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Western Clinicians' Diagnostic Accuracy of Culture-Bound Syndromes

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Western Clinicians' Diagnostic Accuracy of Culture-Bound Syndromes

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science, at Virginia Commonwealth University.

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Abstract

WESTERN CLINICIANS' DIAGNOSTIC ACCURACY OF CULTURE-BOUND
SYNDROMES

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Culture-bound syndromes are of increasing importance in today's more diverse world. The current

study measured the ability of clinicians trained in a western setting to accurately diagnose culture-

bound syndromes from cultures outside of their background. Eight-four clinicians were recruited

through the American Psychological Association (APA) membership directory. All recruited

clinicians were asked to read three vignettes. In two vignettes a patient was suffering from either

Hwabyung or Ataque de Nervios and the third vignette represented a control GAD vignette. The

clinicians were asked to diagnose the patient in the vignette, to explain what information informed

their diagnosis, to complete two indications of what portions of the vignette informed their decision,

and also to describe what strategies they used to help reach their diagnosis. The clinicians then

completed both the Multicultural Counseling Self-Efficacy Scale-Racial Diversity Form and the

Self-Construal Scale to measure their perceived competence in interacting with clients of minority

backgrounds as well as their cultural orientation toward individualism or collectivism.

Demographic questions were also completed to assess information such as participants' cultural

and clinical background. The present study found that clinicians had difficulty correctly diagnosing cultural disorders while there was greater accuracy in diagnosing the western GAD vignette. Clinicians paid more attention to familiar symptoms of cultural disorders (those that resembled western symptoms) while dismissing uniquely cultural symptoms. Individualism and high perceived cultural competence levels were also correlated with reduced accuracy in the diagnosis of Hwabyung. The study revealed that western clinicians lack experience with encountering and diagnosing unique cultural disorders and are quick to give inaccurate western diagnoses to these foreign presentations. It can be concluded from the results that more cultural training whether it is through graduate programs or CE credits are needed and of great importance.

Key words: culture-bound syndrome, cultures, clinicians

Introduction

An understanding of cultural variations in the presentation of psychopathology is vital for clinicians seeking to treat individuals of diverse backgrounds because they may not always present with the same symptoms or in the same manner as patients with which the clinician is more familiar (Ventriglio et al., 2016). Various culture-bound syndromes (e.g., Hwabyung, Ataque de Nervios, Dhat) do not fit the western models of psychopathology represented in tools such as the DSM-5 (Choi & Yeom, 2011). This study aims to investigate how clinicians diagnose these cultural concepts of distress in their own practice. I hope to learn more about how clinicians in the US conceptualize these foreign symptoms to better understand how cognitive representations of disorders may affect the conceptualization of varying forms of psychopathology.

Psychopathology is expressed differently among cultures as demonstrated throughout research on culture-bound syndromes (DSM-IV), cultural idioms of distress (DSM-5) and culture-specific disorders (ICD-10) (Choi & Yeom, 2011; Iwata et al., 2011). Cultural-bound-syndromes have been described as reoccurring, aberrant behavior and troubling experiences linked to specific societies or cultures that may or may not be linked to a particular DSM category (Guarnaccia & Rogler, 1999). The linkage of culture-bound syndromes to a particular area has led some to characterize them as less "real" due to their lack of universality across cultures (Cooper, 2010). However, many authors have suggested that some disorders considered culture-bound syndromes in fact represent unique conditions worthy of their own classification and diagnostic criteria, and that the localization of a disorder does not alter its "realness" (Balhara 2011; Cooper, 2010; Levin & Gaw, 1995).

With respect to the original intent of the term, there is empirical evidence of strong comorbidity—at least for some disorders—between culture-bound syndromes and traditional diagnostic criteria for known psychiatric disorders (Guarnaccia & Rogler, 1999). This may be evidence that culture-bound syndromes are similar to a western diagnostic counterpart, i.e., they are variations in presentation caused by culture. However, this is not foolproof evidence, as even in cases of strong comorbidity, the correlation is not one-to-one, and a similarity in symptoms cannot, by itself, necessarily be proof that two distinct syndromes are in fact one syndrome presenting differently (Guaranaccia & Rogler, 1999).

On the other hand, the idea that culture-bound syndromes are simply variants of known western disorders has been criticized as categorizing western disorders as "pure" or "less culture-bound" than other disorders without strong evidence (Cooper, 2010). In some cases, it is possible that western disorders are in fact simply variants in presentation of a more universal disorder. It could also be that disorders common in western cultures, such as eating disorders, are treated as "real" disorders, despite their absence in many other cultures (Cooper, 2010).

An example of a culture-bound syndrome is Hwabyung, meaning fire disease, a culture-related anger syndrome in Korea (Min, 2009). The etiology of Hwabyung is believed by sufferers to be related to an anger or frustration with unfair social powers, which prevent sufferers from fulfilling their desires (Min, 2009). Often, the disorder is believed—again by sufferers—to result from suppressing one's emotions in order to maintain harmony, for example, an individual suppressing their anger and frustration at an abusive relationship in order to maintain familial harmony (Min, 2009). Eventually, this suppression leads to feelings of physical symptoms, such as sensations of heat throughout the body, red flushing, heart palpitations, and a feeling of compression in the chest, along with other non-somatic symptoms (Min, 2009).

The DSM-5 acknowledges the underlying importance of culture in the classification of psychopathology and how all deviations from mental health are interpreted and communicated from diverse cultural perspectives (Ventriglio et al., 2016). Considering how the westernized versions of diagnostic categorization are widely used throughout the United States, we know that clinicians and mental health professionals are most exposed to and familiar with the DSM manuals (First et al., 2018). This familiarity and reliance on western interpretations of the classification of psychopathology may present a problem when clinicians encounter patients or clients with a foreign presentation due to human errors in memory and conceptualization. For example, clinicians may misdiagnose patients who present in a way that does not align with Western understanding, or, alternatively, misdiagnose culturally normative behavior as psychopathology (Adeponia et al., 2012; Leseth, 2015). Additionally, these misdiagnoses may then lead to the prescription of an incorrect or ineffective treatment (Adeponia et al., 2012).

Overview of the Interplay between Schemas, Heuristics, and the Development of Bias

Schemas and in turn biases and heuristics may be involved in the conceptualization of disorders for clinicians (Lilienfeld & Lynn, 2015; Croskerry, 2005). Schemas are cognitive frameworks for different areas of knowledge that facilitate the encoding, storing, and retrieving of new knowledge (Foster, Webb, Keeley, & Eakin, 2017; Alba & Hasher, 1983). Memory retrieval is assisted by schemas as they function as an organized collection of data (Kleider, Pezdek, Goldinger, & Kirk, 2008). When presented with a novel situation that has some resemblance to a schema, the schema's understood characteristics can be drawn upon to fill in parts of the novel situation that are not well understood or remembered (Kleider et al., 2008).

Schemas have a useful role within memory and preserve cognitive energy through simplifying the recall and encoding process as they allow new information to be linked into

existing schemas (Kleider et al., 2008). New information will be better incorporated into one's

memory if there are schemas that are activated from the incoming new information (Alba &

Hasher, 1983). However, schemas can result in errors in memory or information processing

(Kleider et al., 2008). For example, the ability to draw upon an understood schema to interpret a

novel situation can cause parts of the novel situation to be misremembered (Kleider et al., 2008;

Allport & Postman, 1945). This is exemplified by a classic experiment resembling the game of

"telephone" where individuals demonstrated the use of schemas through the use of racial

stereotypes to fill in gaps of a poorly remembered story (Allport & Postman, 1945). Individuals

were shown a picture of a white man holding a knife while talking to a black man and then told

to describe the picture to another individual who had not seen the picture, who would then

describe it to another in turn (Allport & Postman, 1945). Eventually, many individuals began to

describe the black man as the one holding the knife, demonstrating the use of racially

discriminatory stereotypes being used to draw inferences and fill in the gaps of a poorly

remembered situation (Allport & Postman, 1945).

Clinical decision making and training can also be impacted by schemas due to their effect

on memory (Foster et al., 2017). Based on the importance of schemas for memory formation, it is

not difficult to imagine the implications schemas may have in clinical decision-making for

clinicians. Clinicians develop their own schemas that may not be common among the general lay

public, such as schemas for different disorders (Foster et al., 2017). Through their clinical

training and education in graduate school, clinicians will be exposed to sets of information

regarding psychopathology, which can result in the development of schemas regarding disorders

and their presentations. These schemas can then be triggered when clinicians are exposed to

information that fits within a particular schema's cognitive framework. For example, when

clinicians encounter clients who show symptoms that are related to a disorder (e.g., anxiety symptoms), then a schema for that disorder will be activated (e.g., GAD; Foster, et al., 2017). The clinician would then be more likely to investigate additional symptoms that are consistent with the diagnosis, and potentially more likely to ignore symptoms that do not fit within their framework.

If the incoming information is novel and does not trigger a schema, it makes memory retention of the new information more difficult (Alba & Hasher, 1983). Encoding new information is a process that depends on a prior knowledge base that can integrate new information, thus incorporating it into old schemas (Alba & Hasher, 1983). Without a dataset available to integrate new information, encoding becomes arduous and the novel information may be quickly lost as it cannot be incorporated (Alba & Hasher, 1983). This may present difficulties to clinicians exposed to novel or uncommon psychopathology presentations, as they may be unable to properly diagnose patients with uncommon presentations, or have difficulty retaining or processing information on presentations outside their milieu of expertise. For example, clinicians who are familiar with only western presentations of anxiety, such as the symptoms seen in the DSM, may unintentionally ignore or fail to recognize a foreign or unfamiliar culture's presentation of psychopathology. This is particularly concerning when considering that the most recent version of the DSM only specifies five non-western presentations of anxiety disorders, termed "cultural idioms of distress." A lack of awareness of non-western presentations presents a greater problem now than it may have previously, as the demographics of the United States have shifted and become more diverse. An American clinician is far more likely now than in years past to encounter a patient outside of their cultural group. In

fact, the US census estimates that 13.5% percent of the population in the United States is foreign born (for the 2014-2018 period) and these numbers continue to rise (US Census, 2019).

Variations in the accessibility of different schemas can lead to biases and use of heuristics that may or may not be desirable (Stangor, 2014). A heuristic is a model that is easy to understand, apply, or explain, used for making inferences (Katsikopolous, 2011). Heuristics rely heavily on human capacities such as recall or recognition, and do not necessarily use all available information (Katsikopolous, 2011). Like, schemas, heuristics are a useful tool for cognition and can serve an adaptive purpose. Schemas allow decisions to be made with a lower cognitive load, and do not require consideration of all available information (Strangor, 2014). As heuristics draw on recall, more readily available schemas can lead to the use of specific heuristics, such as the availability heuristic (Stangor, 2014). Although heuristics can reduce cognitive resources, they can also lead to misconstructions (Stangor, 2014).

For instance, racial stereotyping can be used as a heuristic, leading to unfair treatment and prejudicial perceptions of racial minority individuals. There is a long history of minority individuals suffering systematic discrimination in legal cases, medical treatment, and social interactions because their racial background is used as a heuristic (Sommers et al., 2014). To explain, harmful stereotypes can be created about a group and then be widely disseminated throughout a society. After these stereotypes are internalized and well known, they may be drawn upon as an efficient (from a cognitive energy standpoint), but wholly incorrect, way to determine a person's worth. The application of this heuristic then results in a negative interpretation of a person with no regard to their actions or character; instead the interpretation is created based on previously developed inaccurate schemas of the judged individual's racial group. The prejudice caused by the application of a harmful racial heuristic leads to

discrimination throughout society's services (Sommers et al., 2014; van Ryn & Burke, 2000; Peek et al., 2010; Drwecki et al., 2011).

Representativeness Heuristic

Several common heuristics of importance to this study are discussed below. A common heuristic is the representativeness heuristic, which occurs when individuals base their judgments on information which matches what they expect to happen rather than on base rate information (Gualtieri & Denison, 2019). Put much more simply, the representativeness heuristic is when individuals group events based around a prototype (i.e., the best or most central member of a category). A classic example of the representative heuristic was presented by Kahneman, Slovic, and Tversky (1982). Individuals were presented with a hypothetical distribution of jobs in a group of people. People in the group could be either lawyers or engineers. The people in the group were divided into either 70% lawyers and 30% engineers or 70% engineers and 30% lawyers. Some individuals were presented with the lawyer majority group, other with the engineer majority group. The individuals were then given a description of a man who liked puzzles and did not care for social issues, and asked to guess the man's career, lawyer or engineer. Regardless of which job distribution individuals in the study were presented with, they estimated the man was an engineer at very similar levels (Kahneman, Slovic, & Tverksy, 1982). In short, they placed more value on individuating information, a personality description, over base rate information, the job distribution. This heuristic is well represented in human thinking and may be developed at a very young age. In fact, bias caused by the representativeness heuristic has been demonstrated in studies involving children younger than 10 (Davidson, 1995).

The representativeness heuristic may have an influence on the diagnostic decisions of clinicians. If a clinician is only familiar with psychopathological presentations consistent with

their DSM oriented training, they may be unable to properly diagnose an individual who does not match their prototype (Lilienfeld & Lynn, 2015).

For example, a patient may present with uncontrollable screaming, shouting and dissociative experiences. A western trained clinician may focus primarily on the dissociative experiences and conclude that the patient is suffering from dissociative identity disorder (DID) with a few novel additional psychophysiological symptoms because this is consistent with the phenotype they learned in training. In reality, the patient may be experiencing Ataque de Nervios, a syndrome associated with the Spanish speaking population of the Caribbean (Rouzzouk, 2011; American Psychiatric Association, 2000). While both of the disorders used in this example are present in the previous DSM, a clinician from a western cultural background may still be more likely to come to a diagnosis of DID, rather than Ataque de Nervios, which is outside their background. It stands to reason that the influence of this heuristic would be even more prominent should the patient's disorder lay outside the DSM (and common western training) in its entirety.

Availability Heuristic

Another common heuristic that is of relevance is the availability heuristic. When estimating the future probability or frequency of a given class of events, people tend to base their estimates on the number of readily recallable events that come to mind, rather than any sort of statistical comparison of frequency (MacLeod & Campbell, 1992). In some cases, this heuristic can result in somewhat accurate estimations, as events that occur more frequently likely have more readily recallable memories. However, any alterations to the ease of recall can change an individual's estimation of probability and given that mood and other factors can influence ease of recall, the accuracy of this heuristic can be altered significantly (MacLeod & Campbell, 1992).

This may be of importance to clinicians presented with foreign psychopathology presentations that differ from their normal experience. To elaborate with an example, a clinician who consistently and regularly encounters only western presentations of anxiety will likely have many more memories relating to that presentation that are easily recallable. Then, when that clinician encounters a patient with a non-western presentation that has some similarities to western anxiety, the clinician may overestimate the probability that the patient is suffering from anxiety, resulting in misdiagnoses or mistreatment.

Overconfidence Bias

The potential negative impacts of these heuristics may be further compounded by the overconfidence bias, which is a well-documented phenomenon (Kahneman & Tversky, 1997). Simply described, the overconfidence bias represents when an individual's *subjective* confidence in their judgments is much greater than the *objective* accuracy of those judgements. Put another way, individuals often have greater confidence in their perception of the statistical odds of an outcome compared to the reality of the statistical odds. In terms of clinical practice, this is a cause for concern generally; however, it may be of increasing concern when clinicians are exposed to novel presentations, or presentations outside of their cultural experience. A clinician making an incorrect diagnosis due to the effects of the availability heuristic, or some other incorrect heuristic, may then have a statistically unfounded level of confidence in such a diagnosis. Furthermore, individuals tend to place greater confidence in a small quantity of greatly consistent data than in a large quantity of less consistent data—in effect drawing patterns where none may exist (Kahneman & Tversky, 1997). This phenomenon may cause clinicians to seek consistency in their diagnoses and continue to adhere to western standards even should their confidence in those diagnoses be misplaced.

In conclusion, clinicians as human beings are not immune to the wide array of potential miscalculations that are possible due to the influence of schemas, heuristics, and biases on cognitive processes. This influence may potentially lead to misdiagnoses and presents a problem for clinicians who are likely to encounter novel presentations in today's more diverse world.

Cultural Idioms of Distress and Culture-Bound Syndrome Examples

It may be helpful, prior to the discussion of this study's methodology, to outline a few examples of culture-bound syndromes. This should serve of the purpose of demonstrating in detail how a western trained clinician may mistake a culture-bound syndrome for another disorder that is more common within the western milieu.

One such example is Hwabyung, previously discussed above. Hwabyung, often manifests with feelings of heat throughout the body, an accelerated heartrate and feelings of anxiousness (Min, 2009). Generalized anxiety disorder (GAD), one of the more common anxiety disorders present in DSM-5, can be accompanied by a variety of physical symptoms (American Psychiatric Association, 2013). It is possible that a western trained clinician, when encountering Hwabyung for the first time, may mistake it for a manifestation of GAD with an abnormal physiological presentation. This can be problematic when considering that Hwabyung is often tied to feelings of unfair social circumstances, as GAD sufferers may not meet this criterion, and thus a treatment centered around a GAD diagnosis may not address a core cause of the disorder.

A second example that was briefly mentioned above is Ataque de Nervios. Ataque de Nervios is a culture-bound syndrome primarily associated with the Spanish speaking populations of the Caribbean (Rozzouk, 2011). In terms of presentation, Ataque de Nervios manifests with uncontrollable shouting or screaming, combined with dissociative experiences and potentially physical or verbal aggression. Ataque de Nervios is often caused by or associated with a stressful

incident within the family. Similar to Hwabyung, western clinicians who encounter Ataque de Nervios may potentially mistake it for another disorder more common in western cultures, such as the dissociative disorder previously mentioned or a psychotic disorder like Brief Psychotic Disorder. This misdiagnosis may then result in a less suitable treatment. For example, clinicians may diagnose a patient suffering from Ataque de Nervios with Derealization-depersonalization disorder, and then craft a treatment plan that fails to address the patient's likely adverse family experience.

Defining Clinicians' Individualistic vs Collectivistic Values

Due to the differences that culture can have on a clinician's ability to interact with and treat a patient, a variety of tools have been developed that attempt to measure one's culture. One such tool, the Self-Construal Scale, measures a person's affiliation with individualistic vs. collectivistic values (Singelis, 1994). This scale can serve as a useful tool for categorizing a clinician's affiliation with cultural norms specific to one culture or another, which could potentially provide greater insight than demographic questions on racial identity or country of origin. This is important as even within cultural and national groups, individuals can vary with the degree to which they subscribe to their group's values (Green et al., 2005). Due to this potential variance, it is useful for this study's purposes to directly measure an individual's identification with collectivism vs. individualism rather than assuming based upon their cultural background.

Another metric, the Multicultural Counseling Self-Efficacy Scale-Racial Diversity Form (MCSE-RD), measures the perceived competence of a clinician (of any background) in interacting with clients of a minority background (Sheu & Lent, 2007). The MCSE-RD measures three different areas: multicultural intervention, multicultural assessment, and multicultural

session management. Each rating within the MCSE-RD uses a ten-point scale, ranging from 0 (no confidence) to 9 (complete confidence) (Sheu et al., 2012).

While the Self-Construal Scale is useful for the purposes of this study in determining where a clinician lies on an individualistic vs. collectivistic axis, the MCSE-RD is useful for determining a clinician's perceived ability to interact with those of minority backgrounds. Because the ability to interact with those of minority backgrounds, also known as cultural competency, is often proposed as a solution for bridging the cultural divide between patients and clinicians to reduce misdiagnoses, it is useful for the present study to gauge the participants' cultural competency. This perceived competency can then be compared to the clinicians' diagnostic accuracy for culture-bound disorders outside their cultural sphere. From this comparison, the present study can determine the degree to which perceived cultural competency may improve diagnostic accuracy for culture-bound-syndromes.

Current study

This study aimed to assess the influence of a western background on diagnosing patients suffering from disorders uncommon in the western world. In today's world, the ability of clinicians to accurately diagnose patients from diverse cultural backgrounds is of increasing importance. This study sought to measure the ability of clinicians to diagnose culture-bound syndromes outside of their cultural background. Western practitioners were presented with a series of 2 vignettes describing a patient suffering from a culture-bound syndrome uncommon in western culture and 1 control vignette of a western diagnosis. This study aimed to answer the following research questions: 1A) Without any structure, how would clinicians diagnose the two culture-bound syndromes in the vignettes: Hwabyung and Ataque de Nervios? 1B) Will clinicians select a diagnosis of specific culture-bound syndromes if they are offered as an option?

2) What pieces of information from the vignettes stood out to clinicians and informed their decisions? 3)Will a clinician's level of affiliation with individualistic versus collectivistic values and/or clinician's perceived cultural competence have any influence on accuracy of diagnoses? 4) Will clinicians be able to better diagnose a western disorder?

Methods

Participants

I recruited psychologists from the American Psychological Association membership directory. In order to be eligible for the study, psychologists needed to be seeing clients at the time of the study and be in a position that involved diagnosing mental disorders; psychologists who were supervising other clinicians who were seeing patients also qualified. The target sample size for this study was 154 based upon an a priori power analysis. Unfortunately, due to the study being conducted during the winter holiday season and due to the COVID-19 pandemic, the sample collected was 84 clinicians. Table 1 outlines the demographics of the clinicians while Table 2 explains the different cultural populations with which the clinicians have experience working.

Table 1. Demographics

	F (%) or M (SD)
Age	51.10 (16.83)
Average # of Clients in a week	17.24 (11.18)
Gender	
Female	34 (57.63)
Male	21 (35.59)

Transgender	1 (1.69)
Non-binary	2 (3.39)
Other identity	0
Prefer not to answer	1 (1.69)

Racial/Ethnic Background (select all)	
White/Caucasian	51 (79.69)
Native American/Alaskan Native	3 (4.68)
Pacific Islander	0
Black/African American	2 (3.13)
Latinx/Hispanic	1 (1.56)
East Asian/Asian American	0
South Asian/Asian American	4 (6.25)
Arabic	0
Other	3 (4.68)
Prefer not to answer	0

Generational Status	
First generation (I was born in another country)	3 (5.08)
1.5 generation (I was born in another country but moved to the US when I was younger than 12)	1 (1.69)

Second generation (I was born in the US but at least one of my parents were born in another country)	3 (5.08)
Third-and-higher generation (My parents were born in the US)	51 (86.44)
I don't know	1 (1.69)
To what degree do you identify with majority US cultural values	6.73 (2.16)
Degree Type	
Master's	5 (8.47)
PsyD	11 (18.64)
PhD	41 (69.49)
EdD	2 (3.39)
MD	0
Other	0
Practice setting (select all)	
Outpatient	25 (24.51)
Inpatient (non-psychiatric) hospital	6 (5.88)
Psychiatric hospital	4 (3.92)
University setting	9 (8.82)
Private practice	31 (30.39)
Rehabilitation facility	2 (1.96)
Nursing home	0

Telehealth	18 (17.65)
Other	7 (6.86)
Prefer not to say	0

Age range of clients/patients (select all)

0-17	28 (25.69)
18-64	52 (47.71)
65 and up	29 (26.61)
Prefer not to say	0

Years of experience seeing clients

1-10	19 (32.20)
11-20	13 (22.03)
21-30	11 (18.64)
31-40	11 (18.64)
41-50	4 (6.78)
51+	1 (1.69)
Prefer not to say	0

Number of Clients

1-10	20 (33.90)
11-20	20 (33.90)
21- 30	17 (28.81)
31-40	1 (1.69)
41-50	0
51-60	0

61-70   1 (1.69)

Diversity Training

Reading/Writing	5 (6.33)
Work Experience	15 (18.99)
Personal Experience	7 (8.86)
Teaching courses	4 (5.06)
Community Outreach	3 (3.80)
Clubs/Groups	4 (5.06)
Diversity Committees	2 (2.53)
Research	4 (5.06)
Additional Training	11 (13.92)
Workshops/Lectures	9 (11.39)
Peer Consultation	4 (5.06)
No/little experience	10 (12.66)
CE Credits	1 (1.27)

Table 1 : Cultural Experience

Cultural Experience	Frequency
Asian	69
Bangladeshi	1
Cambodian	1
Chinese	8

Filipino	2
Hmong	3
Indian	14
Japanese	5
Korean	10
Nepali	1
Pakistani	3
Tamil	1
Thai	1
Unspecified	19
Pacific Islander	3
Aboriginal Australian	1
Samoan	1
Unspecified	1
Indigenous American	11
Alaskan Native	1
Blackfeet	1
First Nations	1
Lakota	1
Navajo	1
Sioux	1
Ute	1
Yakima	1

Unspecified	3
Middle Eastern / North African	20
Afghanistan	1
Druse	1
Iranian	3
Iraqi	1
Israeli	1
Kuwaiti	1
Lebanese	1
Palestinian	1
Persian	1
Syrian	2
Unspecified	7
Black / African	24
African American	6
Ghanaian	2
Haitian	1
Jamaican	1
Nigerian	3
Somali	1
Unspecified	10
Latinx / Spanish Origin	38
Brazilian	2

	Caribbean	1
	Costa Rican	1
	Honduran	1
	Mexican	1
	Nicaraguan	1
	Puerto Rican	2
	Unspecified	29
Other		2
	Georgian	1
	Jewish	1
No/little experience		7

Materials

  Vignettes. This study used two vignettes depicting well-established cultural syndromes (See Appendix A). The vignettes were created by using past literature on Hwabyung and Ataque de Nervios. Each vignette was filled with details of both cultural syndromes that were representative of the syndromes. All of the characters in the vignettes were female and of similar socioeconomic status and age. Vignettes were prepared using recommended best practices for vignette studies of diagnostic decision-making (Evans et al., 2015) and also contained information about impairment, which is required to meet criteria for a mental health disorder diagnosis. In order to verify the accuracy of these vignettes, they were pretested by diagnostic experts with relevant cultural knowledge and experience. The experts confirmed the diagnosis and determined whether each symptom was truly representative of the population and offered

recommendations and edits to the vignettes. A third control vignette was also included of Generalized Anxiety Disorder. For all three vignettes, they were also pretested by experts in the field of diagnosis and edits and changes were made after consideration of the feedback.

Diagnostic Measures. Clinicians were asked to read all three vignettes; the following questions/instructions were asked after each individual vignette: a free response diagnostic question ("What is your diagnosis of the patient presented in the vignette?"), a forced choice diagnostic question ("What diagnosis would you give the vignette from the list presented below?"), and 3 other questions for each vignette (See Appendix C). The three additional questions were: (1) "What strategies did you use to come to your diagnosis, for example, the DSM-5 or ICD-10, your own notetaking, etc.?" (2) A heat map analysis of each vignette where participants were asked to highlight sections of the vignette that they believed were important to their diagnosis; (3) Rank ordering of 10 out of 32 given symptoms among a list in forming their diagnosis. The list of symptoms for the rank ordering question came from all three vignettes.

Demographic questionnaire. Mental health professional participants completed questions that pertained to their age, gender, years of experience as a clinician, degree type, area of expertise, racial/ethnic identity, generational status, their average case load in a given year, and other questions about their clinical area of experience (See Appendix D for full list of questions). The participants were also asked how often they use the DSM-5 and ICD-10. They rated their familiarity with a variety of cultural and western diagnoses. They also described their degree of experience with varying cultures by lived or professional experience.

Multicultural Counseling Self-Efficacy Scale-Racial Diversity Form. The MCSE-RD is a 37-item rating scale that was used to measure participants' perceived competence in interacting and working with clients of minority racial backgrounds (See Appendix E) (Sheu &

Lent, 2007). The MCSE-RD measures three different areas: multicultural intervention, multicultural assessment, and multicultural session management. The multicultural intervention subscale measures perceived ability in managing lulls in progress with clients of different racial backgrounds. The multicultural assessment subscale investigates perceived ability to incorporate cultural sensitivity into assessments of clients' symptoms and culture-specific disorders. The multicultural session management subscale measures counselors' level of self-assurance of completing common counseling activities with a racial minority client, such as psychotherapy or termination. All items used a ten-point scale, ranging from 0 (no confidence at all) to 9 (complete confidence). The total MCSE-Total Score (the aggregation of all three subscales) has been shown to correlate strongly with theoretically relevant metrics, such as multicultural counseling competencies, general counseling self-efficacy, and total multicultural training experiences (Sheu & Lent, 2007). Sheu and Lent obtained an internal consistency estimate of .98 for the total score of the MCSE-RD. Other studies have shown that the three subscales range in internal consistency from .87 to .97 (Sheu et al., 2012).

Self-Construal Scale. The Self-Construal Scale is used to measure an individual's cultural orientation thought to mediate and explain the effects of culture on a variety of behaviors (See Appendix F) (Levine et al., 2003). This scale was used to measure cultural identity by assessing how individuals view themselves in comparison to others (Singelis, 1994). The Self-Construal Scale is a 30-item questionnaire that uses a 7-point rating scale (1=strongly disagree; 4= neither agree or disagree; 7= strongly agree). Fifteen items measure the individual's individualistic values and beliefs and the remaining fifteen items measure the person's collectivistic values and beliefs. This scale will separately measure individualistic and interdependent values. Across a body of 50 studies, that Self-Construal Scale has been shown to

consistently measure an individualism vs. collectivism continuum (Gudykunst & Lee, 2003). The original self-construal sub-scales, independence and interdependence, have been shown to have internal reliability coefficients of .69 and .68 respectively (Hardin, Leong, & Bhagwat, 2004).

Procedure

I successively sent an invitation email to a total of 11,666 psychologists from the American Psychological Association (APA) membership directory (see Appendix B). Out of the 11,666 emails sent, 814 emails bounced, 1 email failed, 181 psychologists started (but did not complete the study), 11 emails were marked as spam, and 161 participants completed the study. The email contained a link that led them to a survey in Qualtrics, which is an online survey program. Before the survey began, the psychologists were asked whether they were seeing clients at the time of the study and if they were in a career where they diagnose mental health clients. If they fit the inclusion/exclusion criteria, they were then directed to the survey. No reminder emails to complete the study were sent. The survey took approximately 30 minutes to complete, but there was not a time limit. In order to increase participation, the mental health professionals had the chance to be entered into a raffle for a prize of $250 or two runner-up prizes of $100.

Each participant read all three vignettes. The order of presentation of the vignettes was randomized. The instructions stated that the participant may use the DSM-5 and/or the ICD-10 to come to a diagnosis. The instructions also stated that the mental health professionals may take notes or anything else that they would typically do during an intake session with a potential client. The vignettes represented three cases of individuals with either Hwabyung, Ataque de Nervios, or GAD.

After reading all three of the vignettes, a free-response question asked the mental health professionals to come to a diagnosis for the first vignette. Then, they were asked a free-response question regarding what strategies the participant used to come to their diagnosis for the first vignette (i.e., notetaking, DSM-5, ICD-10). Then, in a forced-choice question the clinician was asked to choose a diagnosis for the first vignette among a select number of choices. Afterwards, they were asked to select 10 pieces of information that the clinicians believed were important to their diagnosis through a picture of the vignette that has been separated into symptoms of interest. The final question was the rank ordering question that had a mix of all the major symptoms of each vignette. Participants selected as many of the symptoms as they desired and then ordered them in terms of importance for determining their diagnosis. The same ordering of questions repeated for the second and third vignettes. After completing the questions for all three vignettes, participants answered demographic questions relating to their racial/ethnic identity and other background information. They then completed the Multicultural Counseling Self-Efficacy Scale-Racial Diversity Form (MCSE-RD) and the Self-Construal Scale, which were in counterbalanced order (Sheu & Lent, 2007; Singelis, 1994).

Coding Procedure

The goals of this current study were to see what diagnosis was given to the clients presented in the vignettes, to understand what symptoms led mental health professionals to those diagnoses, and to learn what strategies were used to come to a diagnosis (e.g., using the DSM-5, ICD-10, notetaking). The content of the free-response questions was coded into response groups by two independent coders, one of which was the investigator of the study. The coders also assessed the consistency of participants' free-response and forced-choice diagnoses. The general rule for deciding upon whether the free-response would be counted as the same answer as the

forced-choice depended on if there was any indication that the free-response could somehow share the symptomology of the forced choice (due to some of the participants' free-response choices not being offered as a forced-choice answer choice). For example, one clinician gave the free-response answer of other specified depressive disorder and migraines but selected persistent depressive disorder in the forced-choice. This was marked as the clinician not changing their answer because they endorsed depressive symptoms in their original free-response answer. The two coders independently coded the free-response questions and checked the consistency between the free-response and forced-choice diagnoses. Every coded response was compared between coders and discrepancies (although rare) were discussed and a consensus was reached based on the previously stated guidelines to prevent discrepancies in coding/coding drift. Reliability was checked at the end of the coding procedure to ensure that there was high percent agreement during the study. The following were the reliability ratings for the discrepancy testing for each of the vignettes: Hwabyung: 95.31%; Ataque de nervios 100.00%, GAD: 94.12%.

Results

Diagnostic Accuracy

Free-response Questions. The first question after reading each vignette was the free-response question, which allowed clinicians to provide their diagnosis without any other constraints. I first examined the diagnostic accuracy of clinicians' free response answers to each vignette. Table 3 outlines the diagnoses that the clinicians gave when presented with the Hwabyung vignette. The results of the free-response diagnoses for Hwabyung vignette show that out of the total number of diagnoses, only 2.88% of the sample provided the correct diagnosis of Hwabyung. Clinicians had a wide range of diagnoses for this vignette, that ranged from western disorders that share similar symptomology to Hwabyung to East Asian-sounding cultural

syndromes that greatly varied from Hwabyung, such as Koro. Out of the 104 reported diagnoses, 6 individuals selected East Asian cultural disorders (only 3 being the correct Hwabyung diagnosis). A portion of the sample, 27 (25.96%), chose western disorders/symptoms (anxiety/depression) that share similar symptomology to Hwabyung. The three most common diagnoses were adjustment disorder (15.38%), depressive disorder (13.46%), and anxiety (11.54%).

Table 2 : Hwabyung Free-Response Diagnoses

Hwabyung Vignette Free Response Diagnoses:	Frequency $n = 104$	%
Hwabyung	3	2.88
Adjustment Disorder	16	15.38
Depression/Depressive symptoms	14	13.46
Anxiety /Anxiety symptoms	12	11.54
Somatization Disorder/somatic symptom disorder	11	10.58
Relationship Distress with Spouse	10	9.62
GAD	3	2.88
PTSD	3	2.88
Familial/relationship stressors (lack of communication)	2	1.92
Unspecified trauma-or stressor related disorder	2	1.92
Conversion Disorder	2	1.92
Menopause	2	1.92

Acculturation Problem/Bicultural Stress	2	1.92
Panic Disorder	1	0.96
Koro	1	0.96
Migraines	1	0.96
Illness Anxiety- Care-seeking type	1	0.96
Shenjaing Shuairuo	1	0.96
Taijin kyofusho	1	0.96
Psychological factors affecting physical health	1	0.96
Phase of life problem	1	0.96
Medical problem	1	0.96
Intermittent Explosive Disorder	1	0.96
No-response/No diagnosis given/Un-identified	12	11.54

Table 4 outlines the diagnoses that the clinicians gave when presented with the Ataque de Nervios vignette. The results of the free-response diagnoses for the Ataque de Nervios vignette show that out of the total number of diagnoses, 8.14% of clinicians gave the correct diagnosis. The top four most common diagnoses were panic disorder (24.42%), PTSD (20.93%), adjustment disorder (11.63%) and depressive disorder (11.63%). These top western diagnoses share similar symptomology to Ataque de Nervios. A point worth noting is that there were no cultural diagnoses other than Ataque de Nervios (unlike Hwabyung).

Table 3 : Ataque de Nervios Vignette Free Response Diagnoses

Ataque de Nervios Vignette Free Response	Frequency	%
Diagnoses:	*n* = 86	

Ataque de Nervios	7	8.14
Panic Disorder	21	24.42
PTSD	18	20.93
Adjustment Disorder	10	11.63
MDD/Depression	10	11.63
Acute Stress Disorder/ Reaction	5	5.81
Relationship Distress with Spouse or Intimate Partner	3	3.49
Spouse Violence, physical initial encounter	2	2.33
GAD/Anxiety	2	2.33
Cluster C PD	1	1.16
Intermittent Explosive Disorder	1	1.16
Panic Attacks	1	1.16
PTSD with Panic Attacks	1	1.16
Unspecified trauma-related disorder	1	1.16
DMDD	1	1.16
Adult sexual abuse	1	1.16
Mood Disorder due to known psychological condition with depressive features	1	1.16

Table 5 outlines the diagnoses that the clinicians gave when presented with the GAD vignette, which was included as a control condition. A great majority of the sample (88.0%) was able to provide the correct the western diagnosis for the free-response question.

Table 4 : GAD Free-Response Diagnoses

GAD Vignette Free Response Diagnoses:	Frequency $n = 75$	%
GAD/Anxiety	66	88.00
OCD	4	5.33
Persistent Depressive Disorder	2	2.67
Separation Anxiety Disorder	1	1.33
Helicopter Syndrome	1	1.33
Mood disorder due to known psychological condition, unspecified	1	1.33

There was a significant difference in diagnostic accuracy across the three vignettes, $\chi^2(2,$ $n = 265) = 51.57$, $p < .001$. Both cultural vignettes were less accurate than the control GAD vignette: GAD with Hwabyung $\chi^2(1, n = 179) = 133.27$, $p < .001$ and GAD with Ataque de Nervios $\chi^2(1, n = 161) = 103.10$, $p < .001$. Diagnostic accuracy was not different between the Hwabyung and Ataque de Nervios vignettes. It is important to note that the sample size is referring to the number of diagnoses involved in the analysis.

Forced Choice. After providing their free-response diagnoses, the clinicians were then asked to select one diagnosis from a list of multiple options. These forced choice questions were given after answering the free-response questions to see if clinicians would change their original answers from their free-response questions, when presented with a list of potential answer choices. For the first vignette, the top three most common diagnoses were somatic symptom

disorder (24.29%), Hwabyung (21.4%), and GAD (18.57%). Out of the 70 diagnoses, 6

clinicians (8.57%) selected an East Asian disorder other than Hwabyung.

Table 5 : Hwabyung Forced-Choice Diagnoses

Hwabyung Diagnoses	Frequency	%
	$n = 70$	
Hwabyung	15	21.43
Somatic Symptom Disorder	17	24.29
Generalized Anxiety Disorder	13	18.57
Major Depressive Disorder	12	17.14
Taijin Kyofusho	4	5.71
Persistent Depressive Disorder	3	4.23
Posttraumatic Stress Disorder	2	2.86
Panic Disorder	1	1.43
Disruptive Mood Dysregulation Disorder	1	1.43
Shinbyung	1	1.43
Shenjing Shuairuo	1	1.43
Intermittent Explosive Disorder	0	0
Bipolar I	0	0

Table 7 shows the results of the Ataque de Nervios forced-choice question. The top three

diagnoses were Ataque de Nervios (28.79%), panic disorder (25.76%), and PTSD (25.76%).

Only one participant (1.52%) gave a cultural diagnosis (susto) other than Ataque de Nervios.

Table 6 : Ataque de Nervios Forced-Choice Diagnoses

Ataque de Nervios Diagnoses	Frequency $n = 66$	%
Ataque de Nervios	19	28.79
Panic Disorder	17	25.76
Posttraumatic Stress Disorder	17	25.76
Generalized Anxiety Disorder	5	7.58
Major Depressive Disorder	5	7.58
Illness Anxiety Disorder	1	1.52
Susto	1	1.52
Factitious Disorder	1	1.52
Conversion Disorder	0	0
Koro	0	0
Amok	0	0
Schizoaffective Disorder	0	0
Brief Psychotic Disorder	0	0

Table 8 shows the results of the GAD forced-choice question. The leading diagnosis was GAD (86.76%) with very few other diagnoses endorsed.

Table 7 : GAD Forced-Choice Diagnoses

GAD Diagnoses	Frequency $n = 68$	%

Generalized Anxiety Disorder	59	86.76
Separation Anxiety Disorder	4	5.88
Obsessive-compulsive Disorder	3	4.41
Persistent Depressive Disorder	1	1.47
Conversion Disorder	1	1.47
Panic Disorder	0	0
Major Depressive Disorder	0	0
Agoraphobia	0	0
Social Anxiety Disorder	0	0
Somatic Symptom Disorder	0	0
Posttraumatic Stress Disorder	0	0
Acute Stress Disorder	0	0
Adjustment Disorder	0	0

For participants' forced-choice diagnoses, again there was an overall difference in diagnostic accuracy across the three vignettes, $\chi^2(2, n = 214) = 25.66, p < .001$. Like with the free-response question, participants were more accurate in their diagnosis of the GAD vignette than either cultural vignette: GAD with Hwabyung, $\chi^2(1, n = 148) = 68.01, p < .001$ and GAD with Ataque de Nervios $\chi^2(1, n = 134) = 46.28, p < .001$. Accuracy of the two cultural vignettes was statistically equal.

Free-Response and Forced Choice Comparison

When comparing the free-response and forced-choice questions for the Hwabyung vignette, several differences were called to attention. For the Hwabyung vignette, 26 individuals

(44.07 %) out of 59 did not change their answers when they were given the forced-choice question. The remaining 33 clinicians (55.93%) changed their original free-response diagnosis when given the forced-choice. Out of the individuals who changed their answers, 15 (45.45%) changed their diagnosis from a western to cultural disorder and out of these same individuals 10 (30.30%) correctly selected the forced-choice Hwabyung diagnosis.

A large majority of individuals (21.4%) were able to give the correct Hwabyung diagnosis when presented with it as an option versus when they were asked to provide a diagnosis without any aid (2.88%). The numbers of somatic symptom disorder came in highest at 24.29% for the forced-choice question versus at a 10.58% in the free-response question. An anxiety disorder diagnosis (11.54%) rose to 18.57% when the clinicians were presented with the GAD option in the forced-choice question. In the free-response portion, 2.88% of the sample chose an incorrect East Asian disorder but this number rose to 8.57% in the forced-choice question.

There were also noticeable changes in the comparison between the Ataque de Nervios free-response and forced-choice questions. For the Ataque de Nervios vignette, 42 individuals out of 60 (70.00%) did not change their diagnosis. Out of the 60 responses, 18 (30.00%) changed their forced-choice diagnosis. Out of these changed responses, 13 (72.22%) changed from a western to a cultural diagnosis and 12 clinicians out of the 18 (66.67%), correctly chose Ataque de Nervios. In the free-response questions, panic disorder was the most commonly reported diagnosis (24.42%), but in the forced choice-question, the highest percentage for a diagnosis was Ataque de Nervios (28.79%). In the forced choice question, 1.52% of the sample reported a cultural diagnosis of susto while no other cultural diagnosis other than Ataque de Nervios was reported in the free-response question.

In the free-response and forced-choice questions for GAD, the number minutely changed from 88.00% to 86.76%. When comparing the two questions, 5 out of 62 individuals (8.01%) changed their diagnosis for the forced-choice question and out of the 5, one individual (20.00%) correctly chose the GAD diagnosis. In the free-response question, the two other most reported diagnoses were OCD (5.33%) and persistent depressive disorder (2.67%), but in the forced-choice question, the two other common diagnoses were separation anxiety (5.88%), and OCD (4.41%).

Heat Map

Table 9 lists the symptoms for the heat map portion of the survey that asked individuals to select areas (specified symptoms of the vignette) that helped them to come to their diagnosis. The table has been split between individuals who gave a cultural diagnosis and those that gave a western diagnosis for both free-response and forced-choice questions. Because only 6 individuals gave a cultural diagnosis for Hwabyung, we opted not to present any statistical comparison of frequencies for the free-response question. For those that gave a cultural diagnosis in the free-response question, there was particular focus placed on areas such as race (50.0%), indigestion (50.0%), and no depressed mood or SI (50.0%) while for these same symptoms for the western diagnosis counterparts, the percentages were lower (e.g., race: 7.46%, indigestion: 34.33% and no depressed mood or SI: 25.37%). Some of the most commonly reported symptoms of Hwabyung for individuals that chose a western diagnosis are headache/pain, subjective/expressed anger, and distress/impairment with family, occupation or relationships.

For the forced-choice question, for the majority of the symptoms, both cultural and western diagnosis groups had similar percentages for each symptom. The groups had significant differences for one symptom, race, χ^2 (1, $n = 78$) = 10.32, $p \leq .001$, where those that selected a

cultural diagnosis more often selected this symptom. An interesting observation to note is that
few individuals selected the unique Hwabyung symptoms (regardless of group) such as sighing
or cooling oneself with wet towels from a migraine.

Table 8 : Hwabyung Heat Map

Heat Map Symptom	Free-Response				Forced-Choice				Total	
	Cultural		Western		Cultural		Western		n = 73	
	n = 6		n = 67		n = 21		n = 49			
	F	%	F	%	F	%	F	%	F	%
Distress/impairment with family occupation or relationships.	3	50.00	44	65.67	17	80.95	27	55.10	48	65.75
Headache/pain	2	33.33	43	64.18	14	66.67	32	65.30	47	64.38
Subjective/expressed anger	2	33.33	39	58.21	7	33.33	31	63.27	42	57.53
Indigestion	3	50.00	23	34.33	10	47.62	17	34.69	27	36.99
Heat sensation	2	33.33	19	28.36	7	33.33	15	30.61	22	30.14
Sensation of mass in throat and chest	2	33.33	18	26.87	5	23.81	16	32.65	22	30.14
"she has not felt depressed and has not been having any thoughts of suicide"	3	50.00	17	25.37	9	42.86	11	22.45	20	27.40

Frequent temper outbursts	1	16.67	17	25.37	4	19.05	13	26.53	18	24.66
"She was forced to give up her position as a housewife and help her husband by working at their beauty store"	0	0	0	0	7	33.33	6	12.24	15	20.55
Labored breathing/shortness of breath	1	16.67	12	17.91	3	14.29	10	20.41	13	17.81
Race	3	50.00	5	7.46	7***	33.33	1***	2.04	9	12.33
"she has tried to treat her migraines herself with cool wet towels but has not had any success"	0	0	14	20.9	2	9.52	6	12.24	9	12.33
"she denied using any drugs or alcohol"	1	16.67	8	11.94	3	14.29	6	12.24	9	12.33
Sighing	0	0	8	11.94	2	9.52	6	12.24	8	10.96
Physician recommended mental health treatment	0	0	6	8.96	3	14.29	2	4.08	7	9.59

Age	1	16.67	2	2.99	2	9.52	1	2.04	3	4.11
Gender	0	0	9	13.43	1	4.76	1	2.04	2	2.74
Immigrant status	1	16.67	1	1.49	0	0	1	2.04	1	1.37
Married	0	0	1	1.49	0	0	0	0	0	0
Has Kids	0	0	0	0	0	0	0	0	0	0
Other	4	66.67	45	67.16	17	80.95	31	63.27	50	68.49

Table 10 outlines the results of the Ataque de Nervios heat map. This table was also split based on individuals that provided a cultural diagnosis versus a western diagnosis for the free-response and forced-choice questions. Again, the number of individuals that gave a cultural diagnosis limited our ability to conduct statistical comparisons of symptoms endorsed by the two groups for the free-response question. For the heat map, individuals in the cultural diagnosis and western diagnosis groups for the most part had similar percentages for the symptoms except for fainting or seizure like episodes, race, and financial impairment. In these symptoms, a higher portion of the cultural group (in comparison to the western group) picked the previously mentioned symptoms. For the forced-choice question, significant differences were found between the symptoms of race, $\chi^2(1, n = 74) = 10.07$, $p < .001$ and financial impairment, $\chi^2(1, n = 70) = 8.13$, $p < .01$, where individuals with cultural diagnoses more often selected these symptoms.

Table 9 : Ataque de Nervios Heat Map

	Free-Response		Forced-Choice		Total
Heat Map	Cultural	Western	Cultural	Western	n = 67
Symptoms	n = 7	n = 60	n = 20	n = 46	

	F	%	F	%	F	%	F	%	F	%
Sense of being out of control	7	100	51	85.00	19	95.00	38	82.61	58	86.57
Partner violence	4	57.14	32	53.33	14	70.00	21	45.65	36	53.73
Attacks of crying	4	57.14	25	41.67	10	50.00	18	39.13	29	43.28
Verbal/physical aggression	3	42.86	23	38.33	10	50.00	16	34.78	26	38.81
Palpitations	3	42.86	20	33.33	6	30.00	16	34.78	23	34.33
Uncontrollable shouting	3	42.86	20	33.33	9	45.00	14	30.43	23	34.33
Shortness of breath	3	42.86	17	28.33	7	35.00	12	26.09	20	29.85
Fainting or seizure like episodes	5	71.43	15	25	10	50.00	10	21.74	20	29.85
Suicidal ideation	2	28.57	17	28.33	6	30.00	12	26.09	19	28.36
Clinically significant impairment in important areas of functioning	2	28.57	11	18.33	3	15.00	10	21.74	13	19.40
"She feels ashamed and	1	14.29	10	16.67	4	20.00	7	15.22	11	16.41

embarrassed by

her actions"

"She also fears	1	14.29	9	15.00	4		20.00	6		13.04	10	14.92

that these

symptoms will

lead to health

complications,

such as a heart

attack"

Race	3	42.86	5	8.33	7**		35.00	1**		2.17	8	11.94
"She denies any	0	0	6	10.00	1		5.00	5		10.87	6	8.96

usage of drugs or

alcohol"

Partner drinking	0	0	5	8.33	1		5.00	4		8.70	5	7.46

and gambling

"Rosa's tests	0	0	4	6.67	1		5.00	3		6.52	4	5.97

indicated she was

in good health"

Financial	2	28.57	2	3.33	4**		20.00	0**		0	4	5.97

impairment

Difficulty	0	0	3	5	0		0	3		6.52	3	4.48

controlling

thoughts

"refuses to seek help"	0	0	3	5	0	0	3	6.52	3	4.48
Gender	0	0	0	0	0	0	0	0	0	0
Age	0	0	0	0	0	0	0	0	0	0
"she is worried what her friends will think of her"	0	0	0	0	0	0	0		0	0
Other	6	85.71	40	66.67	17		85.00	28	60.87	46	69.70

In the GAD heat map (Table 11), the top three most commonly endorsed symptoms (not including unlisted portions of the vignette) were excessive anxiety and/or worry (86.76%), difficulty controlling worry (76.47%), and difficulty concentrating (50.0%).

Table 1 0: GAD Heat Map

Symptoms	n = 68	
	F	%
Excessive Anxiety and or worry	59	86.76
Difficulty controlling worry	52	76.47
Difficulty concentrating	34	50.00
Clinically significant impairment in important areas of functioning	24	35.29
Muscle tension	23	33.82
Irritability	20	29.41
Restlessness, feeling keyed up	18	26.47
Stomach aches	10	14.70

Easily fatigued	10	14.70
"this has caused her children to become frustrated with her 'constant hovering.'"	8	11.76
Sleep disturbance	7	10.29
Crying episodes	7	10.29
Denies Alcohol/Drugs	6	8.82
Good Health	5	7.35
Age	2	2.94
Race	1	1.47
"Difficulty keeping up with payments while also financially supporting Chloe and Sam through college"	1	1.47
Denies SI or HI	1	1.47
Mother	0	0
Married	0	0
Occupation ("works part-time in retail")	0	0
Other	41	60.29

Rank Order

Table 12 outlines the results of the rank order question that presented the participant with the same 32 symptoms for each vignette (mixed with distractor symptoms) and requested the participants to select up to 10 symptoms and rank order them by order of importance (1 being most important and 10 being least important out of the 10). It is worth noting that for several of these symptoms, they could be applicable to more than one vignette while the original intent was

to separate them for each vignette. For Hwabyung, the top three highest frequency symptoms (regardless of the rankings) were clinically significant impairment in important areas of functioning, headache/pain, and stressful family event. For this vignette, several of the distractor variables were selected such as attacks of crying (6 individuals), shortness of breath (24 individuals), acute anxiety (17), feelings of worthlessness (8) and feelings of hopelessness (6). Some of the symptoms that were unique to Hwabyung were also correctly selected, such as indigestion, heat sensation and headache/pain. Surprisingly, some of these distractor symptoms were highly ranked for Hwabyung (e.g., attacks of crying (M = 2.67; SD = 1.37), excessive anxiety and worry (M = 3.00; SD = 1.58), and palpitations (M = 3.00; SD = 2.10).

For Ataque de Nervios, similar patterns of selecting distractor symptoms were found. For example, 28 individuals selected the Hwabyung symptoms of headache/pain (M = 5.21; SD = 2.46) and 13 selected heat sensation (M = 5.00; SD = 2.74). A surprising finding is that very few individuals (n = 10, M = 2.80; SD = 1.55) selected the distinct Ataque de Nervios symptom of fainting or seizure-like episodes although it was highly ranked.

For GAD, for the most part, clinicians were able to correctly select the symptoms that were related to the GAD vignette. Clinicians did make some mistakes, however. For example, they incorrectly selected the Ataque de Nervios symptoms acute anxiety (M = 2.29), uncontrollable shouting (M = 6.00 SD = N/A), attacks of crying (M = 5.75; SD = 2.19), verbal/physical aggression (M = 7.00; SD = 4.36), sense of being out of control (M = 4.04, SD = 2.25), shortness of breath (M = 6.50, SD =.71), and palpitations (M = 7.00, SD = 1.41). They also incorrectly endorsed Hwabyung symptoms such as headache/pain (M = 6.50, SD = 2.12), indigestion (M = 9.50, SD =3.54), sensation of mass in the throat and chest (M =8.50, SD =.71), frequent temper outbursts (M =8.33, SD = 2.31), and heat sensation (M = 11.00, SD = N/A). The

top three highest frequency symptoms (regardless of the rankings) were difficulty controlling worry, excessive anxiety and worry about a number of events or activities, and clinically significant impairment in important areas of functioning. The highest three symptom rankings (not considering frequency) were excessive anxiety and worry about a number of events or activities (M = 1.67; SD = 1.22), acute anxiety (M = 2.29; SD = 1.71), and difficulty controlling worry (M = 2.61; SD = 1.23).

Table１１: Rank Order of Symptoms for the Three Vignettes

Rank Order of Symptoms for the Three Vignettes

Symptoms:	Hwabyung			Ataque de Nervios			GAD		
	F	Mean Rank	SD	F	Mean Rank	SD	F	Mean Rank	SD
Feelings of worthlessness	8	2.88	2.36	7	4.43	3.41	**3**	**5.33**	**3.22**
Difficulty concentrating or mind going blank	0			13	5.00	2.74	**30**	**4.10**	**1.40**
Acute anxiety	17	3.41	2.551	**41**	**2.88**	**2.20**	24	2.29	1.71
Uncontrollable shouting	1	2.0	N/A	**23**	**5.30**	**3.01**	1	6.00	
Attacks of crying	6	2.67	1.37	**33**	**4.36**	**2.13**	8	5.75	2.19
Verbal/physical aggression	8	5.00	3.30	**23**	**4.13**	**3.62**	3	7.00	4.36
Delusions	0			**0**			0		
Sense of being out of control	14	4.14	2.25	**41**	**3.83**	**2.63**	25	**4.04**	**2.25**
Feelings of unfairness	**10**	**3.00**	**1.49**	2	2.00	0.00	0		
Suicidal ideation	0			**24**	**4.71**	**3.16**	1	1.00	
Nervousness	2	1.50	.707	5	4.40	3.36	**24**	**4.04**	**1.60**

	n	Mean	SD	n	Mean	SD	n	Mean	SD
Fainting or seizure-like episodes	1	2.0	N/A	**22**	**4.68**	**1.70**	0		
Difficulty controlling worry	9	4.33	2.83	20	4.60	2.82	**56**	**2.61**	**1.23**
Easily fatigued	10	4.90	1.37	3	7.00	3.46	**21**	**6.00**	**1.79**
Shortness of breath	**24**	**5.08**	**2.10**	**21**	**4.71**	**2.59**	2	6.50	0.71
Palpitations	6	3.00	2.10	**28**	**5.21**	**2.46**	4	7.00	1.41
Clinically significant impairment in important areas of functioning	**37**	**3.92**	**2.62**	**34**	**5.21**	**3.36**	**41**	**4.32**	**2.94**
Stressful family event	32	2.78	2.54	**35**	**2.80**	**2.61**	7	4.00	3.00
Excessive anxiety and worry, about a number of events or activities	9	3.00	1.58	10	2.80	1.55	**55**	**1.67**	**1.22**
Irritability	**31**	**3.77**	**2.59**	5	8.20	3.35	**30**	**5.47**	**2.21**
Muscle tension	9	4.33	2.78	3	6.00	1.73	**19**	**5.47**	**2.07**
Restlessness, feeling keyed up or on edge	8	6.38	2.39	8	3.62	1.41	**25**	**5.88**	**2.03**
Feelings of hopelessness	6	5.00	4.24	4	5.25	4.03	**3**	**6.67**	**2.52**
Heat sensation	**28**	**4.07**	**2.40**	2	6.50	0.71	1	11.00	
Sighing	**13**	**6.08**	**2.50**	1	8.00		0		

Frequent temper outbursts (3 or more a week)	**12**	**3.67**	**1.83**	8	7.50	4.12	3	8.33	2.31
Sensation of mass in the throat and chest	**22**	**4.36**	**2.19**	0			2	8.50	0.71
Indigestion	**29**	**5.07**	**2.17**	1	9.00		2	9.50	3.54
Headache/pain	**33**	**4.09**	**2.07**	0			2	6.50	2.12
Hypersomnia	0			0			0		
Denied use of drugs or alcohol	**16**	**6.87**	**2.73**	12	7.83	4.15	13	6.46	2.73

Note: Bolded information signifies to what vignette the symptoms belong.

Diagnostic Accuracy with MCSE-RD and SCS

Table 13 shows clinicians' mean ratings of the MCSE-RD and SCS scales split by participants that gave cultural or western diagnoses for the free-response and forced-choice questions. Independent-samples *t*-tests examined differences in scale means for the two types of diagnosis. For the Hwabyung vignette, clinicians that gave a western diagnosis on the forced-choice question rated their level of cultural competence higher on the MCSE-RD Assessment, Multicultural Session Management, and Total scales. Clinicians that gave a western diagnosis on the forced-choice question also had higher scores for independent/individualistic scores. For the Ataque de Nervios vignette, clinicians that gave a western diagnosis on the free-response and forced-choice questions were reportedly more confident in their cultural competence on the MCSE-RD Multicultural Intervention, Session Management, and Total scales. There were no differences on the SCS scales for Ataque de Nervios.

Table 1 2 : Table 13: Mean Differences on the MCSE-RD and SCS across Cultural versus Western Diagnoses

			MCSE-RD MA M (SD)	MCSE-RD MI M (SD)	MCSE-RD MSM M (SD)	MCSE-RD Total M (SD)	SCS Indep M (SD)	SCS Interdep M (SD)
Hwabyung	Free Response	Cultural	5.44 (2.56)	7.23 (1.43)	7.76 (1.25)	7.06 (1.47)	4.64 (.52)	4.48 (.52)
		Western	6.42 (1.54)	7.86 (.98)	8.32 (1.04)	7.71 (.99)	4.94 (.61)	4.62 (.68)
	Forced Choice	Cultural	5.71* (2.00)	7.41 (1.17)	7.69* (1.04)	7.19* (1.21)	4.64* (.52)	4.73 (.65)
		Western	6.65* (1.44)	7.94 (.98)	8.42* (.99)	7.82* (.96)	4.99* (.61)	4.57 (.63)
Ataque de Nervios	Free Response	Cultural	5.67 (1.56)	6.65** (.90)	7.19** (.95)	6.59* (.88)	4.52 (.52)	4.63 (.36)
		Western	6.37 (1.67)	7.90** (.98)	8.36** (1.02)	7.74* (1.01)	4.95 (.60)	4.61 (.69)
	Forced Choice	Cultural	5.74 (1.86)	7.27* (1.14)	7.74* (.98)	7.11* (1.11)	4.70 (.52)	4.73 (.64)
		Western	6.56 (1.53)	7.98* (.94)	8.40* (1.04)	7.83* (.97)	4.96 (.62)	4.54 (.64)

Note: MCSE-RD = Multicultural Counseling Self-Efficacy Scale-Racial Diversity Form; MA =

Multicultural Assessment; MI = Multicultural Intervention; MSM = Multicultural Session

Management; SCS = Self-Construal Scale; Indep = Independent; Interdep = Interdependent.

Logistic Regression of Diagnostic Choices

I used the MCSE-RD and SCS subscales in a logistic regression to determine if they

predict who selected a western versus cultural diagnosis for either the free-response or forced-

choice questions across the Hwabyung and Ataque de Nervios vignettes. No model provided a

significant prediction: Hwabyung free-response $\chi^2(5) = 2.97$, Nagelkerke $R^2 = .10$; Hwabyung

forced-choice $\chi^2(5) = 8.78$, Nagelkerke $R^2 = .20$; Ataque de Nervios free-response, $\chi^2(5) = 12.11$,

Nagelkerke $R^2 = .38$; Ataque de Nervios forced-choice, $\chi^2(5) = 7.01$, Nagelkerke $R^2 = .16$.

Relationship of Diagnosis with Other Variables

One possible explanation of who offered a cultural versus western diagnosis is the

person's level of familiarity with the diagnosis. Table 14 compares the forced-choice diagnosis

questions (western vs. cultural answers) for both Hwabyung and Ataque de Nervios with the

level of familiarity participants had for various disorders. Table 14 includes both the means as

well as point-biserial correlations of participants' familiarity rating with their diagnostic choice.

In this section, we only present the forced-choice diagnosis because there were more individuals

who provided a cultural diagnosis under that format. For the Hwabyung comparison, 9 of the

following relationships were significant and indicated that individuals who selected a western

diagnosis were more familiar with the following disorders: major depressive disorder; $r_{pb}(54) = -$

0.31, $p < .05$, factitious disorder; $r_{pb}(51) = -0.33$, $p < .05$; GAD $r_{pb}(54) = -0.29$, $p < .05$; brief

psychotic disorder $r_{pb}(52) = -0.35$, $p < .05$; PTSD $r_{pb}(54) = -0.26$, $p < .05$; panic disorder $r_{pb}(54)$

$= -0.43$, $p < .001$; Bipolar I $r_{pb}(52) = -0.45$, $p < .001$; disruptive mood dysregulation disorder

$r_{pb}(51) = -0.27$, $p < .05$; and intermittent explosive disorder $r_{pb}(51) = -0.31$, $p < .05$. In this same

Hwabyung comparison, clinicians that selected a cultural diagnosis showed more familiarity with

shinbyung, $r_{pb}(44) = 0.29$, $p < .05$. For the Ataque de Nervios comparison, the only significant

relationships indicated that clinicians who selected western diagnoses had greater familiarity

with the following three disorders: panic disorder $r_{pb}(56) = -0.31$, $p < .05$, disruptive mood

dysregulation disorder $r_{pb}(53) = -0.27$, $p < .05$; and intermittent explosive disorder $r_{pb}(53) = -$

0.31, $p < .05$.

Table 1 3 : Familiarity with Disorders Across Cultural versus Western Diagnoses

Disorder	Total M (SD)	Hwabyung Western M (SD)	Hwabyung Cultural M (SD)	Hwabyung Correlation	Ataque de Nervios Western M (SD)	Ataque de Nervios Cultural M (SD)	Ataque de Nervios Correlation
Major Depressive Disorder	90.61 (13.46)	93.59 (6.48)	84.59 (21.77)	-0.31*	92.10 (8.29)	86.13 (21.88)	-0.20
Hwabyung	6.06 (9.91)	4.13 (6.81)	10.00 (13.64)	0.28	4.59 (6.89)	9.79 (14.58)	0.24
Factitious Disorder	43.63 (27.63)	49.53 (27.20)	30.94 (21.65)	-0.33*	46.92 (25.74)	32.06 (27.18)	-0.25
GAD	91.59 (12.76)	93.92 (8.32)	85.94 (19.33)	-0.28*	92.71 (9.17)	88.13 (19.46)	-0.16

Brief Psychotic Disorder	54.05 (30.81)	61.05 (27.04)	38.00 (32.79)	-0.35*	58.15 (26.67)	40.94 (36.37)	-0.26
PTSD	86.90 (16.72)	89.87 (14.89)	80.47 (19.95)	-0.26*	89.07 (15.21)	80.38 (19.46)	-0.23
Persistent Depressive Disorder	80.41 (24.35)	82.61 (21.88)	75.82 (29.86)	-0.13	81.37 (22.30)	76.75 (29.75)	-0.09
Panic Disorder	82.46 (18.04)	87.74 (13.50)	71.29 (21.56)	-0.43*	85.57 (14.77)	73.19 (22.87)	-0.31*
Conversion Disorder	49.84 (28.02)	54.11 (26.62)	41.41 (27.33)	-0.22	50.70 (25.69)	44.56 (31.87)	-0.10
Somatic Symptom Disorder	55.28 (27.27)	57.11 (28.67)	51.29 (23.05)	-0.10	55.58 (26.16)	51.75 (29.15)	-0.07
Amok	12.00 (22.04)	10.47 (21.64)	15.35 (23.53)	0.12	10.72 (20.96)	15.47 (25.15)	0.10
Shinbyung	6.28 (14.22)	3.40 (6.18)	12.00 (22.21)	0.29*	4.22 (6.75)	11.36 (23.80)	0.23
Bipolar I	79.74 (19.70)	85.73 (13.23)	66.82 (25.67)	-0.45*	81.98 (15.71)	72.88 (26.76)	-0.21
Ataque de Nervios	25.17 (31.67)	23.79 (29.85)	30.35 (35.68)	0.10	23.73 (33.04)	29.38 (30.06)	0.09

Koro	10.20	9.57	11.76	0.05	9.57	12.07	0.06
	(21.65)	(21.13)	(23.60)		(20.45)	(25.10)	
Taijin Kyofusho	7.89	7.89	8.29	0.01	8.10	7.93	-0.005
	(16.58)	(17.85)	(15.32)		(17.26)	(16.27)	
Schizoaffective Disorder	62.05	65.55	56.41	-0.14	62.02	59.75	-0.03
	(30.67)	(26.20)	(37.18)		(27.71)	(37.76)	
Disruptive Mood Dysregulation Disorder	52.68	58.50	40.94	-0.27*	57.18	38.75	-0.27*
	(31.44)	(31.19)	(27.71)		(31.87)	(25.33)	
Intermittent Explosive Disorder	57.63	64. 17	42.59	-0.31*	63.13	41.56	-0.31*
	(32.68)	(32.65)	(28.84)		(32.16)	(28.66)	
Shenjing Shuairuo	3.64	2.89	5.06	0.19	3.61	3.87	0.02
	(5.70)	(5.08)	(6.70)		(6.01)	(5.44)	
Susto	12.62	10.69	17.13	0.13	14.00	10.50	-0.07
	(23.04)	(21.31)	(26.85)		(26.50)	(14.53)	
Illness Anxiety Disorder	39.71	40.52	33.19	-0.10	36.53	42.69	0.09
	(34.59)	(33.19)	(28.92)		(34.65)	(32.74)	

I also examined if how often the person referenced the DSM or ICD impacted their diagnostic choice. For Hwabyung, clinicians that selected a cultural disorder referenced the DSM or ICD more during their diagnosis $r_{pb}(54) = .39$, $p < .05$. There was no difference for Ataque de

Nervios. All other variables (level of exposure to unfamiliar syndromes, experience working with clients of Korean or Latinx descent, frequency of international travel, exposure to diverse cultural experiences, number of diversity courses) did not differ across participants that offered western versus cultural diagnoses. See Tables 15-20 for descriptive statistics of these variables.

Table 1 4 : Frequency of Referencing the DSM or ICD

Vignette	Total M (SD)	Western M (SD)	Cultural M (SD)	Correlation
Hwabyung	41.66 (36.56)	32.47 (34.09)	63.12 (35.57)	.39
Ataque de Nervios	41.13 (35.45)	36.13 (36.30)	54.31 (31.53)	.24
GAD	29.00 (34.22)	--	--	--

Table 1 5 : Frequency of Exposure to Unfamiliar Syndromes

	Total F (%)	Hwabyung Western F (%)	Hwabyung Cultural F (%)	Ataque de Nervios Western F (%)	Ataque de Nervios Cultural F (%)
Very rarely	7 (11.86)	5 (12.82)	2 (11.76)	7 (16.67)	0
Rarely	19 (32.20)	13 (33.33)	6 (35.29)	12 (28.57)	7 (43.75)
Occasionally	30 (50.85)	20 (51.28)	7 (41.18)	21 (50.00)	8 (50.00)

Frequently	2 (3.39)	0	2 (11.76)	1 (2.38)	1 (6.25)
Very frequently	1 (1.69)	1 (2.56)	0	1 (2.38)	0

Table 1 6 : Frequency of Prior Experience Working with Korean and Latinx Clients

		Total F (%)	Western F (%)	Cultural F (%)
Korean				
	Yes	9 (15.25)	7 (17.95)	1 (5.88)
	No	50 (84.75)	32 (82.05)	16 (94.11)
Latinx				
	Yes	23 (39.00)	6 (14.29)	3(18.75)
	No	36 (61.0)	36 (85.71)	13 (81.25)

Table 1 7 : Frequency of International Travel

How many times have you traveled internationally?	F (%)	Hwabyung Western F (%)	Hwabyung Cultural F (%)	Ataque de Nervios Western F (%)	Ataque de Nervios Cultural F (%)

0	1 (1.69)	1 (2.56)	0	0	1 (6.25)
1	3 (5.08)	2 (5.13)	0	2 (4.76)	0
2	6 (10.17)	3 (7.69)	3 (17.65)	4 (9.52)	2 (12.50)
3	5 (8.48)	1 (2.56)	4 (23.53)	1 (2.38)	4 (25.00)
4	2 (3.39)	1 (2.56)	1 (5.88)	2 (4.76)	0
5	7 (11.86)	5 (12.82)	2 (11.76)	6 (14.29)	1 (6.25)
6	2 (3.39)	2 (5.13)	0	2 (4.76)	0
7	5 (8.47)	3 (7.69)	0	2 (4.76)	3 (18.75)
8	3 (5.08)	2 (5.13)	1 (5.88)	2 (4.76)	1 (6.25)
More than 10	25 (42.37)	19 (48.72)	5 (29.41)	21 (50.00)	4 (25.00)

Table 1 8 : Exposure to Diverse Cultural Experiences

	M (SD)	Hwabyung Western Mean	Hwabyung Cultural Mean	Hwabyung Correlation	Ataque de Nervios Western Mean	Ataque de Nervios Cultural Mean	Ataque de Nervios Correlation
Cultural Experiences	60.10 (28.49)	62.67 (28.45)	54.06 (27.68)	-0.14	61.67 (29.24)	54.44 (26.81)	-0.11

Table 1 9 : Number of Diversity Courses

	Total F (%)	Hwabyung Western F (%)	Hwabyung Cultural F (%)	Ataque de Nervios Western F (%)	Ataque de Nervios Cultural F (%)
0-2	14 (23.73)	8 (20.51)	5 (29.41)	8 (19.05)	6 (37.50)
3-5	19 (32.20)	14 (35.90)	4 (23.53)	14 (33.33)	4 (25.00)
6-8	11 (18.64)	6 (15.38)	4 (23.53)	6 (14.29)	5 (31.25)
9-11	6 (10.17)	5 (12.82)	1 (5.88)	6 (14.29)	0
More than 12	9 (15.25)	6 (15.38)	3 (17.65)	8 (19.05)	1 (6.25)

Discussion

The aims of this study were to investigate the following questions: 1A) Without any structure, how would clinicians diagnose the two culture-bound syndromes in the vignettes: Hwabyung and Ataque de Nervios? 1B) Will clinicians select a diagnosis of specific culture-bound syndromes if they are offered as an option? 2) What pieces of information from the vignettes stood out to clinicians and informed their decisions? 3)Will a clinician's level of affiliation with individualistic versus collectivistic values and/or clinician's perceived cultural competence have any influence on accuracy of diagnoses? 4) Will clinicians be able to better diagnose a western diagnosis?

I will now proceed to discuss each research question in the context of the variables of the study. Based on question 1A, for Hwabyung, clinicians most frequently diagnosed adjustment disorder (15.38%), depression (13.46%), anxiety (11.54%), and somatization disorder (10.58%) and very rarely provided the Hwabyung diagnosis (2.88%). The high rate of adjustment disorder could be explained by the ICD and DSM's categorization of adjustment disorder as a disproportionate reaction to stress (Patra & Sarkar, 2013), although this diagnosis would still be inappropriate considering that the symptom profile of the diagnosis does not well match that of adjustment disorder. The three other diagnoses—depression, anxiety, and somatization disorder—have similar symptomology to Hwabyung, due to the anxiety symptoms, such as palpitations chest tightness and high startle response or the somatic symptoms of headache and a feeling of a mass in the chest or lump in the throat Rhi, 2004; Min, Suh, & Song, 2009). Generally speaking, there was little agreement among clinicians in this sample on the diagnosis of this vignette.

This same trend was found for free-response diagnoses of the Ataque de Nervios vignette, where clinicians most often diagnosed panic disorder (24.42%), PTSD (20.93%), adjustment disorder (11.63%) and depression (11.63%). The high rates of endorsement for panic disorder, PTSD, and depression could be due to panic disorder symptoms of feeling of being out of control, or the PTSD symptoms of angry outbursts or the depressive symptoms of suicidal ideation but this would not fully capture Ataque de Nervios. Adjustment disorder could also be explained in the same manner as Hwabyung, where it may be due to being classified as a disproportionate reaction to stress, but again, this does not fully encompass Ataque de Nervios as there are more unique presentations of Ataque de Nervios, such as the fainting episodes that could not be explained by any of these disorders. The results of this question could potentially be bringing attention to the cognitive bias that western clinicians may have encountered. For example, I previously explained the importance of schemas, heuristics, and biases. Through their training and clinical experience, clinicians develop their own set of schemas of psychopathology (Foster et al., 2017). When presented with novel situations, like the vignettes of this study, it may be harder for clinicians to retain the unique symptoms due to not having acquired schemas regarding these disorders. This may lead to retention and attention to familiar western symptoms and dismissal of unique cultural symptoms, therefore resulting in incorrect western diagnoses.

One noticeable difference between Hwabyung and Ataque de Nervios was that in Hwabyung's free-response question, several east Asian disorders were given as an answer (e.g., Shenjaing Shuairuo (0.96%), Taijin kyofusho (0.96%), and Koro (0.96%) while in Ataque de Nervios, no other cultural disorders were given other than Ataque de Nervios. This may suggest that the clinicians in our sample had more knowledge of Latinx disorders than Asian disorders. Indeed, the average level of familiarity with Ataque de Nervios was 25.17 where the average

level of familiarity with Hwabyung was 6.06 (on a scale of 100). This level of more familiarity with Latinx disorders than East Asian may be attributed to the demographic composition of the United States where there are more individuals of Latinx backgrounds currently than Asian (U.S. Census Bureau, 2019). There was also more variability regarding the range of diagnoses given to the Hwabyung vignette overall (cultural and western diagnoses) compared to the Ataque de Nervios vignette.

In terms of aim 1B, there were higher rates of the correct diagnosis for Hwabyung and Ataque de Nervios when clinicians were presented with the forced-choice option. This may have to do with the ability of individuals to better recognize information rather than free-recall information (Postman, Jenkins, & Postman, 1948). When comparing the free-response questions to the forced-choice questions, for the Hwabyung vignette, 26 individuals (44.07%) out of 59 did not change their answers when they were given the forced-choice question. The remaining 33 clinicians (55.93%) changed their original free-response diagnosis when given the forced-choice. Out of the individuals who changed their answers, 15 (45.45%) changed their diagnosis from a western to cultural disorder and out of these same individuals 10 (30.30%) correctly selected the forced-choice Hwabyung diagnosis. A larger portion of individuals (21.4%) were able to give the correct Hwabyung diagnosis when presented with it as an option versus when they were asked to provide a diagnosis without any aid (2.88%). Somatic symptom disorder was the most common selection (24.29%) for the forced choice question versus only 10.58% in the free-response question. This shift may be attributed to the ability of individuals to better recognize information rather than free-recall information and therefore seeing the diagnosis listed as one of the options may have led to more recall of somatic symptoms and led to a switch in their diagnostic choice (Postman, Jenkins, & Postman, 1948). Somatic symptom disorder is not as common a diagnosis

as depression or anxiety in western mental health practice, and thus may have been less likely to come to mind (Dimsdale et al., 2013; Twenge, & Joiner, 2020). An anxiety disorder diagnosis (11.54%) rose to 18.57% when the clinicians were presented with the GAD option in the forced choice question. In the free-response portion, 2.88% of the sample chose an incorrect East Asian disorder but this number rose to 8.57% in the forced choice question.

There were also noticeable changes in the comparison between the Ataque de Nervios free-response and forced-choice questions. For the Ataque de Nervios vignette, 42 individuals out of 60 (70.00%) did not change their diagnosis. Out of the 60 responses, 18 (30.00%) changed their forced-choice diagnosis. Out of these changed responses, 13 (72.22%) changed from a western to a cultural diagnosis and 12 clinicians out of the 18 (66.67%) correctly chose Ataque de Nervios. In the free-response questions, panic disorder was the most commonly reported diagnosis (24.42%), but in the forced choice-question, the highest percentage for a diagnosis was Ataque de Nervios (28.79%). In the forced choice question, one individual reported a cultural diagnosis of susto while no other cultural diagnoses other than Ataque de Nervios were reported in the free-response question. There was a greater degree of variability to the cultural diagnoses given to the Hwabyung vignette. The higher percentage of accuracy for Ataque de Nervios versus Hwabyung may suggest that western trained clinicians may be more knowledgeable about Latinx/Hispanic cultures than they are about east Asian disorders. We also noticed that a large portion of individuals selected a wide variety of western disorders that shared symptomology with Hwabyung and Ataque de Nervios which also suggests these clinicians are more familiar and knowledgeable with western disorders than cultural ones. This interpretation is supported by clinicians' self-report of their familiarity with diagnoses in this study.

Aim 2, "What pieces of information from the vignettes stood out to clinicians and informed their decisions?" was addressed through the heat map and the rank order questions. For the heat maps for both Hwabyung and Ataque de Nervios, participants who gave cultural diagnoses placed particular focus on characteristics/symptoms such as ethnic background (for both cultural disorders), indigestion (for Hwabyung), fainting/seizure like episodes (for Ataque de Nervios), and not having depressed mood or SI (for both cultural disorders). Another interesting observation was that the highest reported symptoms of Hwabyung were symptoms that are also commonly found in western disorders such as headache/pain, subjective/expressed anger, and distress/impairment with family, occupation or relationships. This trend of endorsing symptoms of cultural disorders that can also be found in western disorders was again seen in Ataque de Nervios through symptoms such as sense of being out of control and partner violence. This finding suggests that many US clinicians are more drawn to or place more emphasis on symptoms that they are used to or commonly come across while possibly subconsciously dismissing some of the more unique cultural symptoms that would have been valuable to their diagnosis. This pattern of attending to symptoms is an example of the availability heuristic where individuals are more likely to notice things that are more familiar or come to mind more easily (MacLeod & Campbell, 1992).

For the rank ordering of symptoms for Hwabyung and Ataque de Nervios, I noticed that a number of distractor variables were incorrectly endorsed. Surprisingly, a lot of the culturally unique symptoms, and therefore the biggest clues to giving a correct diagnosis were not ranked (e.g., fainting/seizure for Ataque de Nervios; indigestion and heat sensation for Hwabyung). The number of incorrectly picked distractor symptoms that were similar to western symptoms may mean that they misremembered these vignettes and replaced the gaps in their memory with

symptoms that are commonly seen in western diagnoses (Webb, Keeley, & Eakin, 2016), which

is a manifestation of the representativeness heuristic (Gualtieri & Denison, 2019). It is also very

important to mention that several of these symptoms that were originally intended to characterize

only one vignette could be interpreted to fit others. For example, the Ataque de Nervios vignette

symptom of a stressful family event could be correctly attributed to Hwabyung's vignette due to

the stressful family dynamic depicted in the vignette.

The third aim, "Will a clinician's level of affiliation with individualistic versus

collectivistic values and/or clinician's perceived cultural competence have any influence on

accuracy of diagnoses?" was answered using the MCSE-RD and SCS scales. I found that for

Hwabyung, clinicians that gave a western diagnosis on the forced-choice question rated their

level of cultural competence higher on the MCSE-RD Assessment, Multicultural Session

Management, and Total scales and that they also had higher scores for

independent/individualistic scores. The same pattern was shown for Ataque de Nervios for the

MCSE-RD in Multicultural Intervention, Session Management, and Total scores, where having

higher perceived confidence in one's ability in these areas were more correlated with incorrect

western diagnoses. This pattern is a typical example of the overconfidence bias (Kahneman &

Tversky, 1997). Clinicians that provided a cultural diagnosis showed less confidence in their

abilities which may have led to more careful consideration of the symptoms in the vignettes. For

Hwabyung, there were higher rates of individualistic qualities among individuals that provided a

western diagnosis which may be the result of the representative heuristic. For example, I

previously discussed how the representative heuristic is caused when people form judgments on

information based on their previously learned content rather than the actual likelihood of the

event or situation occurring given the context of the situation at hand (Gualtieri & Denison,

2019). For example, in the case of western and more individualistic clinicians, the representative heuristic may have influenced them to become more attentive to the symptoms that look similar to western symptomology (while dismissing culturally unique symptoms) and lead to a western diagnosis because this is similar to the phenotype of the western disorders learned in training. While this significant difference was found for Hwabyung in terms of the interaction of interdependence on diagnosis, this was not shown for Ataque de Nervios. This difference may mean that individuals coming from a western individualistic culture have a harder time recognizing interdependent East Asian culture symptoms since this trend was not found in Latinx culture through Ataque de Nervios.

For the final question, "Will clinicians be able to better diagnose a western diagnosis?" clinicians were able to correctly diagnose GAD most of time (e.g., 88.00% correct in free response and 86.76% for forced-choice). This was a great difference compared to the 2.88% correct free-response diagnosis of Hwabyung and 8.14% of Ataque de Nervios. Considering the high prevalence of anxiety in the United States where in 2019, 2.7% of adults experienced severe anxiety in any given 2 weeks, this study result may not come at a surprise (Terlizzi & Villarroel, 2020). Familiarity and regular experience with GAD could explain the high correct rates of diagnosis.

The study explored a variety of additional variables that could help explain who offered a cultural versus western diagnosis. These analyses focused only on the forced-choice diagnoses as so few individuals offered a cultural diagnosis as a free-response. The trend was similar to the previously seen variables. Clinicians that provided a western diagnosis were more familiar with western disorders like major depressive disorder and GAD while those that gave a cultural disorder had more knowledge of cultural disorders like shinbyung. For Ataque de Nervios,

clinicians that gave a western diagnosis had more knowledge of western diagnoses that shared similar symptomology as Ataque de Nervios, such as panic disorder and intermittent explosive disorder. This finding again insinuates that U.S. clinicians may be placing more emphasis on familiar western disorders and their symptoms or may have limited knowledge of cultural disorders. The remaining variables (e.g., frequency of referencing ICD or DSM, exposure to different cultures) did not show any significant relationship with diagnostic accuracy.

Implications

Based on the findings of this study, I found significant deficits in the ability of clinicians to correctly diagnose cultural syndromes. The lack of correct diagnosis could lead to errors in treatment. For example, for someone with a cultural disorder who is closely tied to their culture, it may prove to be invalidating to be diagnosed with a western disorder while a cultural disorder may lead to more understanding of their condition and better improve rapport with the clinician. For example, one of the unique characteristics about Hwabyung is that while an individual might not publicly share what they label their disorder due to shame or stigma, they are usually aware that they have Hwabyung and would call it that. So to hear a western clinician label it as a western disorder might damage rapport and also lead to the client questioning the clinician's fit and ability to treat them. The same is likely true for Ataque de Nervios. Someone of the Latinx culture might also feel more validated and responsive hearing a diagnosis that accurately depicts their condition versus being labeled and put into a western diagnosis. The type of diagnosis and the associated treatment also may cause harm to the individual. For example, quite a few individuals diagnosed both cultural diagnoses as adjustment disorders and depressive disorders. While there might be some treatment aspects in adjustment disorder that may help with the disorder like helping to cope with the symptoms, it would not address the rage and anger created

by unfair conditions that are seen in both cultural disorders. The same would apply for typical

treatment approaches for depressive disorders.

We saw in the rank order and heat map that some focus was placed on western and

therefore very familiar symptoms. This finding suggests clinicians need to become more aware

of cultural presentations and symptoms since these are the biggest clues in forming these

diagnoses and due to the demographic composition of the United States becoming much more

diverse which increases the likelihood of western clinicians to have a more diverse population on

their caseload (US Census, 2019).This might mean there is confirmation bias at play, which is

where individuals subconsciously prioritize information that is consistent with their own

knowledge while dismissing contradictory information. In the case of this study, this may mean

that clinicians were subconsciously searching for symptoms that remained consistent with their

preconceived diagnosis or those that they were accustomed to while dismissing symptoms that

remained foreign to them (Mendel et al., 2011).

I also saw through the MCSE scales that higher confidence in one's own cultural

competency can also negatively affect the accuracy of the diagnosis and may have to do with

overestimating one's own ability to assess cultural symptoms and lead to less contemplation and

thorough assessment of cases. Studies have shown that there are lower rates of diagnostic

accuracy in minority populations, which insinuates lack of cultural training and

conceptualization (Kim, Morales, Knashawn, & Bogner, 2008; Rivera Mindt, et al., 2010;

Borowsky, 2000). To alleviate the concerns caused by inaccurate diagnoses and to increase

cultural presentation awareness, changes are needed. Potential suggestions for these negative

consequences are to insert opportunities for educating students about these cultural disorders

through practicum or classes such as psychopathology or diversity and helping them to become

more familiar with their symptomology to prepare them for when they are confronted in their clinical training. For those who have already graduated and earned their degrees, it would be important to enroll in continuing education credits or to actively look for cultural humility courses to further improve their knowledge and assessment of cultural disorders.

Limitations

There were several limitations to this study. The first is that the sample size was 84, which is much smaller than the intended 154 sample size indicated by an a priori power analysis. The small sample may have led to some variables not showing significant results. The study was also conducted during the COVID-19 pandemic, which affected response rates due to potential increased stressors for clinicians caused by changing work environments and expectations that likely lowered their willingness to participate in this study. Another potential limitation is that the within-participant nature of the study, where participants were presented with all three vignettes, may have led to priming and led to increases in diagnostic accuracy during later parts of the study since it may have become obvious that the study was centered around cultural differences. This effect was controlled by randomizing the order of presentation of the vignettes; nonetheless, rates of cultural diagnosis may have been even lower if clinicians saw only a single vignette. A limitation that is important to be shared is that although the original intent of the rank order of the symptoms was to have unique symptoms for each vignette, the symptoms could potentially be interpreted to fit other vignettes leading to ambiguities in the interpretation of these results.

<div align="center">

Conclusion

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The results of this study revealed that western American clinicians rarely applied culture-bound syndromes as diagnoses to case vignettes and they focused on familiar western

symptoms/disorders that are commonly seen in the U.S. while knowledge of culturally unique symptoms was limited. This shows that much more insight into the workings of cultural diagnosis are needed and that more initiative should be taken in furthering education related to culturally unique disorders to accurately diagnose individuals of diverse and varying backgrounds.

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Appendix

Appendix A

<u>**Hwabyung Vignette:**</u>

Yoon is a 55-year-old Korean female who immigrated to the United States while she was in her mid-30s. She has been married to her husband (60) for over 20 years and has two children, Min (18) and Suzy (15). She describes her marriage as unhappy and anxiety inducing. She reports that her husband is very controlling, patriarchal and nitpicks all of her decisions. Recently, due to Min entering college and a rising cost of living, she was forced to give up her position as a housewife and help her husband by working at their beauty supply store. She reports that her adversarial relationship with her husband is degrading, and that every argument they have is worsening her health further. However, despite desiring a divorce, she refuses to initiate one out of a sense of loyalty to her children and concerns about what others might think of her being a divorcee. Within the last month, her anger has intensified, and she has begun to get angry at what she recognizes are insignificant topics. For example, she recently became extremely frustrated and upset after finding out her husband had used the last sponge and forgot to buy replacements. This anger often causes painful migraines paired with sudden sensations of heat, concentrated in her head. Yoon reports experiencing migraines and hot sensations several times a week. She has tried to treat her migraines herself with cool wet towels but has not had any success. Additionally, she has begun to suffer an array of other physical symptoms. Most prominently, she reports having extreme indigestion, which is signaled by nausea and where it feels as though it is being caused by a lump in her chest. While explaining her situation, Yoon sighed many times and paused during the conversation in fear that she might get angry and feel any shortness of breath or hot headaches. She assured you that she has not felt depressed and has not been having any thoughts of suicide. She denied using any drugs or alcohol. She stated that her physical symptoms were painful and preventing her from being able to work and take care of the usual housework. Yoon also reported that her becoming easily upset is causing strains in her relationships and affecting how she interacts with customers. Yoon scheduled the appointment with you after first visiting her family physician, who recommended that she seek mental health treatment. She indicated that she would like to find a way to cope with her symptoms and feel better.

<u>**Ataque de Nervios Vignette:**</u>

Rosa (55) lives in Puerto Rico with her husband, Jose (60), and her two children Lily (12) and Mateo (9). Jose is the primary breadwinner as construction worker, while Rosa stays at home and is responsible for the cooking, cleaning, and childcare. Their family has monetary struggles, and has difficulty paying monthly bills. Their financial situation is made worse by Jose's frequent drinking and gambling. Rosa reports that Jose often becomes violent after drinking, and that he has become aggressive with her and her children. When Jose has violent outbursts, Rosa attempts to defend her children but is usually unable to stop her husband. A day or so after Jose gets violent, Rosa reports crying and screaming uncontrollably and having fainting episodes. Rosa reports during these incidents, she feels like she cannot stop and feels overwhelmed by numerous feelings at once including a state of intense panic. While panicking, she feels overwhelmed by

fear, and becomes consumed with worry that her distressed state will cause a heart attack. Additionally, during her incidents, she has difficulty controlling her thoughts, which occur too fast for her to process. She often ends up yelling and throwing random items, which she says seems to help resolve the feelings. She also experiences accompanying physical symptoms, usually shortness of breath and heart palpitations. After her attacks, she feels ashamed and embarrassed by her actions. She is scared of herself and fears that she is on the verge of insanity. Recently, she has felt suicidal, but refuses to seek outside help because she is worried what her friends will think of her. Rosa shares with you her bursts of uncontrollable crying, screaming, fits of anger, and panic are preventing her from completing housework and also are causing great distress in her young children and in herself. She also fears that these symptoms will lead to health complications, such as the heart attack that she fears she will have. In her most recent visit to the doctor, Rosa's tests indicated she was in good health. She denies any usage of drugs or alcohol.

GAD Vignette:

Susan is a 55-year-old American female who currently works part-time in retail. She is the mother of three children, Louis (7), Chloe (19), Sam (20), and is married to her husband, Mark, who is a longtime grocery store employee. Susan and Mark have had difficulty keeping up with payments while also financially supporting Chloe and Sam through college and raising young Louis. Susan reports that she has suffered from anxiety since childhood. She mentions she had several fears all throughout her childhood, such as worrying about forgetting to turn in assignments, being afraid that she would miss the school bus, or being afraid that she would not have anyone to play with at recess. Susan shares that these worries would lead to crying episodes, stomach aches, and that in the middle of the night, she would ask to sleep in the same bed as her parents to comfort her. She shares that even as an adult she is still overwhelmed by different worries all throughout the day that make her feel like she is drowning and powerless. Susan mentions that while she has a healthy marriage with her husband, she finds that she easily lashes out at him when she is anxious about minor things, such as her husband forgetting to hang his clothes up after coming home from work. Susan shares that these moments of irritability lead to bigger arguments and have strained their relationship. Susan reports that she fears that she may lose her job and that this would lead to her family losing their home due to being unable to pay their mortgage. She stated that sometimes while at work, the thought of losing her job leads her to become distracted and make mistakes, such as charging a customer the wrong amount for products or forgetting to check the inventory. She also reports that she also worries about the safety of her two older children and whether or not they are doing well in school. She states that she has upsetting thoughts that they may not be attending classes and failing exams and these thoughts keep her awake at night. Whenever she has worries about the academic performance of her children, she tries to reassure herself by calling them and checking in, but this has caused her children to become frustrated with her "constant hovering." They now ignore her calls as often as they answer them. Susan states that her children becoming distant from her has led to new fears that when she is older, they may not visit, and she will be alone. She shares that no matter what she does, she is unable to stop herself from thinking about these fears and feels that she has no control of what is happening to her. Susan reports that her muscles often ache, and she is always tired, but that she is unsure whether this is due to the long hours at work or related to stress. She also shared that she finds herself often pacing the room or feeling jittery. Susan denies any

thoughts of harming herself or others. Susan recently visited her primary care physician and was told that she is healthy and in good condition. Susan shares that she has never used any drugs or alcohol.

Appendix B

Dear [First Name, Last Name],

      I am emailing you to invite you to participate in a research study. I am a psychology doctoral student at Virginia Commonwealth University, and my study examines the impact of culture on mental health clinicians' diagnostic decision-making. You were selected as a possible participant for this study because you are a psychologist and a member of APA.

      In the study, we will ask you to read and diagnose three short vignettes and answer a few questions about them. You will also answer some questions regarding your experience as a clinician, your training, and your cultural background. After completing the study, you will be eligible to enter your name to win one $250 first prize or one of two $100 second prizes.

      To be eligible, you have to (1) be currently practicing psychotherapy or conducting psychodiagnostic assessments, (2) employed in a position that requires the diagnosis of mental health disorders, and (3) be at least 18 years of age. **Completing the survey for this study should take around 30-60 minutes.**

Participation in this study is voluntary and your identity will remain anonymous. Additional information about your rights as a participant is present in the consent form once you access the survey. You may click on the link below to access the survey.

[Enter link for survey here]

If you have questions about the study please direct them to Lisa Chung at chungy8@mymail.vcu.edu or Dr. Jared Keeley at jwkeeley@vcu.edu.

Thank you,

Lisa Chung

Ph.D. Student

Department of Psychology

Virginia Commonwealth University

Appendix C

Diagnostic Questions

Free Response Questions:

What is your diagnosis of the patient presented in the vignette?

_____

What strategies did you use to come to your diagnosis, for example, the DSM-5 or ICD-10, your own notetaking, etc.?

_____

Forced Choice Question for Hwabyung:

What diagnosis would you give for the vignette from the list below?

- A. Major Depressive Disorder
- B. Generalized Anxiety Disorder
- C. Persistent Depressive Disorder
- D. Panic Disorder
- E. Hwabyung
- F. Somatic Symptom Disorder
- G. Disruptive Mood Dysregulation Disorder
- H. Shinbyung
- I. Intermittent Explosive Disorder
- J. Taijin kyofusho
- K. Shenjing Shuairuo
- L. Bipolar I
- M. Posttraumatic Stress Disorder

Forced Choice Question for Ataque de Nervios:

What diagnosis would you give for the vignette from the list below?

- A. Ataque de Nervios
- B. Panic Disorder
- C. Susto
- D. Schizoaffective Disorder
- E. Major Depressive Disorder

F. Posttraumatic Stress Disorder
G. Illness Anxiety Disorder
H. Conversion Disorder
I. Koro
J. Amok
K. Generalized Anxiety Disorder
L. Factitious Disorder
M. Brief Psychotic Disorder

Forced Choice Question for Ataque de Nervios:

A. Separation Anxiety Disorder
B. Panic Disorder
C. Major Depressive Disorder
D. Agoraphobia
E. Social Anxiety Disorder
F. Somatic Symptom Disorder
G. Posttraumatic Stress Disorder
H. Persistent Depressive Disorder
I. Conversion Disorder
J. Generalized Anxiety Disorder
K. Obsessive-compulsive Disorder
L. Acute Stress Disorder
M. Adjustment Disorder

Heat Map

Instructions: Please click on the portions of the vignette below that you believe were (vignette relevant to question was inserted)

Rank Order

Directions: Please select the items from the following list that influenced your diagnosis and rank them by order of importance in coming to your diagnosis. The items can be dragged into the box to rank them in order of importance. The box will expand such that any number of items can be selected.

- Feelings of worthlessness
- Difficulty concentrating or mind going blank
- Acute anxiety

- Uncontrollable shouting
- Attacks of crying
- Verbal/physical aggression
- Delusions
- Sense of being out of control
- Feelings of unfairness
- Suicidal ideation
- Nervousness
- Fainting or seizure-like episodes
- Shortness of breath
- Palpitations
- Clinically significant impairment in important areas of functioning
- Stressful family event
- Excessive anxiety and worry, about a number of events or activities
- Irritability
- Muscle tension
- Restlessness, feeling keyed up or on edge
- Heat sensation
- Sighing
- Frequent temper outbursts (3 or more a week)
- Sensation of mass in the throat and chest
- Indigestion
- Headache/pain
- Hypersomnia
- Denied use of drugs or alcohol

Appendix D

Demographic Questions:

1) How old are you? (Free-response question)

2) What gender do you identify with?
   o Female
   o Male
   o Transgender
   o Non-binary
   o Other identity
   o Prefer not to say

3) What is your racial/ethnic background? (check all that apply)
   o White/Caucasian
   o Native American/Alaskan Native
   o Pacific Islander
   o Black/African American
   o Latinx/Hispanic
   o East Asian/Asian American
   o South Asian/Asian American
   o Arabic
   o Other
   o Prefer not to say

4) What generation are you within your family living in the US?
   o First generation (I was born in another country)
   o 1.5 generation (I was born in another country but moved to the US when I was younger than 12)
   o Second generation (I was born in the US but at least one of my parents were born in another country)
   o Third-and-higher generation (My parents were born in the US)
   o I don't know

5) To what degree do you identify with majority US cultural values and ideals?
   o 1 (Not at all)
   o 2
   o 3
   o 4
   o 5
   o 6
   o 7
   o 8
   o 9
   o 10 (Very much)

6) What is the highest degree you obtained?
   o Master's
   o PsyD
   o PhD
   o EdD
   o MD
   o Other

7) What is the average number of clients/patients you see in a given week? (Free-response question)

8) How familiar are you with the DSM-5?
   o Not at all familiar
   o Somewhat familiar
   o Mostly familiar
   o Very familiar

9) How familiar are you with the ICD-10?
   o Not at all familiar
   o Somewhat familiar
   o Mostly familiar
   o Very familiar

10) How many years of experience do you have seeing clients?
   o 1-10
   o 11-20
   o 21--30
   o 31-40
   o 41-50
   o 51-60
   o Prefer not to say

9) What kind of practice setting do you work in? (check all that apply)
   a. Outpatient
   b. Inpatient (non-psychiatric) hospital
   c. Psychiatric hospital
   d. University setting
   e. Private practice
   f. Rehabilitation facility
   g. Nursing home
   h. Telehealth
   i. Other
   j. Prefer not to say

10) What age range(s) of clients/patients so you see? (check all that apply)

       a. 0-17
       b. 18-64
       c. 65 and up
       d. Prefer not to say

11) Please use the familiarity rating scale slider, ranging from very familiar (100) to not at all familiar (0), for each question. What is your level of familiarity with:
       a. Major Depressive Disorder
       b. Hwabyung
       c. Factitious Disorder
       d. Generalized Anxiety Disorder
       e. Brief Psychotic Disorder
       f. Posttraumatic Stress Disorder
       g. Persistent Depressive Disorder
       h. Panic Disorder
       i. Conversion Disorder
       j. Somatic Symptom Disorder
       k. Amok
       l. Shinbyung
       m. Bipolar I
       n. Ataque de Nervios
       o. Koro
       p. Taijin Kyofusho
       q. Schizoaffective Disorder
       r. Disruptive Mood Dysregulation Disorder
       s. Intermittent Explosive Disorder
       t. Shenjing Shuairuo
       u. Susto
       v. Illness Anxiety Disorder

12) How often did you review/reference the DSM or ICD about unfamiliar material within the vignette when making a diagnosis for vignette Yoon? (reference frequency)

13) How often did you review/reference the DSM or ICD about unfamiliar material within the vignette when making a diagnosis for vignette Rosa? (reference frequency)

14) How often did you review/reference the DSM or ICD about unfamiliar material within the vignette when making a diagnosis for vignette Susan? (reference frequency)

15) In your practice, how frequently have you been exposed to syndromes or disorders you are unfamiliar with?

16) What non-western cultural backgrounds do you have experience treating?

17) Have you had prior experience working with clients of Korean ancestry whose presenting problem was unfamiliar to you?

    a. Yes
    b. No

18) Have you had prior experience working with Latinx individuals whose presenting problem was unfamiliar to you?
    a. Yes
    b. No

19) How many times have you traveled internationally?
    a. 0
    b. 1
    c. 2
    d. 3
    e. 4
    f. 5
    g. 6
    h. 7
    i. 8
    j. 9
    k. More than 10

20) In your lived experience, how often would you say you have been exposed to diverse cultural experiences (e.g., living among other cultures, interacting with individuals of other cultural backgrounds)? (rating scale from 0-very rarely to 100-very often)

21) How many diversity courses have you taken in graduate school and/or for CE credits?

    a. 0-2
    b. 3-5
    c. 6-8
    d. 9-11
    e. More than 12

22) Other than diversity courses for CE credits or courses taken in graduate school, what other forms of diversity training/education have you had?

Appendix E

Multicultural Counseling Self-Efficacy Scale-Racial Diversity Form

Directions: The following questionnaire consists of items asking about your perceived ability to perform different counselor behaviors in individual counseling with clients who are racially different from you. Using the 0 –9 scale, please indicate how much confidence you have in your ability to do each of these activities at the present time, rather than how you might perform in the future. Please select the number that best reflects your response to each item.

Multicultural intervention:

1) Remain flexible and accepting in resolving cross-cultural strains or impasses

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

2) Manage your own racially or culturally based countertransference toward the client (e.g.,

overidentification with the client because of his or her race)

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

3) Help the client to clarify how cultural factors (e.g., racism, acculturation, racial identity)

may relate to her or his maladaptive beliefs and conflicted feelings

- o 0 (No confidence at all)
- o 1
- o 2

- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

4) Admit and accept responsibility when you, as the counselor, have initiated the cross-cultural impasse

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

5) Encourage the client to express his or her negative feelings resulting from cross-cultural misunderstanding or impasses

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

6) Assess the salience and meaningfulness of culture/race in the client's life

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6

- o 7
- o 8
- o 9 (Complete confidence)

7) Resolve misunderstanding with the client that stems from differences in culturally based

style of communication (e.g., acquiescence versus confrontation)

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

8) Help the client to identify how cultural factors (e.g., racism, acculturation, racial

identity) may relate to his or her maladaptive relational patterns

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

9) Take into account multicultural constructs (e.g., acculturation, racial identity) when

conceptualizing the client's presenting problems

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8

      ○ 9 (Complete confidence)

10) Manage your own anxiety due to cross-cultural impasses that arise in the session

      ○ 0 (No confidence at all)
      ○ 1
      ○ 2
      ○ 3
      ○ 4
      ○ 5
      ○ 6
      ○ 7
      ○ 8
      ○ 9 (Complete confidence)

11) Respond in a therapeutic way when the client challenges your multicultural counseling

competency

      ○ 0 (No confidence at all)
      ○ 1
      ○ 2
      ○ 3
      ○ 4
      ○ 5
      ○ 6
      ○ 7
      ○ 8
      ○ 9 (Complete confidence)

12) Assess relevant cultural factors (e.g., the client's acculturation level, racial identity,

cultural values and beliefs)

      ○ 0 (No confidence at all)
      ○ 1
      ○ 2
      ○ 3
      ○ 4
      ○ 5
      ○ 6
      ○ 7
      ○ 8
      ○ 9 (Complete confidence)

13) Help the client to set counseling goals that take into account expectations from her or

his family

- 0 (No confidence at all)
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9 (Complete confidence)

14) Openly discuss cultural differences and similarities between the client and yourself

- 0 (No confidence at all)
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9 (Complete confidence)

15) Address issues of cultural mistrust in ways that can improve the therapeutic relationship

- 0 (No confidence at all)
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9 (Complete confidence)

16) Help the client to develop culturally appropriate ways to deal with systems (e.g., school, community) that affect him or her

- 0 (No confidence at all)
- 1
- 2
- 3
- 4

- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

17) Help the client to develop new and more adaptive behaviors that are consistent with his

or her cultural background

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

18) Repair cross-cultural impasses that arise due to problems in the use or timing of

particular skills (e.g., introduce the topic of race into therapy when the client is not

ready to discuss)

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

19) Help the client to utilize family/community resources to reach her or his goals

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6

- o 7
- o 8
- o 9 (Complete confidence)

20) Deal with power-related disparities (i.e., counselor power versus client powerlessness)

with a client who has experienced racism or discrimination

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

21) Take into account cultural explanations of the client's presenting issues in case

conceptualization

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

22) Where appropriate, help the client to explore racism or discrimination in relation to his

or her presenting issues

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8

- o 9 (Complete confidence)

23) Take into account the impact that family may have on the client in case

conceptualization

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

24) Deliver treatment to a client who prefers a different counseling style (i.e., directive

versus nondirective)

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

Multicultural assessment

25) Treat culture-bound syndromes (DSM-IV) for racially diverse clients (e.g., brain fag,

neurasthenia, nervios, ghost sickness)

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

26) Assess culture-bound syndromes (DSM-IV) for racially diverse clients (e.g., brain fag, neurasthenia, nervios, ghost sickness)

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

27) Interpret standardized tests (e.g., MMPI-2, Strong Interest Inventory) in ways sensitive to cultural differences

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

28) Select culturally appropriate assessment tools according to the client's cultural background

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

29) Use nonstandardized methods or procedures (e.g., card sort, guided fantasy) to assess the client's concerns in a culturally sensitive way

- o   0 (No confidence at all)
- o   1
- o   2
- o   3
- o   4
- o   5
- o   6
- o   7
- o   8
- o   9 (Complete confidence)

30) Conduct a mental status examination in a culturally sensitive way

- o   0 (No confidence at all)
- o   1
- o   2
- o   3
- o   4
- o   5
- o   6
- o   7
- o   8
- o   9 (Complete confidence)

<u>Multicultural session management</u>

31) Encourage the client to take an active role in counseling

- o   0 (No confidence at all)
- o   1
- o   2
- o   3
- o   4
- o   5
- o   6
- o   7
- o   8
- o   9 (Complete confidence)

32) Evaluate counseling progress in an ongoing fashion

- o   0 (No confidence at all)
- o   1
- o   2
- o   3
- o   4

- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

33) Respond effectively to the client's feelings related to termination (e.g., sadness, feeling

of loss, pride, relief)

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

34) Keep sessions on track and focused with a client who is not familiar with the counseling
process

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8
- o 9 (Complete confidence)

35) Assess the client's readiness for termination

- o 0 (No confidence at all)
- o 1
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7
- o 8

o   9 (Complete confidence)

36) Help the client to articulate what she or he has learned from counseling during the

termination process

- o   0 (No confidence at all)
- o   1
- o   2
- o   3
- o   4
- o   5
- o   6
- o   7
- o   8
- o   9 (Complete confidence)

37) Identify and integrate the client's culturally specific way of saying good-bye in the

termination process

- o   0 (No confidence at all)
- o   1
- o   2
- o   3
- o   4
- o   5
- o   6
- o   7
- o   8
- o   9 (Complete confidence)

Appendix F

Self-Construal Scale (Singelis, 1994)

Instructions: This is a questionnaire that measures a variety of feelings and behaviors in various

situations. Listed below are a number of statements. Read each one as if it referred to you.

Beside each statement write the number that best matches your agreement or disagreement.

Please respond to every statement. Thank you.

1) I enjoy being unique and different from others in many respects.

- o   1 (Strongly disagree)
- o   2
- o   3
- o   4
- o   5
- o   6
- o   7 (Strongly agree)

2) I can talk open with a person who I meet for the first time, even when this person is much older than I am.

- o   1 (Strongly disagree)
- o   2
- o   3
- o   4
- o   5
- o   6
- o   7 (Strongly agree)

3) Even when I strongly disagree with group members, I avoid an argument.

- o   1 (Strongly disagree)
- o   2
- o   3
- o   4
- o   5
- o   6
- o   7 (Strongly agree)

4) I have respect for the authority figures with whom I interact.

- o   1 (Strongly disagree)
- o   2
- o   3
- o   4

- o 5
- o 6
- o 7 (Strongly agree)

5) I do my own thing, regardless of what others think.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

6) I respect people who are modest about themselves.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

7) I feel it is important for me to act as an independent person.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

8) I will sacrifice my self-interest for the benefit of the group I am in.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

9) I'd rather say "no" directly than risk being misunderstood.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4

- o 5
- o 6
- o 7 (Strongly agree)

10) Having a lively imagination is important to me.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

11) I should [consider] my parents' advice when making education/career plans.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

12) I should take into consideration my parents' advice when making education/career plans.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

13) I prefer to be direct and forthright when dealing with people I've just met.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

14) I feel good when I cooperate with others.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4

- o 5
- o 6
- o 7 (Strongly agree)

15) I am comfortable with being singled out for praise or rewards.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

16) If my brother or sister fails, I feel responsible.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

17) I often have the feeling that my relationships with others are more important than my own accomplishments.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

18) Speaking up during a class (or a meeting) is not a problem for me.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

19) I would offer my seat in a bus to my professor (or my boss).

- o 1 (Strongly disagree)
- o 2
- o 3

- o 4
- o 5
- o 6
- o 7 (Strongly agree)

20) I act the same way no matter who I am with.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

21) My happiness depends on the happiness of those around me.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

22) I value being in good health above everything.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

23) I will stay in a group if they need me, even when I am not happy with the group.

- o 1 (Strongly disagree)
- o 2
- o 3
- o 4
- o 5
- o 6
- o 7 (Strongly agree)

24) I try to do what is best for me, regardless of how that might affect others.

- o 1 (Strongly disagree)
- o 2
- o 3

- 4
- 5
- 6
- 7 (Strongly agree)

25) Being able to take care of myself is a primary concern for me.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

26) It is important to me to respect decisions made by the group.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

27) My personal identity, independent of others, is very important to me.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

28) It is important for me to maintain harmony within my group.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

29) I act the same way at home that I do at school (or at work).

- 1 (Strongly disagree)
- 2
- 3

- 4
- 5
- 6
- 7 (Strongly agree)
-

30) I usually go along with what others want to do, even when I would rather do something different.

- 1 (Strongly disagree)
- 2
- 3
- 4
- 5
- 6
- 7 (Strongly agree)

Vita

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