- and negatively-worded items in refining the CHES, or, at the very least,

avoid mixed-worded items in any single domain/factor. Finally, the CHES consists of factors representing dispositional qualities (Factor A and Factor B) and situational manifestations (Factor C). Although all factors were found to have excellent reliability estimates and moderate correlations with each other, the CHES appears to be the only CH measure that combined both perspectives. Future researchers should continue to evaluate whether combining both perspectives in one measure is conceptually and statistically advantageous.

Methodological Highlights and Contributions

The literature has critiqued that measurement development in the counseling field is often done without careful and thorough methodological considerations (Lenz & Wester, 2017). Informed by the critiques, all methodological decisions in the current study regarding instrumentation were made based on a thorough review of the instrumentation strategies of previous humility measures as well as consulting the measurement development literature. The researcher adopted the best practice guidelines recommended in the literature, particularly in aspects that have not received adequate attention according to our review (Table 2). For example, a panel of content experts who have published records on humility measure development participated in reviewing the initial items to ensure content validity (Lambie et al., 2017). The researcher also paid particular attention to sample size through holistically considering the general rule-of-thumb (Worthington & Whittaker, 2006), ratio-based criteria (Gorsuch, 1983; Tinsley & Tinsley, 1987), common sample size for recent humility measures (Table 2), and a prior SEM-based power analysis (Klainin-Yobas, 2016).

Several methodological aspects of the study are considered innovative and may contribute to the contemporary discourses in the measurement development literature. First, the CHES seems to be the only humility measure to date that incorporates both the dispositional and

situational perspectives (Table 2). Although the full scale has adequate consistency and the factors representing dispositional and situational qualities share moderate correlations, future researchers may wish to further explore the effect of combining both perspectives on factor structures and psychometric properties. Second, a 6-point Likert-type scale was adopted as the format of the CHES, rather than the 5-point and 7-point format commonly adopted by many recent humility measures (Table 2). The rationale for selecting the 6-point format was to enhance data normality (Leung, 2011) and avoid the undesirable occasions in which the mid-point is using as a dumping ground (Chyung et al. 2017). As a result, no serious concern with data normality was identified during analyses in the current study. Future researchers may wish to explore the effect of using even-point scale with more response categories or continuous rating scale (i.e., slider scale; Bosch et al., 2019).

Third, CF-Equamax was selected as the rotation method for the EFAs. As Schmitt and Sass (2011) pointed out, few researchers provided rationale when they selected an oblique rotation method. The review of recent humility (Table 2) reveals that the most studies selected *promax* or *direct oblimin* without providing a justification. Promax and direct oblimin are also the only two oblique options for conducting EFA on SPSS. Since Mplus was used for EFAs in this study, the researcher was able to consider a variety of rotation methods and ultimately selected CF-Equamax for its superiority in determining issues with cross-loading and appropriateness for the initial stage of scale development (Schmitt & Sass, 2011). Lastly, the researcher incorporated a model selection perspective (Preacher et al., 2013) in determining the number of factors to retained, Specifically, the RMSEA.LB was considered as an important indicator, in addition to the more conventional criteria, such as the EV-great-than-1 rule, scree plot, and parallel analysis. As the RMSEA.LB threshold suggested by Preacher et al. (2013) was

in the context of ML estimation, future researchers may wish to further explore the utility of the RMSEA.LB indicator in the case of other extraction methods, such as weighted least square mean and variance adjusted (WLSMV) for nonnormal categorical variables.

Implications for Future Research

The findings in this study contributes to the research on CH by developing a conceptually and empirically sound measure with initial evidence of various types of reliability and validity. Davis and Hook (2019) identified that a key limitation in the current stage of humility research is the limited evidence for the construct and criterion-related validity for the existing measures. Therefore, future researchers may wish to continue to validate and refine the factor structure of the CHES by utilizing more confirmatory methods, such as the confirmatory factor analysis (CFA) and item response theory (IRT) analysis. Furthermore, future researchers may include other types of humility measure to better understand the relationships between CH and other types of humility (e.g., general humility, intellectual humility) and further gather evidence for the construct validity of the CHES.

Relatedly, as Worthington et al. (2017) pointed out, one of the major challenges in the empirical research on humility was to go beyond simply identifying the correlates of humility and articulate its core theoretical components. The same challenge is faced by conducting research on CH, as the current definitions in the literature do not seem to offer clarity on the core theoretical elements of CH (Davis & Hook, 2019; Van Tongeren et al., 2019). For example, Fisher-borne and colleagues (2015) claimed that CH entails three core elements: institutional and individual accountability, lifelong learning and critical reflection, and mitigating power imbalances. However, their definition seemed to conflate core components with correlates, since the element of institutional and individual accountability, defined as “work in concert with one

another to incite long-term change" (p. 174), seems to be an outcome of CH, rather than its theoretical core. Worthington et al.'s (2017) critique also applies to the results in the current study, since the participants were not asked to differentiate the core aspects from the correlates of CH in their perception. Furthermore, although the CHES has a broader conceptual coverage than its predecessor, it still may not depict CH in a comprehensive manner, given that the assessment of CH in the current study was based on the participants' perceptions, without having access to the internal processes of their counselors or the direct observations of therapeutic encounters. Therefore, more research incorporating quantitative and qualitative methods and multiple forms of observation are needed to further articulate a comprehensive conceptual model of CH, which, in turn, may guide future measurement development regarding CH.

Future research may also explore the relationships between CH and other culturally relevant constructs. Among the various aspects assessed by the CHES, the conceptual dimension represented by the CHES Factor A "Cultural Teachability" seems to be a distinct dimension that is non-overlapping with other related measures (e.g., the CHS, CCCI-R7). Furthermore, the CHES Factor A also explained the largest portion of variance compared to the other two factors. These results suggest that teachability and receptivity may be the most central and distinct aspect when it comes to perceiving CH, which is consistent with prior literature (e.g., Van Tongeren et al., 2019; Worthington & Allison, 2018) that suggests a core aspect of humility is realizing one's limitations and willingness to engage in life-long learning. The factor structure of the CHES validated this perspective and may spur further discourse on the comparison between CH and other related constructs (e.g., CC).

Implication for Counseling and Counselor Education

The results in the current study suggest numerous implications for counseling as well as

for the training and supervision of counselor trainees. Evidence in prior studies (e.g., Davis et al., 2016; Grad, 2019; Hook et al., 2013, Owen et al., 2016) as well the current study suggest that CH is a strong predictor of positive counseling process and outcome, thereby supporting the clinical utility of CH. The CHES, as a conceptually and statistically sound measure, can assist counseling practitioners, counselor educators, and clinical supervisors in assessing CH in a reliable and comprehensive manner. For example, counseling practitioners may incorporate the CHES as a part of their routine assessment activities, along with other counseling process and outcome measures (e.g., WAI-SR). Counselors may utilize the CHES as a springboard for discussion around cultural and value difference, egalitarianism (or lack thereof), and alliance ruptures. Counselor educators and clinical supervisors may utilize the CHES in their instruction and supervision practice as means to monitor the development of CH in their trainees/supervises.

The three factors within the CHES represents three clusters of qualities that may be particularly important for counselors working in multicultural and cross-cultural milieu, therefore providing insights on specific areas that practitioners should be mindful of. For example, Factor A represents counselors' willingness and openness to examine and modify their cultural views in working with clients. Given the clinical significance of CH demonstrated in this study, counselors and counselor trainees may benefit from self-reflect and seek supervision on whether they allow themselves to be challenged by and learn from their clients who may have divergent cultural views. Counselor educators and clinical supervisors may utilize a variety of interventions (e.g., focusing on the here-and-now, experiential learning) to intentionally foster the sense of openness within their trainees when it comes to cultural discussions. For example, Sanchez et al. (2019) introduced an experiential curriculum aiming to promote CH in which undergraduate students are challenged to learn people with socio-cultural identities different

from their own by engaging in activities such as eating a meal at a social service agency or attending a religious service unfamiliar to them. Students engaged in writing reflective journals throughout the semesters, in which they were instructed to practice metacognition by commenting on their writing process. Using a thematic analysis of student's reflective journals, the authors found evidence for the development of CH as students became increasingly aware of and acceptance toward their discomfort in encountering cultural discrepancies as well as observed changes in perspectives about issues such as racism and social stigma. Counselor educators may wish to adapt Sanchez et al.'s (2019) curriculum to a counseling context.

Similarly, counselors and counselor trainees may benefit from attending to their verbal and non-verbal behaviors that may exude a sense of superiority and arrogance, as indicated by the CHES Factor B, which is detrimental to the therapeutic relationship from the clients' perspectives. Hook et al. (2016) discussed that clinical supervisors should overcome the tendency to view their cultural views and worldviews as superior to their supervisees. The authors further suggested that supervisors should model CH within the supervisory context by initiating conversations about culture and cultural identities, inviting supervisees to engage in ongoing dialogues, and instilling the qualities of CH in their supervisees. Therefore, clinical supervisors may utilize the CHES as a tool to facilitate ongoing conversations about cultural identities, values, and CH in their supervisory work.

More broadly, the findings in this study highlighted the importance of culture and values in the context of counseling and counselor education. The results suggested that counselors who are perceived to have a high level of CH are also perceived to form a strong therapeutic working alliance with their clients. Counselors who demonstrate openness to examine, modify, and expand their cultural views and those who are other-oriented behaviors when encountering value

conflict are most likely to form a strong alliance. These results echoed the ACA Code of Ethics (ACA, 2014) and CACREP (2015) training standards for the emphasis on counselor's ability to work in a multicultural and cross-cultural milieu. The results suggest that counselors are more likely to form deep and meaningful therapeutic relationships with their culturally diverse clients if they consistently display willingness and openness to examine their own cultural assumptions, promote egalitarianism in the therapeutic relationship, and demonstrate a deep commitment to the well-being of their clients when conflicts arise.

Conclusion

In this study, the researcher developed the CHES, which aims to measure counselors' level of CH as perceived by clients. The researchers explored the factor structure of the CHES, as well as its reliability, construct validity, and criterion-related validity. The development of CHES is grounded in the current CH literature as well as the measurement development literature. As one of few existing measures on CH, the CHES is advantageous in terms of its conceptual comprehensiveness and evidence for various types of reliability and validity. The CHES supports future research on articulating the conceptual model of CH, relationships between CH and other types of humility, as well as relationships between CH and other culturally relevant constructs (e.g., CC). Furthermore, the CHES supports the clinical utility of CH and has numerous implications for incorporating the assessment of CH in the counseling, teaching, and supervisory context.

As Tangney (2000) pointed out, "Doing research on humility is humbling. Quite possibly, the quest for a reliable and valid measure of humility is even more humbling" (p. 75). Although the current version of the CHES has many strengths, developing a conceptually and statistically sound measure of CH is only in the beginning stage. The researcher hopes that the

results in the current study may aid future researchers in their pursuits of uncovering the many facets of CH.

Appendices

Appendix A: Cultural Humility and Enactment Scale

Instructions: There are many aspects that may be considered relevant to one's *culture*, including (but not limited to) one's race/ethnicity, nationality, gender identity, age, sexual orientation, religion, disability, and socioeconomic status.

Please identify aspects of your culture that are most central or important to you:
_____

How similar are you with your **counselor** in terms of the cultural aspect(s) you identified?

Not at all similar		Somewhat similar		Very similar
1	2	3	4	5

One's **values and worldview** may be influenced by their culture. In general, how similar are your and your counselor's values and worldview?

Not at all similar		Somewhat similar		Very important
1	2	3	4	5

Instructions: Please think about your interactions with your counselor **in general**. Using the scale below, please indicate the extent to which you agree or disagree with the following statements about your counselor.

1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Somewhat Agree; 5 = Agree; 6 = Strongly Agree

When approaching cultural topics, my counselor…						
1. Is open to exploring cultural topics.	1	2	3	4	5	6
2. Is willing to see things from my perspective.	1	2	3	4	5	6
3. Is open to changing their views on cultural issues.	1	2	3	4	5	6
4. Is curious about what my culture means to me.	1	2	3	4	5	6
5. Is interested in my cultural views.	1	2	3	4	5	6
6. Is open to cultural views that are different from their own.	1	2	3	4	5	6
7. Is rigid in their cultural beliefs. [R]	1	2	3	4	5	6
8. Enjoys discussing ideas of different cultures.	1	2	3	4	5	6
9. Asks clarifying questions about cultural issues when they are uncertain.	1	2	3	4	5	6

10. Has a stereotypical view of my culture. [R]	1	2	3	4	5	6
11. Is willing to examine their own biases.	1	2	3	4	5	6
12. Recognizes the limitation of their cultural views.	1	2	3	4	5	6
13. Is oblivious to their own biases. [R]	1	2	3	4	5	6
14. Seeks corrective feedback for their cultural views.	1	2	3	4	5	6
15. Is open to corrective feedback for their cultural views.						
16. Is willing expand their cultural view(s).	1	2	3	4	5	6
17. Recognizes his/her biases.	1	2	3	4	5	6
18. Has a clear understanding of their own cultural views.	1	2	3	4	5	6
19. Pretends to know something when they have no idea. [R]	1	2	3	4	5	6
20. Prioritizes their cultural views over mine. [R]	1	2	3	4	5	6
21. Shows off their knowledge on cultural issues. [R]	1	2	3	4	5	6
22. Is arrogant about their cultural views. [R]	1	2	3	4	5	6
23. Imposes their cultural views on me. [R]	1	2	3	4	5	6
24. Makes me feel like my cultural views are inferior. [R]	1	2	3	4	5	6
25. Patronizes me in discussing cultural views. [R]	1	2	3	4	5	6

Instructions: Please recall a moment when you and your therapist **had some forms of conflicts (e.g., difference of opinion, disagreement, tension) related to culture and cultural values.** Using the scale below, please indicate the extent to which you agree or disagree with the following statements about how your counselor behaved in that specific moment. If you cannot recall such a moment, please imagine how your counselor *would* behave based on your prior interactions.

1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Somewhat Agree; 5 = Agree; 6 = Strongly Agree

In moments of cultural tension, my counselor…						
26. Is defensive when their cultural view(s) are challenged.	1	2	3	4	5	6
27. Listens to my cultural view(s).	1	2	3	4	5	6
28. Tries to justify their cultural view(s).	1	2	3	4	5	6
29. Admits when they made mistakes.	1	2	3	4	5	6
30. Seeks to understand my cultural view(s) better.	1	2	3	4	5	6
31. Wants to understand my cultural view(s) better.	1	2	3	4	5	6
32. Makes room for me to have a different cultural perspective.	1	2	3	4	5	6
33. Minimizes my cultural view(s).	1	2	3	4	5	6
34. Collaborates with me.	1	2	3	4	5	6
35. Makes me feel valued in our relationship.	1	2	3	4	5	6
36. Is attentive to how I feel about our conflict.	1	2	3	4	5	6

37. Empathizes with how I feel about our conflict.	1	2	3	4	5	6
38. Is uncomfortable to talk about our conflict.	1	2	3	4	5	6
39. Has authentic dialogue with me about our conflict.	1	2	3	4	5	6
40. Avoids having dialogues about our conflict.	1	2	3	4	5	6

Appendix B: Participants Recruitment Letter

Dear _____

You're invited to take part in a research study that I (Peitao Zhu, Doctoral Candidate) am conducting at Syracuse University. My goal is to develop a valid and reliable scale in measuring counselor's cultural humility in a clinical setting. I am asking individuals to reflect on your experiences with cultural humility as client receiving mental health services. Your support will be of tremendous help to the development of this new scale, which not only may advance the research in this area, but also result in the training of practitioners who can better address cultural issues in counseling.

Your participation in this study is completely *voluntary*, and you can withdraw your participation from the study at any time. Below, I include a brief description of the study and factors that may influence whether you would decide to participate.

Research Purpose: The scale is designed for adult clients who have received or are currently receiving counseling services by a mental health professional. We believe all counseling is value-laden and is likely to be influenced by the presence of cultural humility (or lack thereof). Therefore, we intend to develop the Cultural Humility and Enactment Scale (CHES) to examine how mental health professionals engage in critical self-examination, displays curiosity toward and respect for client's cultural background and values, and responds to cultural conflicts and misattunement in counseling.

Inclusion Criteria: Please check the following criteria before you agree to participate in the study:

a) You are 18 years of age or older;
b) You are currently receiving or have received counseling/psychotherapy services from a licensed and/or certified mental health practitioner (e.g., mental health counselors, marriage, couple, and family therapist, clinical social workers, counseling/clinical psychologist, psychiatrists);
c) You have received a minimum of three sessions with the identified practitioner

Confidentiality:
Your responses to the survey will be kept confidential by storing your data securely on a password-protected, encrypted website and computer. The data will be anonymous as you will not be asked for information that may reveal your individual identity. IP addresses will be not tracked or recorded as a part of this research. Dissemination of research results will be based on all participants' combined results, not your individual responses.

To Participate:
Please fill out an on-line survey, including a few demographic questions and X number of items (*based on the results of expert review*) measuring your therapist's cultural humility. The items were compiled by me and have been reviewed by a group of experts from various professional fields (counseling, psychology, child/youth development, education, psychiatry). It would take approximately 20 minutes to fill out the survey.
Follow the link below to proceed to our survey:
Insert Qualtrics or Mturk Link
If the link does not direct you to the survey, please copy and paste the link into your browser.

Compensation:
Qualtrics Version: If you choose to participate in this study, you will have the option to enter your email address for a chance to win a $25 Amazon gift card.

Mturk Version: Upon successful completion of this study, you will be award 0.20 U.S Dollar through MTurk system.

Risks and Benefits:
There is no anticipated risk in participating in the study, other than potential discomfort in answering questions about your relationship with your therapist. There are no direct benefits associated with participating in the study; however, your response may help to provide information that could benefit scholars' and mental health practitioners' understanding of cultural dynamics in counseling and psychotherapy.

If you have any additional questions regarding any aspect of this research project, please do not hesitate to contact Peitao Zhu at pzhu01@syr.edu. You may also contact my dissertation Chair, Dr. Yanhong Liu at yliu363@syr.edu

Sincerely,

Peitao Zhu, M.A.
Doctoral Candidate
Department of Counseling and Human Services
Syracuse University

Appendix C: Expert Review Packet

Invitation Letter

Dear Expert Reviewer,

My name is Peitao Zhu and I am a doctoral candidate in Counseling and Counselor Education at Syracuse University. I am writing to request your feedback on a measure of cultural humility as a part of my dissertation project, tentatively titled *Cultural Humility and Enactment Scale (CHES)*. I believe your expertise and published records on the subject of cultural humility will be invaluable to the development of this instrument.

The CHES is intended to be a client-rated measure of counselor's cultural humility to be used in a clinical setting. I have developed the initial CHES items based on a comprehensive review of literature on cultural humility and a review of humility measures developed in the recent decade. I would greatly appreciate your input in establishing the content validity of this proposed measure. Specifically, your feedback on the relevance and clarity of the initial items as well as the comprehensiveness of the scale will be most helpful.

In this packet, I have attached three documents: (a) a brief description of key terms and the proposed content domains related to cultural humility; (b) a copy of the CHES scale that consists of the preliminary items, and (c) an evaluation form with instructions. In addition to commenting on the specified aspects according to the instructions, any comments and suggestions you may have on the measure would be welcome. The final measure to be disseminated to the participants is expected to have no more than 45 items.

If you decide to participate in the expert review, I am requesting that your comments and observations be returned to me by December 5th, 2019. Your feedback and participation status will be kept confidential. I would also ask that you not distribute the scale or use it outside of the expert review context. If you have any questions about the scale or the research process, please contact me at pzhu01@syr.edu or Dr. Yanhong Liu, my dissertation advisor, at yliu363@syr.edu.

Thank you for your consideration!

Sincerely,

Peitao Zhu

Key Terms and Proposed Content Domains of Cultural Humility

Culture. While a variety of definitions and conceptualizations of culture exists across various disciplines, in this study, culture is defined broadly as a learned system of meaning influenced by demographic (e.g., age, gender, geographic location), status (e.g., social, economic, educational), and ethnographic (e.g., race/ethnicity, nationality) factors, as well as formal and informal affiliation (Pedersen, 1995). In this sense, culture is considered complex, dynamic, and multifaceted, and is relevant to intersecting cultural identities.

Humility is a personality characteristic that involves an accurate understanding of one's strengths and limitations, presenting oneself in a modest fashion, and holding an attitude oriented toward benefiting others (Worthington & Allison, 2018). Humility may manifest as a general disposition (i.e., trait) or situationally (i.e., state). Humility is considered to have various subtypes, such as intellectual, cultural, or religious humility, all of which are considered the manifestation of humility in different contexts (Worthington, Davis, & Hook, 2017).

Cultural humility (CH) involves both *intrapersonal* and *interpersonal* domains (Hook et al., 2013) Intrapersonally, culturally humble individuals are open to the multiplicity of cultural values and worldviews and is committed to engaging in critical self-examination and developing cultural awareness; interpersonally, culturally humble individuals have a modest self-representation, acknowledging the limitations in their cultural values and imperfections in their cultural encounters, and value the relationships they build with other individuals.

Based on a review of literature, CH is conceptualized as having the following five domains:

- **Openness to the multiplicity of culture (O)**: Open-mindedness, adopting a "not knowing" position, genuine interests and curiosity in learning about other cultural worldviews and perspectives, recognition of culture as complex and evolving, willing to change or modify one's cultural perspectives (e.g., Foronda et al., 2016; McElroy-Heltzel et al., 2019)
- **Lifelong self-examination (S)**: life-long commitment to develop cultural self-understanding, awareness of one's strengths and limitations, acknowledging blind spots, willingness to incorporate feedback (e.g., Chang et al., 2012; Tervalon & Murray Garcia, 1998)
- **Interpersonal modesty (M)**: lack of bragging or showing off, not calling attention to one's self, lack of superiority in interactions, lack of needs to impose power (e.g., Tangney, 2009; Davis et al., 2013)
- **Lack of defensiveness (D)**: ability to acknowledge particular mistakes, flaws, or missteps during interactions, ability to lean into discomfort to gain better understanding of cultural misattunement, ability to incorporate feedback from others (e.g., Fahlberg et al., 2016; Zhu et al., 2019)
- **Relational orientation (R)**: building relationship, focuses on valuing interpersonal relationship as mutually beneficial, attending to other's needs and feelings, displaying empathy and compassion toward others, displaying authenticity during interaction (e.g., Hook et al., 2013; Zhu et al., 2019).

Cultural Humility and Enactment Scale

Instructions: There are many aspects that may be considered relevant to one's culture, including (but not limited to) one's race/ethnicity, nationality, gender identity, age, sexual orientation, religion, disability, and socioeconomic status.

Please identify at least one aspect of your culture that is most central or important to you:

_____

How similar are you with your **counselor** in terms of the cultural aspect(s) you identified?

Not at all similar		Somewhat similar		Very important
1	2	3	4	5

One's **value and worldview** may be influenced by culture. In general, how similar are your and your counselor's value and worldview?

Not at all similar		Somewhat similar		Very important
1	2	3	4	5

Instructions: Please think about your interactions with your counselor **in general**. Using the scale below, please indicate the extent to which you agree or disagree with the following statements about your counselor.

In general, my counselor…	Strongly Disagree					Strongly Agree
1. Is open to exploring cultural topics.	1	2	3	4	5	6
2. Is willing to see things from my perspective.	1	2	3	4	5	6
3. Is open to changing their views on cultural issues.	1	2	3	4	5	6
4. Is curious about what my culture means to me.	1	2	3	4	5	6
5. Is interested in my cultural views.	1	2	3	4	5	6
6. Is open to cultural views that are different from their own.	1	2	3	4	5	6
7. Is rigid in their cultural beliefs. [R]	1	2	3	4	5	6
8. Enjoys discussing ideas of different cultures.	1	2	3	4	5	6
9. Asks clarifying questions about cultural issues when they are uncertain.	1	2	3	4	5	6
10. Has a stereotypical view of my culture. [R]	1	2	3	4	5	6
11. Is willing to examine their own biases.	1	2	3	4	5	6
12. Recognizes the limitation of their cultural views.	1	2	3	4	5	6

13. Is oblivious to their own biases. [R]	1	2	3	4	5	6
14. Seeks corrective feedback for their cultural views.	1	2	3	4	5	6
15. Is open to corrective feedback for their cultural views.	1	2	3	4	5	6
16. Is willing expand their cultural view(s).	1	2	3	4	5	6
17. Recognizes his/her biases.	1	2	3	4	5	6
18. Has a clear understanding of their own cultural views.	1	2	3	4	5	6
19. Pretends to know something when they have no idea. [R]	1	2	3	4	5	6
20. Prioritizes their cultural views over mine. [R]	1	2	3	4	5	6
21. Shows off their knowledge on cultural issues. [R]	1	2	3	4	5	6
22. Is arrogant about their cultural views. [R]	1	2	3	4	5	6
23. Imposes their cultural views on me. [R]	1	2	3	4	5	6
24. Makes me feel like my cultural views are inferior. [R]	1	2	3	4	5	6

Instructions: Please recall a moment when you and your therapist **had some forms of conflict (e.g., difference of opinion, disagreement, misunderstanding).** Using the scale below, please indicate the extent to which you agree or disagree with the following statements about how your counselor behaved in that specific moment. If you cannot recall such a moment, please imagine how your counselor *would* behave based on your prior interactions.

In moments of conflict, my counselor…	Strongly Disagree					Strongly Agree
25. Is defensive [R].	1	2	3	4	5	6
26. Listens to my perspective.	1	2	3	4	5	6
27. Is more interested in justifying his/her view[R].	1	2	3	4	5	6
28. Admits his/her mistake(s).	1	2	3	4	5	6
29. Seeks to understand me better.	1	2	3	4	5	6
30. Wants to understand my perspective.	1	2	3	4	5	6
31. Values my perspective, even when we disagree	1	2	3	4	5	6
32. Minimizes my view. [R]	1	2	3	4	5	6
33. Collaborates with me.	1	2	3	4	5	6
34. Makes me feel valued in our relationship.	1	2	3	4	5	6
35. Is attentive to my feelings and needs.	1	2	3	4	5	6
36. Is honest with me.	1	2	3	4	5	6
37. Emphasizes with how I feel.	1	2	3	4	5	6
38. Says things only to make me feel better [R].	1	2	3	4	5	6
39. Does not shy away from asking difficult questions.	1	2	3	4	5	6
40. Pretend that nothing happened. [R]	1	2	3	4	5	6

Expert Evaluation Form

Part 1: Evaluation of existing items.
Instructions: Please review each of the 45 initial items using the following rating scale.

Relevance (REV): *how relevant do you think this item is regarding the CH content domains?*

Not at all relevant		Somewhat relevant		Very relevant
1	2	3	4	5

Item Clarity (CLR): *how clear is this item expressed in terms of being comprehended by an average client?*

Not at all clear		Somewhat clear		Very clear
1	2	3	4	5

Item Disposition (DSP): to what degree do you think this item should be retained in the final scale?

Poor Item Definitely Delete				Great item Definitely Keep
1	2	3	4	5

IN GENERAL, my counselor…

1. Is open to exploring cultural topics. [Domain: Openness to Cultural Multiplicity]

REV _____ CLR _____ DSP _____

Comments:
_____

2. Is willing to seeing things from my perspective. [O]

REV _____ CLR _____ DSP _____

Comments:
_____

3. Is open to changing his/her view(s). [O]

REV _____ CLR _____ DSP _____

Comments:

_____

4. Is genuinely curious about me. [O]

REV _____ CLR _____ DSP _____

Comments:

_____

5. Is genuinely interested in my view(s). [O]

REV _____ CLR _____ DSP _____

Comments:

_____

6. Is open to views that are different from his/her own. [O]

REV _____ CLR _____ DSP _____

Comments:

_____

7. Is rigid in his/her beliefs. [O]

REV _____ CLR _____ DSP _____

Comments:

_____

8. Enjoys discussing ideas of different cultures. [O]

REV _____ CLR _____ DSP _____

Comments:

_____

9. Asks questions when he/she is uncertain. [O]

REV _____ CLR _____ DSP _____

Comments:

_____

10. Has a stereotypical view of me. [O]

REV _____ CLR _____ DSP _____

Comments:

_____

11. Is willing to examine his/her own biases. [Domain: Critical self-examination]

REV _____ CLR _____ DSP _____

Comments:

_____

12. Recognizes the limitation of his/her perspectives. [S]

REV _____ CLR _____ DSP _____

Comments:

_____

13. Is oblivious to his/her own biases and assumptions. [S]

REV _____ CLR _____ DSP _____

Comments:

_____

14. Seeks feedback, even when it's critical. [S]

REV _____ CLR _____ DSP _____

Comments:

_____

15. Is always willing to learn. [S]

REV _____ CLR _____ DSP _____

Comments:

_____

16. Recognizes his/her biases. [S]

REV _____ CLR _____ DSP _____

Comments:

_____

17. Knows him/herself well. [S]

REV _____ CLR _____ DSP _____

Comments:

_____

18. Pretends to know what I'm talking about when he/she has no idea. [Domain: Interpersonal Modesty]

REV _____ CLR _____ DSP _____

Comments:

_____

19. Makes our sessions about him/her. [M]

REV _____ CLR _____ DSP _____

Comments:

_____

20. Shows off his knowledge [M]

REV _____ CLR _____ DSP _____

Comments:

_____

21. Is arrogant. [M]

REV _____ CLR _____ DSP _____

Comments:

_____

22. Imposes his/her views on me. [M]

REV _____ CLR _____ DSP _____

Comments:

_____

23. Makes me feel inferior. [M]

REV _____ CLR _____ DSP _____

Comments:

_____

24. Makes me feel patronized. [M]

REV _____ CLR _____ DSP _____

Comments:

_____

IN MOMENTS OF CONFLICTS, my counselor…

25. Is defensive [Domain: Lack of Defensiveness]

REV _____ CLR _____ DSP _____

Comments:

_____

26. Listens to my perspective. [D]

REV _____ CLR _____ DSP _____

Comments:

_____

27. Is more interested in justifying his/her view. [D]

REV _____ CLR _____ DSP _____

Comments:

_____

28. Admits his/her mistake(s). [D]

REV _____ CLR _____ DSP _____

Comments:

_____

29. Seeks to understand me better. [D]

REV _____ CLR _____ DSP _____

Comments:

_____

30. Wants to understand my perspective. [D]

REV _____ CLR _____ DSP _____

Comments:

_____

31. Values my perspective, even when we disagree [D]

REV _____ CLR _____ DSP _____

Comments:

_____

32. Minimizes my view. [D]

REV _____ CLR _____ DSP _____

Comments:

_____

33. Collaborates with me. [Domain: Relational Orientation]

REV _____ CLR _____ DSP _____

Comments:

_____

34. Makes me feel valued in our relationship. [R]

REV _____ CLR _____ DSP _____

Comments:

_____

35. Is attentive to my feelings and needs. [R]

REV _____ CLR _____ DSP _____

Comments:

_____

36. Is honest with me. [R]

REV _____ CLR _____ DSP _____

Comments:

_____

37. Emphasizes with how I feel. [R]

REV _____ CLR _____ DSP _____

Comments:

_____

38. Says things only to make me feel better [R]

REV _____ CLR _____ DSP _____

Comments:

_____

39. Does not shy away from asking difficult questions. [R]

REV _____ CLR _____ DSP _____

Comments:

_____

40. Pretend that nothing happened. [R]

REV _____ CLR _____ DSP _____

Comments:

_____

Part 2: Additional suggestions

Are there new items that you suggest should be added to the initial item pool?

Do you have any suggested modification for the instructions and prompts in this measure?

Do you have any additional suggestions to improvement this measure?

Appendix D: Demographic Questionnaire

1. Please indicate your age in years_____

2. Please indicate your gender:

    a. Male _____

    b. Female _____

    c. Transgender _____

    d. Prefer to self-describe: _____

3. Please select the racial/ethnic group with which you identify:

    a. American Indian or Alaskan Native _____

    b. Asian _____

    c. Black or African American_____

    d. Hispanic or Latina/o_____

    e. Native Hawaiian or Other Pacific Islander_____

    f. White_____

    g. Biracial or multi-racial_____

    h. Prefer to self-describe: _____

4. Please indicate your spiritual/religious views (e.g., Agnostic, Atheist, Buddhist, Christian, Hindu, Islam, Jewish, spiritual, etc.) _____

5. Please indicate your sexual orientation:

    a. Homosexual/lesbian/gay

    b. Heterosexual/straight

    c. Bisexual

    d. Pan-sexual/omni-sexual

    e. Prefer to self-describe: _____

6. Please indicate the highest level of education you have completed (If currently enrolled, please indicate the highest degree received):

    a. Some high school, no diploma

    b. High school/GED

    c. Some college credit, no degree

d. Trade/Technical/Vocational training

e. Associate degree

f. Bachelor's degree

g. Master's degree

h. Doctoral-level degree

7. Please indicate your employment status:

a. Employed full-time

b. Employed part-time

c. Not working

d. Retired, not working

e. Retired, working part-time

f. Student

g. Prefer to self-describe: _____

8. Please indicate your marital status:

a. Divorced

b. Married

c. Single

d. Separated

e. Widowed

f. Prefer to self-describe: _____

9. Do you identify as an individual who has a disability (e.g., hearing impairment, physical disability, mental disability, etc.).

a. Yes.

b. No

10. Please identify a counselor/therapist who you have worked with or are currently working with. What is his/her first name? _____

11. If you know, what professional title does your counselor/therapist identify with?

a. Social worker

b. Mental Health Counselor

c. Marriage and Family Therapist

d. Psychologist

e. Psychiatrist

f. I'm not aware of their professional title.

12. How many sessions have you had with your counselor/therapist (please provide an estimate if you do not know the exact number) _____

13. Please indicate the type of treatment setting where you received or are receiving mental health services from your counselor/therapist:

a. Outpatient clinic

b. Hospital

c. Community-based agency

d. College counseling center

e. Other (please specify) _____

Appendix E: Cultural Humility Scale

Instructions: There are several different aspects of one's cultural background that may be important to a person, including (but not limited to) race, ethnicity, nationality, gender, age, sexual orientation, religion, disability, socioeconomic status, and size. Some things may be more central or important to one's identity as a person, whereas other things may be less central or important

Please identify the aspect of your cultural background that is most central or important to you:

_____

How important is this aspect of your cultural background?

Not at all important		Somewhat Important		Very important
1	2	3	4	5

If there is a 2nd aspect of your cultural background that is important to you, please list:

_____

How important is this aspect of your cultural background?

Not at all important		Somewhat Important		Very important
1	2	3	4	5

If there is a 3rd aspect of your cultural background that is important to you, please list:

_____

How important is this aspect of your cultural background?

Not at all important		Somewhat Important		Very important
1	2	3	4	5

Instructions: Please think about your counselor. Using the scale below, please indicate the extent to which you agree or disagree with the following statements about your counselor.

Regarding the core aspect (s) of my cultural background, my counselor…	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree
1. Is respectful.	1	2	3	4	5
2. Is open to explore.	1	2	3	4	5
3. Assumes he/she already knows a lot.	1	2	3	4	5
4. Is considerate.	1	2	3	4	5
5. Is genuinely interested in learning more.	1	2	3	4	5
6. Acts superior.	1	2	3	4	5
7. Is open to seeing things from my perspective.	1	2	3	4	5
8. Makes assumptions about me.	1	2	3	4	5
9. Is open-minded	1	2	3	4	5
10. Is a know-it-all.	1	2	3	4	5
11. Thinks he/she understands more than he/she actually does.	1	2	3	4	5
12. Asks questions when he/she is uncertain.	1	2	3	4	5

Appendix F: Cross-Cultural Counseling Inventory-Revised-7-item

Instructions: Please circle the appropriate rating under each statement. Please circle the only response for each statement. Be sure you check every scale even though you feel that you may have insufficient data on which to make a judgment.

Items	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
1. My counselor acknowledges and is comfortable with cultural differences.	1	2	3	4	5	6
2. My counselor attempts to perceive my problems within the context of my cultural experience, values, and/or lifestyle.	1	2	3	4	5	6
3. My counselor values and respects cultural differences.	1	2	3	4	5	6
4. My counselor demonstrates knowledge about my culture.	1	2	3	4	5	6
5. My counselor is aware of how his or her own values might affect me.	1	2	3	4	5	6
6. My counselor is comfortable with differences between us.	1	2	3	4	5	6
7. My counselor is at ease talking with me.	1	2	3	4	5	6

Appendix G: Working Alliance Inventory – Short Form Revised

Instructions: Below is a list of statements and questions about experiences people might have with their therapy or therapist. Some items refer directly to your therapist with an underlined space -- as you read the sentences, mentally insert the name of your therapist in place of _____ in the text. Think about your experience in therapy, and decide which category best describes your own experience.

Please take your time to consider each question carefully.

Items	Seldom	Sometimes	Fairly Often	Very Often	Always
1. As a result of these sessions I am clearer as to how I might be able to change.	1	2	3	4	5
2. What I am doing in therapy gives me new ways of looking at my problem.	1	2	3	4	5
3. I believe____likes me.	1	2	3	4	5
4. ____and I collaborate on setting goals for my therapy.	1	2	3	4	5
5. ____and I respect each other.	1	2	3	4	5
6. ____and I are working towards mutually agreed upon goals.	1	2	3	4	5
7. I feel that____ appreciates me.	1	2	3	4	5
8. _____ and I agree on what is important for me to work on.	1	2	3	4	5
9. I feel _____ cares about me even when I do things that he/she does not approve of.	1	2	3	4	5
10. I feel that the things I do in therapy will help me to accomplish the changes that I want.	1	2	3	4	5
11. _____ and I have established a good understanding of the kind of changes that would be good for me.	1	2	3	4	5
12. I believe the way we are working with my problem is correct.	1	2	3	4	5

Appendix H: Permission to Use Measures

Permission to use the CHS (Hook et al., 2013)

Re: [EXT] Re: Permission to use the CHS

HJ

Hook, Joshua <Joshua.Hook@unt.edu>
To Yanhong Liu
Cc Peitao Zhu

You replied to this message on 9/27/2019 11:41 AM.

Sure, go for it!

Joshua N. Hook, Ph.D
Associate Professor of Psychology
University of North Texas
www.JoshuaNHook.com

On Sep 27, 2019, at 8:41 AM, Yanhong Liu <yliu363@syr.edu> wrote:

> Dear Josh,
>
> I appreciate your consideration for Peitao to use your CHS. Please feel free to let me know if you have any questions about Peitao's study.
>
> Sincerely,
> Yanhong
>
> **Yanhong Liu, Ph.D., NCC**
> Assistant Professor, School Counseling Program Coordinator
>
> Department of Counseling and Human Services
> T 315.443.9624 F 315.443.4697
> yliu363@syr.edu
>
> 130 College Place Suite 440, Syracuse, NY 13244
> www.chs.syr.edu
> Syracuse University

Permission to use the CCCI-R7 (Drinane et al., 2016)

Re: Permission to use the CCCI-R7

JM

Joanna M. Drinane <joanna.drinane@gmail.com>
To Yanhong Liu
Cc Peitao Zhu

Hi Peitao and Yanhong,

Of course! Wishing you the best with the study.

Take care,
Joanna

Joanna M. Drinane, Ph.D.
Assistant Professor
Counseling/Counseling Psychology Program
Department of Educational Psychology
University of Utah

Pronouns: she/her/hers (https://www.mypronouns.org/)

On Sep 27, 2019, at 7:39 AM, Yanhong Liu <yliu363@syr.edu> wrote:

> Dear Dr. Drinane,
>
> I appreciate your consideration for Peitao to use your CCCI-R7. Please feel free to let me know if you have any questions about Peitao's study.
>
> Sincerely,
> Yanhong

SOCIETY FOR PSYCHOTHERAPY RESEARCH

October 10, 2019

Peitao Zhu
Syracuse University
Syracuse, NY
USA

Dear Peitao:

You have our permission to use the Working Alliance Inventory for your dissertation study on developing a measure of cultural humility. Please be aware that we require publishing the following note at the end of the measure:

Reprinted by permission of the Society for Psychotherapy Research © 2016.

We wish you the best in your work. Thank you for your continued membership in the Society for Psychotherapy Research, an international, multidisciplinary scientific association devoted to research on psychotherapy.

Sincerely,

Marna S. Barrett, Ph.D.
Executive Officer
sprexecutive@gmail.com

Appendix I: R Codes for SEM-based Power Analysis

```
R version 3.4.4 (2018-03-15) -- "Someone to Lean On"
Copyright (C) 2018 The R Foundation for Statistical Computing
Platform: x86_64-pc-linux-gnu (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

Rweb:> png(file= "/tmp/Rout.30983.%03d.png")
Rweb:>
Rweb:> #Computation of minimum sample size for test of fit
Rweb:>
Rweb:> rmsea0 <- 0.05 #null hypothesized RMSEA
Rweb:> rmseaa <- 0.04 #alternative hypothesized RMSEA
Rweb:> d <- 725 #degrees of freedom
Rweb:> alpha <- 0.05 #alpha level
Rweb:> desired <- 0.8 #desired power
Rweb:>
Rweb:> #Code below need not be changed by user
Rweb:> #initialize values
Rweb:> pow <- 0.0
Rweb:> n <- 0
Rweb:> #begin loop for finding initial level of n
Rweb:> while (pow<-="" n+100="" ncp0="" (n-1)*d*rmsea0^2="" ncpa="" (n-
1)*d*rmseaa^2="" #compute="" power="" if(rmsea0
Rweb:> #begin loop for interval halving
Rweb:> foo <- -1
Rweb:> newn <- n
Rweb:> interval <- 200
Rweb:> powdiff <- pow - desired
Rweb:> while (powdiff>.001) {
+   interval <- interval*.5
+   newn <- newn + foo*interval*.5
+   ncp0 <- (newn-1)*d*rmsea0^2
+   ncpa <- (newn-1)*d*rmseaa^2
+   #compute power
+   if(rmsea0<-="" qchisq(alpha,d,ncp="ncp0,lower.tail=F)" pow=""
pchisq(cval,d,ncp="ncpa,lower.tail=F)" }="" else="" qchisq(1-
alpha,d,ncp="ncp0,lower.tail=F)" 1-pchisq(cval,d,ncp="ncpa,lower.tail=F)"
powdiff="" abs(pow-desired)="" if="" (powdesired) {
+     foo <- -1
+   }
+ }
Rweb:>
Rweb:> minn <- newn
Rweb:> print(minn)
[1] 196.0938
```

```
Rweb:>
Rweb:>
```

Appendix J: Syracuse University IRB Approval Letter

SYRACUSE UNIVERSITY

INSTITUTIONAL REVIEW BOARD
MEMORANDUM

TO:	Yanhong Liu
DATE:	November 22, 2019
SUBJECT:	**Determination of Exemption from Regulations**
IRB #:	19-308
TITLE:	*The Development and Initial Validation of the Cultural Humility and Enactment Scale in Counseling*

The above referenced application, submitted for consideration as exempt from federal regulations as defined in 45 C.F.R. 46, has been evaluated by the Institutional Review Board (IRB) for the following:

1. determination that it falls within one or more of the eight exempt categories allowed by the organization;
2. determination that the research meets the organization's ethical standards.

It has been determined by the IRB this protocol qualifies for exemption and has been assigned to category **2**. This authorization will remain active for a period of five years from **November 21, 2019** until **November 20, 2024**.

CHANGES TO PROTOCOL: Proposed changes to this protocol during the period for which IRB authorization has already been given, cannot be initiated without additional IRB review. If there is a change in your research, you should notify the IRB immediately to determine whether your research protocol continues to qualify for exemption or if submission of an expedited or full board IRB protocol is required. Information about the University's human participants protection program can be found at: http://researchintegrity.syr.edu/human-research/. Protocol changes are requested on an amendment application available on the IRB web site; please reference your IRB number and attach any documents that are being amended.

STUDY COMPLETION: Study completion is when all research activities are complete or when a study is closed to enrollment and only data analysis remains on data that have been de-identified. A Study Closure Form should be completed and submitted to the IRB for review (Study Closure Form).

Thank you for your cooperation in our shared efforts to assure that the rights and welfare of people participating in research are protected.

Tracy Cromp, M.S.W.
Director

DEPT: Counseling & Human Services, 130 College Place – Suite 440B **STUDENT:** Peitao Zhu

Appendix K: Descriptive Statistics for CHES Initial Items

Item No.	Mean	SD	Skewness	Kurtosis	Missing N.
Item 1	4.62	1.167	-1.037	.097	1
Item 2	4.85	1.084	-1.163	1.461	1
Item 3	4.17	1.199	-.567	.006	0
Item 4	4.42	1.276	-.890	.314	2
Item 5	4.63	1.126	-.896	.846	0
Item 6	4.64	1.108	-.876	.784	1
Item 7	2.58	1.345	.696	-.387	1
Item 8	4.39	1.239	-.729	.161	2
Item 9	4.45	1.307	-.946	.501	0
Item 10	2.59	1.465	.760	-.456	1
Item 11	4.24	1.247	-.689	.022	0
Item 12	4.11	1.265	-.644	-.001	2
Item 13	2.60	1.438	.588	-.769	3
Item 14	3.86	1.386	-.318	-.737	2
Item 15	4.30	1.157	-.688	.316	1
Item 16	4.52	1.163	-.859	.640	1
Item 17	4.22	1.236	-.666	.052	1
Item 18	4.69	1.028	-.917	1.078	4
Item 19	2.29	1.385	.947	-.075	0
Item 20	2.56	1.471	.827	-.244	1
Item 21	3.2	1.486	.038	-1.133	2
Item 22	2.00	1.256	1.298	.953	0
Item 23	2.30	1.411	1.031	.121	1
Item 24	2.23	1.432	1.131	.270	2
Item 25	2.38	1.483	.855	-.464	1
Item 26	2.46	1.422	.917	-.054	2
Item 27	4.82	1.045	-1.125	1.485	4
Item 28	3.21	1.474	0.195	-.923	6
Item 29	4.43	1.265	-.870	.318	1
Item 30	4.60	1.061	-.864	.755	4
Item 31	4.63	1.120	-.995	1.037	2
Item 32	4.65	1.115	-.996	.907	2
Item 33	2.33	1.379	1.012	.131	0
Item 34	4.72	1.103	-.904	.726	2
Item 35	4.74	1.179	-1.176	1.250	2
Item 36	4.63	1.210	-.992	.616	4
Item 37	4.53	1.255	-1.054	.681	2
Item 38	2.35	1.370	1.035	.297	2
Item 39	4.49	1.232	-1.027	.580	1
Item 40	2.67	1.477	.794	-.345	1

Appendix L: CHES Initial Items Covariance Matrix

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10
Item 1	1.36									
Item 2	0.75	1.18								
Item 3	0.81	0.79	1.44							
Item 4	0.82	0.77	0.79	1.63						
Item 5	0.91	0.79	0.77	0.98	1.27					
Item 6	0.84	-0.61	0.79	-0.78	0.78	1.23				
Item 7	-0.50	0.92	-0.61	-0.54	-0.61	-0.57	1.83			
Item 8	0.96	0.74	0.92	0.93	0.95	0.75	-0.54	1.54		
Item 9	0.79	0.65	0.74	0.92	0.84	0.70	-0.43	0.87	1.70	
Item 10	-0.64	-0.67	-0.55	-0.52	-0.61	-0.58	1.00	-0.62	-0.45	2.15
Item 11	0.86	0.70	0.94	0.67	0.73	0.74	-0.42	0.83	0.77	-0.42
Item 12	0.68	0.58	0.81	0.75	0.70	0.70	-0.30	0.79	0.59	-0.35
Item 13	-0.64	-0.68	-0.57	-0.54	-0.64	-0.57	1.03	-0.56	-0.48	1.13
Item 14	0.71	0.57	0.90	0.81	0.70	0.69	-0.27	0.94	0.65	-0.31
Item 15	0.86	0.73	0.90	0.81	0.82	0.76	-0.55	0.88	0.80	-0.61
Item 16	0.89	0.76	0.92	0.89	0.88	0.85	-0.55	0.90	0.75	-0.53
Item 17	0.75	0.76	0.82	0.78	0.72	0.72	-0.49	0.77	0.67	-0.53
Item 18	0.64	0.51	0.48	0.52	0.63	0.55	-0.35	0.68	0.47	-0.44
Item 19	-0.76	-0.74	-0.63	-0.56	-0.75	-0.69	1.05	0.60	-0.50	1.26
Item 20	-0.59	-0.63	-0.45	-0.52	-0.63	-0.59	1.06	-0.40	-0.55	1.03
Item 21	0.13	0.09	0.34	0.42	0.24	0.11	0.20	0.39	0.29	0.22
Item 22	-0.66	-0.64	-0.58	-0.64	-0.75	-0.64	1.01	-0.62	-0.52	1.12
Item 23	-0.60	-0.59	-0.50	-0.46	-0.59	-0.57	1.11	-0.54	-0.41	1.21
Item 24	-0.69	0.61	-0.43	-0.54	-0.68	-0.64	1.03	-0.50	-0.50	1.14
Item 25	-0.50	-0.55	-0.28	-0.35	-0.44	-0.54	0.78	-0.34	-0.32	1.12
Item 26	-0.60	-0.59	-0.45	-0.51	-0.63	-0.58	0.97	-0.47	-0.33	1.17
Item 27	0.82	0.73	0.70	0.72	0.77	0.74	-0.58	0.74	0.65	-0.58
Item 28	-0.38	-0.34	-0.18	-0.29	-0.35	-0.30	0.72	-0.15	-0.32	0.90

Item 29	0.86	0.83	0.81	0.77	0.79	0.80	-0.58	0.87	0.87	-0.77
Item 30	0.75	0.74	0.74	0.84	0.79	0.69	-0.54	0.78	0.75	-0.68
Item 31	0.80	0.80	0.78	0.88	0.81	0.83	-0.59	0.82	0.78	-0.64
Item 32	0.78	0.74	0.72	0.79	0.83	0.73	-0.63	0.76	0.75	-0.67
Item 33	-0.57	-0.67	-0.40	-0.65	-0.64	-0.56	0.87	-0.51	-0.59	1.10
Item 34	0.77	0.77	0.74	0.74	0.79	0.76	-0.62	0.72	0.61	-0.67
Item 35	0.86	0.83	0.75	0.75	0.81	0.74	-0.56	0.75	0.72	-0.70
Item 36	0.75	0.74	0.66	0.76	0.74	0.70	-0.47	0.70	0.61	-0.48
Item 37	0.73	0.77	0.63	0.71	0.76	0.64	-0.48	0.73	0.67	-0.63
Item 38	-0.66	-0.56	-0.46	-0.56	-0.65	-0.66	0.76	-0.58	-0.50	0.96
Item 39	0.76	0.76	0.69	0.81	0.74	0.63	-0.42	0.78	0.78	-0.61
Item 40	-0.61	-0.47	-0.38	-0.60	-0.52	-0.57	0.80	-0.53	-0.43	0.85

	Item 11	**Item 12**	**Item 13**	**Item 14**	**Item 15**	**Item 16**	**Item 17**	**Item 18**	**Item 19**	**Item 20**
Item 11	1.55									
Item 12	0.78	1.60								
Item 13	-0.48	-0.36	2.08							
Item 14	0.70	0.82	-0.37	1.92						
Item 15	0.87	0.74	-0.60	0.84	1.34					
Item 16	0.83	0.79	-0.56	0.75	0.93	1.35				
Item 17	0.95	0.83	-0.59	0.84	0.81	0.77	1.53			
Item 18	0.56	0.47	-0.40	0.39	0.58	0.60	0.54	1.06		
Item 19	-0.65	-0.50	1.23	-0.37	-0.69	-0.71	-0.66	-0.51	1.91	
Item 20	-0.41	-0.35	1.26	-0.21	-0.52	-0.51	-0.47	-0.37	1.06	2.16
Item 21	0.20	0.34	0.22	0.46	0.22	0.29	0.26	0.24	0.19	0.31
Item 22	-0.57	-0.42	1.09	-0.32	-0.63	-0.67	-0.60	-0.46	1.27	1.06
Item 23	-0.43	-0.38	1.18	-0.16	-0.47	-0.50	-0.43	-0.45	1.22	1.31
Item 24	-0.46	-0.30	1.11	-0.18	-0.48	-0.53	-0.51	-0.43	1.12	1.24
Item 25	-0.43	-0.21	1.09	0.05	-0.37	-0.34	-0.32	-0.31	0.91	1.16
Item 26	-0.37	-0.27	1.22	-0.20	-0.56	-0.53	-0.47	-0.42	1.22	1.07
Item 27	0.65	0.53	-0.63	0.56	0.67	0.73	0.60	0.50	-0.71	-0.61
Item 28	-0.16	-0.31	0.94	0.01	-0.28	-0.26	-0.24	-0.17	0.80	0.92

Item 29	0.95	0.76	-0.72	0.70	0.91	0.84	0.89	0.59	-0.82	-0.65
Item 30	0.73	0.68	-0.59	0.59	0.75	0.78	0.73	0.48	-0.69	-0.57
Item 31	0.76	0.74	-0.62	0.65	0.77	0.80	0.77	0.50	-0.77	-0.61
Item 32	0.71	0.65	-0.61	0.66	0.73	0.76	0.73	0.50	-0.68	-0.63
Item 33	-0.45	-0.29	1.07	-0.18	-0.55	-0.56	-0.50	-0.50	0.99	1.00
Item 34	0.71	0.65	-0.58	0.65	0.69	0.74	0.75	0.53	-0.77	-0.56
Item 35	0.74	0.63	-0.72	0.65	0.78	0.83	0.75	0.57	-0.85	-0.69
Item 36	0.78	0.63	-0.67	0.64	0.74	0.74	0.76	0.47	-0.62	-0.72
Item 37	0.72	0.52	-0.69	0.55	0.67	0.68	0.65	0.46	-0.69	-0.73
Item 38	-0.46	-0.40	-0.97	-0.40	-0.56	-0.52	-0.55	-0.43	1.01	0.87
Item 39	0.83	0.66	-0.65	0.57	0.73	0.67	0.70	0.51	-0.64	-0.77
Item 40	-0.45	-0.37	-0.89	-0.35	-0.54	-0.47	-0.49	-0.29	0.92	1.04

	Item 21	**Item 22**	**Item 23**	**Item 24**	**Item 25**	**Item 26**	**Item 27**	**Item 28**	**Item 29**	**Item 30**
Item 21	2.22									
Item 22	0.14	1.57								
Item 23	0.17	1.15	1.99							
Item 24	0.13	1.12	1.36	2.05						
Item 25	0.40	0.93	1.15	1.15	2.20					
Item 26	0.22	1.18	1.20	1.15	0.99	2.03				
Item 27	0.17	-0.69	-0.68	-0.74	-0.58	-0.67	1.10			
Item 28	0.34	0.70	0.95	0.92	0.86	1.10	-0.30	2.19		
Item 29	0.22	-0.74	-0.70	-0.64	-0.61	-0.70	0.82	-0.36	1.60	
Item 30	0.20	-0.68	-0.61	-0.60	-0.51	-0.58	0.76	-0.38	0.84	1.14
Item 31	0.18	-0.70	-0.66	-0.61	-0.52	-0.61	0.86	-0.32	0.95	0.88
Item 32	0.14	-0.68	-0.71	-0.74	-0.57	-0.71	0.81	-0.50	0.92	0.82
Item 33	0.15	0.98	1.17	1.16	1.12	1.19	-0.65	1.01	-0.76	-0.73
Item 34	0.17	-0.75	-0.61	-0.71	-0.54	-0.65	0.81	-0.39	0.91	0.81
Item 35	0.21	-0.80	-0.71	-0.76	-0.60	-0.70	0.87	-0.42	0.95	0.86
Item 36	0.11	-0.65	-0.52	-0.61	-0.73	-0.63	0.78	-0.31	0.78	0.76
Item 37	0.13	-0.68	-0.65	-0.71	-0.77	-0.68	0.81	-0.42	0.87	0.73
Item 38	0.09	0.98	0.21	0.89	0.80	1.14	-0.62	0.87	-0.75	-0.62

Item 39	0.19	-0.59	-0.59	-0.16	-0.76	-0.57	0.80	-0.40	0.97	0.78
Item 40	0.14	0.81	0.85	0.95	0.88	1.09	-0.51	0.72	-0.59	-0.55

	Item 31	**Item 32**	**Item 33**	**Item 34**	**Item 35**	**Item 36**	**Item 37**	**Item 38**	**Item 39**	**Item 40**
Item 31	1.26									
Item 32	0.86	1.24								
Item 33	-0.63	-0.71	1.90							
Item 34	0.86	0.87	-0.65	1.22						
Item 35	0.90	0.86	-0.76	0.91	1.40					
Item 36	0.79	0.85	-0.61	0.83	0.86	1.47				
Item 37	0.78	0.84	-0.82	0.83	0.88	1.04	1.58			
Item 38	-0.62	-0.63	1.08	-0.68	-0.79	-0.62	-0.72	1.88		
Item 39	0.82	0.86	-0.70	0.79	0.90	1.15	1.15	-0.69	1.75	
Item 40	-0.52	-0.57	0.98	-0.62	-0.66	-0.65	-0.74	1.16	-0.72	2.18

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Zhu, P., Luke, M. M., & Bellini, J. L. (2019; Under review). A grounded-theory analysis of cultural humility in counseling and counselor education. *Counselor Education and Supervision.*

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EDUCATION

School of Education, Syracuse University — Syracuse, NY
Ph.D., Counseling and Counselor Education - CACREP Accredited — 2020 (Expected)
-Dissertation Title: *The Initial Development and Validation of the Cultural Humility and Enactment Scale in Counseling*
-Cognate: Relational, Social, and Cultural Perspectives of Complex Trauma

School of Medicine, Boston University — Boston, MA
M.A., Mental Health Counseling and Behavioral Medicine – CACREP Accredited — 2016

School of Life Science, Fudan University — Shanghai, China
B.S., Biotechnology — 2010

LICENSURE/CERTIFICATION

National Certified Counselor	02/2018-PRESENT
New York State Mental Health Counselor Limited Permit	04/2017-PRESENT
Licensed National Psychological Counselor (LNPC) in China	06/2011-PRESENT

RESEACH AND PROFESSIONAL ACTIVITIES

Refereed Publications

Zhu, P., Lau, J., Navalta, C. P. (In press). An Ecological Approach to Understanding Pervasive and Hidden Shame in Complex Trauma. *Journal of Mental Health Counseling.*

Zhu, P. (In press). A metatheoretical analysis of Interpersonal Psychotherapy: challenges with dissemination and pathways toward integration. *Romanian Journal of Counseling.*

Zhou, X., **Zhu, P.**, & Miao, I. Y., (In press). Incorporating acculturation perspective into the Integrated Developmental Model (IDM) in working with international trainees. *Training and Education in Professional Psychology.*

Zhu, P. (2019**).** Undergraduate Peer Mentoring Programs for Improved Social Support and Mental Health. In P. A. Burak (Eds.). *Addressing Mental Health Issues and International Students*. NAFSA: Association of International Educators.

Zhu, P. (2018). Experiential growth group in counselor education: a review of its pedagogy, research, and ethical dilemmas. *The Journal for Specialists in Group Work*, *43*(2), 144–165. https://doi.org/10.1080/01933922.2018.1451581

Manuscripts Under Review

Zhu, P., Luke, M. M., & Bellini, J. L. (Submitted in 2019, under review). A grounded-theory analysis of cultural humility in counseling and counselor education. *Journal of Counseling & Development.*

Manuscript in Preparation

Liu, Y. **& Zhu, P.** (Data collected; analysis in progress). A Case Study on Relational Empathy and Perceived Cultural Humility in an Experiential Growth Group.

Zhu, P. & Luke, M. (Editing stage). Systematically attending to supervision outcomes: a guide for clinical supervisors.

Liu, Y. Li, D., & **Zhu, P.** (Contracted; Forthcoming in 2020). *Children experiencing grief and loss.* (Editors) The Handbook of Research on Trauma in Children. Cognella Publications.

Non-Peer Reviewed Publications

Zhu, P. (2018) Editorial Note. *NARACES Graduate Gazette*. North Atlantic Region Association for Counselor Education and Supervision. 1(2), 1.

Duquette, K. & **Zhu, P.** (2018) Editorial Note. *NARACES Graduate Gazette*. North Atlantic Region Association for Counselor Education and Supervision. 1(1), 2.

Media Recognition

Zhu, P. & Grad, R. I. (Drs. Marty Jencius & Eric Baltrinic). (2018, December). *TFM 039 International students and faculty in the U.S.* [Audio podcast]. Retrieved from https://itunes.apple.com/us/podcast/the-faculty-meeting/id1289763425?mt=2

External Research Grants

Primary Investigator: Zhu, P. & Liu, Y. (2019). A Case Study on Relational Empathy and Perceived Cultural Humility in an Experiential Growth Group. Awarded $800.00 through ASGW Research Grant, sponsored by the Association for Specialists in Group Work.

Primary Investigator: Zhu, P., Luke, M. M., & Bellini, J. L. (2017) A grounded-theory analysis of cultural humility in counseling and counselor education. Applied for $2500.00 through the SPR Small Research Grant, sponsored by the Society for Psychotherapy Research. Grant unfunded. AY 2018-2019

Primary Investigator: Zhu, P., Luke, M. M., & Bellini, J. L. (2017) A grounded-theory analysis of cultural humility in counseling and counselor education. Applied for $500.00 through ACES Research Grant, sponsored by the Association for Counselor Education and Supervision. Grant unfunded. AY 2018-2019

Internal Research Grants

Student Researcher: Bellini, J., & Luke, M., & **Zhu, P.** (2018) A grounded-theory analysis of cultural humility in counseling and counselor education. Applied for $2,500.00 through Joan Burstyn endowed Fund for Collaborative Research, sponsored by Syracuse University School of Education. Grant unfunded. AY 2018-2019

Internal Operations Grants

Co-Manager: Burak, P. & **Zhu, P.** (AY 2018-2019) First-year global peer. $4,736.60 funded through the

Unsurpassed Student Experience Diversity & Inclusion Grant, sponsored by Syracuse University Office of the Provost.

Co-Manager: Burak, P. & **Zhu, P.** (AY 2018-2019) The Connections peer mentoring program for first-year international undergraduate students. $65,000.00 funded through the Co-curricular Grant, sponsored by Syracuse University Division of Enrollment and the Student Experience.

PROFESSIONAL PRESENTATIONS

Zhu, P., Liu, Y, Luke, M., & Wang, Q. (Accepted; June 2020). The Development and Initial Validation of the Cultural Humility and Enactment Scale in Counseling. Society for Psychotherapy Research Annual International Conference. Amherst, MA.

Schroder, K., Stevens, M., Xiong, Y., & **Zhu, P.** (January 2020). Group Work Scholars Wanted: How to Join the Conversation. Association for Counselor Education and Supervision. Puerto Rico.

Liu, Y., **Zhu, P.**, & Turner, A. D. (January 2020) Weird, but it actually worked": Understanding Personal Growth through Experiential Growth Groups. Association for Specialists in Group Work. Puerto Rico.

Liu, Y. & **Zhu, P.** (October 2019) Initial Measure Development and Validation: Item Generation, Functoriality, and Structural Confirmation. Association for Counselor Education and Supervision. Seattle, WA.

Zhu, P. (October 2019). A grounded-theory analysis of cultural humility in counseling and counselor education. Association for Counselor Education and Supervision. Seattle, WA.

Schroder, K., Kiweewa, J., Stevens, M., & **Zhu, P.** (October 2019). Group Work Scholars Wanted: How to Join the Conversation. Association for Counselor Education and Supervision. Seattle, WA.

Grad, R. I., & **Zhu, P.** (September 2019). Therapeutic Alliance among Individuals who Experienced Childhood Interpersonal Trauma: The Role of Cultural Humility, Therapeutic Presence, and Attachment Style. Association for Assessment and Research in Counseling. San Antonio, TX.

Zhu, P. (July 2019). A grounded-theory analysis of cultural humility in counseling and counselor education. Society for Psychotherapy Research Annual International Conference. Buenos Aires, Argentina.

Zhu, P., Craigen, L. & Field, T. (September 2018) The dynamics of trauma: shame, vulnerability and self-compassion. North Atlantic Region Association for Counselor Education and Supervision. Burlington, VT.

Zhu, P. (September 2018). Experiential growth groups: theory, evidence and innovation. North Atlantic Region Association for Counselor Education and Supervision. Burlington, VT.

Zhu, P. & Darkis, J. (September 2018). The supervisor working alliance: a critical examination. Burlington, VT.

Zhu, P. (June 2018). The supervisory working alliance: how does it affect supervision outcomes? Society for Psychotherapy Research Annual International Conference. Amsterdam, Netherlands.

Zhu, P. (June 2018**).** A grounded-theory analysis of cultural humility in counseling and counselor education. Society for Psychotherapy Research Annual International Conference. Amsterdam, Netherlands.

Zhu, P. (Feb. 2018**)**. How do experiential growth groups benefit counselors-in-training? Association for Specialists in Group Work. Savannah, GA.

Zhu, P. & Luke, M**.** (Oct. 2017). Teaching constructivism or constructivist teaching? Lesson learned in counseling theories pedagogy. Association for Counselor Education and Supervision. Chicago, IL.

Zhu, P., Craigen, L. & Navalta, C. (Oct. 2017). Infusing trauma-informed pedagogies into counselor training. Association for Counselor Education and Supervision. Chicago, IL.

Zhu, P. (June 2017). The pervasive shame in complex trauma: an ecological view. Society for Psychotherapy Research Annual International Conference. Toronto, Canada.

Zhu, P. (March 2017). The pervasive shame in complex trauma: an ecological view. International Society for the Study of Trauma and Dissociation Annual Conference. Washington, D.C.

Zhu, P. (March 2017). Addressing the pervasive shame in complex trauma. International Society for the Study of Trauma and Dissociation Annual Conference. Washington, D.C.

Zhu, P. & Mazor-Thomas, Y. (Oct. 2015). What your student won't tell you about the small group experience: a master's level student perspective. Association for Counselor Education and Supervision. Philadelphia, PA.

PROFESSIONAL EXPERIENCES

The Meadows Integrated Outpatient Clinic at Helio Health — Syracuse, NY
Per diem Mental Health Counselor — 05/2017-03/2019
Doctoral Clinical Intern — 10/2016-04/2017
-Provided individual, couple, family, and group counseling in a community outpatient setting for clients with a full range of mental health diagnoses

Slutzker Center for International Services, Syracuse University — Syracuse, NY
Graduate Assistant — 08/2017-05/2019
-Coordinated the Connections program, a peer mentoring program that serves approximately 300 first-year international undergraduate students annually
-Provided weekly consultation for mental health and student affairs issues pertaining to international students

Department of Counseling and Human Services, Syracuse University — Syracuse, NY
Individual Clinical Supervisor — 01/2017-PRESENT
-Provide clinical supervision of master's students' practicum and internship experience

Boston Area Rape Crisis Center (BARCC) — Cambridge, MA
Clinical Intern — 09/2015 – 05/2016
-Provided trauma-informed short-term individual, couple, family and group counseling in an outpatient setting for survivors with various forms of sexual trauma and their significant others
-Co-facilitated a two-phased trauma-based group, *Healing from Trauma for Male-ident.fied Survivors*, for adult male survivors of sexual trauma
-Collaborated with in-house services including crisis hotline, case management, medical advocacy, legal advocacy, community outreach and prevention.

Psychiatric Emergency Services, Boston Medical Center — Boston, MA
Clinical Intern — 01/2015 – 05/2015
-Provided crisis interventions and assessments in a multidisciplinary crisis team
-Conducted psychiatric evaluations, determined appropriate level of care, performed bed searches and executed referrals for client

Center for Counseling and Psychological Services, Fudan University — Shanghai, China
Intern Counselor — 06/2013 – 06/2014
-Provided brief individual psychological support for students with behavioral and emotional concern in a college counseling setting

Shanghai New Oriental School — Shanghai, China
English Teacher — 07/2012 – 06/2014
-Delivered 1-on-1 English tutoring and small-class teaching for high-school and college students

Undergraduate Affairs Office (UAO), Fudan University — Shanghai, China
Student Advisor — 09/2010 – 06/2014

-Served as an advisor for up to 200 undergraduates and addressed issues related to their psychological, social and academic needs
-Attended in-services training on student affairs counseling, leadership development, crisis intervention and case discussion

TEACHING EXPERIENCE

COU 878 Seminar in Advanced Theory, *Doctoral Teaching Associate* — Syracuse University
Faculty Instructor: Melissa Luke, Ph.D. — Fall 2019
-Designed, implemented, and evaluated the online-learning module of the course
-Facilitated classroom discussions and activities

COU 644 Counseling PrePracticum, *Guest Lecturer* — Syracuse University
Faculty Instructor: Fei Shen, Ph.D. — Fall 2019
-Delivered lectures on empathic understanding and responding

COU 624 Theories of Counseling, *Guest Lecturer* — Syracuse University
Faculty Instructor: Yanhong Liu, Ph.D. — Fall 2019
-Delivered lectures on Psychodynamics and Interpersonal theories.

COU 614 Group Work in Counseling, Doctoral Co-Instructor — Syracuse University
Faculty Co-Instructor: Yanhong Liu, Ph.D. — Spring 2019
-Delivered 50% of the course content
-Led one of the experiential growth group for 11 sessions, a group experience required by CACREP

COU723 Psycho-Social-Cultural Aspects of Disabilities, *Doctoral Teaching Associate* — Syracuse University
Faculty Instructor: James Bellini, Ph.D. — Fall 2018
-Delivered lectures on qualitative interviewing and coding methods
-Facilitated class discussions and provided feedback for student assignments

CFS 479 Power, Conflict, Violence, and the Family, *Guest Lecturer* — Syracuse University
Instructor: Ying Zhang — Fall 2018
- Delivered lecture on recognizing the complexity of intimate partner violence

COU 651 Crisis Counseling, *Doctoral Teaching Associate* — Syracuse University
Faculty Instructor: Derek Seward, Ph.D. — Summer 2018
-Facilitated class discussions and role-plays

COU 612 Professional Orientation and Ethical Practice, *Doctoral Teaching Associate* — Syracuse University
Faculty Instructor: Derek Seward, Ph.D. — Fall 2017
-Delivered lectures on confidentiality, privileged communication, malpractice, and professional competence.
- Provided individual feedback on students' assignments

COU 624 Theories of Counseling, *Guest Lecturer* — Syracuse University
Faculty Instructor: Sharon Bruner, Ph.D. — Fall 2017
-Delivered lectures on Feminist and Intersectionality theories.

COU 790 Internship, *Doctoral Teaching Associate* — Syracuse University
Faculty Instructor: Derek Seward, Ph.D. — Summer 2017
-Delivered lectures on working with complex trauma.
-Facilitated students' case presentations and provided individual feedback on students' assignments

COU 758 Research Methods, *Doctoral Teaching Associate* Syracuse University
Faculty Instructor: Melissa Luke, Ph.D. Spring 2017
-Delivered lectures on non-experimental quantitative design and qualitative research design.
-Co-constructed the mid-term and final exams.

COU 624 Theories of Counseling, *Doctoral Teaching Associate* Syracuse University
Faculty Instructor: Melissa Luke, Ph.D. Fall 2016
-Delivered lectures on Psychodynamic, Existential, Gestalt, Constructivist and Feminist theories.
-Provided individual feedback on students' assignments.
-Co-constructed the mid-term and final exams.

PROFESSIONAL SERVICE, LEADERSHIP, AND AWARDS

NEW YORK UNIVERSITY
- Steinhardt Faculty First-look Scholars (2019-2020)

ASSOCIATION FOR ASSESSMENT AND EVALUATION IN COUNSELING
- Assessment Committee Member (2019-2020)

SOCIETY FOR PSYCHOTHERAPY RESEARCH
- Laura Rice Memorial Student Travel Award (2019)
- Member of the steering committee for Special Interest Group on Culture and Psychotherapy

ASSOCIATION FOR SPECIALISTS IN GROUP WORK
- Research Committee Member (2018-present)
- 2020 Conference Program reviewer
- 2018 Conference Program reviewer
- 2018 Conference Volunteer award

ASSOCIATION FOR COUNSELOR EDUCATION AND SUPERVISION
- Conference proposal reviewer (2019)
- Conference proposal reviewer (2017)

NORTH ATLANTIC REGION ASSOCIATION FOR COUNSELOR EDUCATION AND SUPERVISION
- Editor of the Graduate Gazette, the student online publication of NARACES (2018-2020)
- Emerging Leader (2018)
- Graduate Student Representative (2018-2020)
- Grant reviewer (2018)

AMERICAN EDUCATIONAL RESEARCH ASSOCIATION
- Division E Graduate Student Fellowship Award (2019)

AMERICAN COUNSELING ASSOCIATION OF NEW YORK
- Graduate Student Chair (2018-2019)

THE EVOLUTION OF PSYCHOTHERAPY
- 2017 Pre-conference and full conference volunteer

SYRACUSE UNIVERSITY
- University Fellowship (2016-2020)
- Spector-Warren Fellowship on Teaching about the Holocaust and Genocide (2017-2018)

- Member of the Steering Committee for the First Year Experience (2018-2019)
- Member of the International Student Advisory Board (2017-2019)

BOSTON UNIVERSITY SCHOOL OF MEDICINE
- Elected Graduating Class Speaker (2016)
- Provost Scholarship (2014)

PROFESSIONAL AFFILIATIONS

American Educational Research Association (Student Member)	2018 - present
Association for Specialists in Group Work (Student Member)	2017 - present
Association for Assessment and Research in Counseling (Student Member)	2017 - present
Society for Psychotherapy Research (Student Member)	2016 - present
American Counseling Association (Student Member)	2014 - present
Association for Counselor Education and Supervision (Student Member)	2014 - present
Shanghai Psychological Counseling Association of Higher Learning	2013 - present

SPECIALIZED TRAINING

Structural Equation Modeling, AARC pre-conference — Sep. 2018
Dr. Stephanie Crockett, Richmond, VA

Dyadic Quantitative Data Analysis Workshop — Oct. 2017
Dr. Holly Law, Lake George, NY.

Consensual Qualitative Research (CQR) Workshop — Oct. 2017
Drs. Clara Hill and Sarah Knox, Silver Spring, MD

Rape Crisis Counseling 40-hr Certified Training — Aug. 2015
Sharon Imperato, LMHC, Boston Area Rape Crisis Center

LANGUAGE SKILLS

English: Proficient (Oral & Written)
Mandarin Chinese: Native Speaker