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Clinician Bias in the Diagnosis of Posttraumatic Stress Disorder: How Clinician Characteristics and Training May Relate to Diagnosis

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Abstract

As our understanding of PTSD has advanced, changing demographics in the United States over the past few decades have led to a growing awareness of the mental health needs of an increasingly diverse and multicultural population. Research on ethnoracial differences in PTSD has had mixed results and additional research exploring possible contributing factors is needed to better explain observed differences. This study explored the presence of and contributing factors to clinician bias in the diagnoses of PTSD based on race and context. It examined whether clinicians were more likely to diagnose PTSD in a Black or White man due to combat or gang violence and examined the impact of various individual clinician characteristics and multicultural training experience on clinicians' diagnoses. In this study, 294 active clinicians-in-training were presented with one of four vignettes and provided a primary diagnosis of the presented case. Participants were then asked to complete measures of social dominance orientation, ethnocultural empathy, ethnocentrism, and multicultural training. Clinicians-in-training diagnosed PTSD more frequently for men who experienced combat than gang violence ($p = .007$). PTSD diagnosis did not differ between White and Black vignettes ($p = .890$). Multicultural training moderated the relationship between vignette (race and context) and PTSD diagnostic impression ($p = .016$). Social dominance orientation, ethnocultural empathy, and ethnocentrism did not moderate the relationship between vignette (race and context) and PTSD diagnostic impression. Implications of these results are discussed.

Clinician Bias in the Diagnosis of Posttraumatic Stress Disorder: How Clinician Characteristics and Training May Relate to Diagnosis

Over the past several decades, posttraumatic stress disorder (PTSD) has developed as a diagnosis and its prevalence in the United States general population has increased. Shortly after PTSD was added to the DSM-III, PTSD prevalence in the United States was found to be around 1% (Helzer, Robins, & McEvoy, 1987). Currently, projected lifetime risk for PTSD in the United States is 8.7% (American Psychiatric Association, 2013). Prevalence rates are higher in veteran populations (American Psychiatric Association, 2013) with multiple wars and ongoing combat in Iraq and Afghanistan contributing to rates of approximately 20% (Dekel & Monson, 2010). These conflicts have increased awareness of PTSD as a diagnosis and a potential mental health consequence of combat. However, combat exposure is only one of several risk factors for PTSD. Other variables that contribute to increased risk for PTSD include experiencing rape or molestation, low socioeconomic status, and lack of education (Brewin, Andrews, & Valentine, 2000; Keane, Marshall, & Taft, 2006).

As our understanding of PTSD has advanced, changing demographics in the United States over the past few decades have led to a growing awareness of the mental health needs of an increasingly diverse and multicultural population. As of the 2010 United States Census (U.S. Census Bureau, Population Division, 2012), 36.3% of the United States population identified as non-White ethnic and racial minorities. Projections estimate that by 2044 more than 50% of the United States population will identify as an ethnic and racial minority (i.e., any group other than non-Hispanic White alone) (Colby

& Ortman, 2015). As demographics shift, mental health clinicians are likely to treat increasing numbers of ethnoracial minority clients. Thus, it is increasingly important that mental health professionals have an understanding of potential racial and cultural biases and how they may influence diagnosis. It is essential that clinicians are able to correctly identify PTSD in various populations as a result of different traumatic events in order to ensure proper and adequate treatment.

Research on ethnoracial differences in PTSD has had mixed results. Multiple studies have found higher rates of PTSD in ethnoracial minorities compared to non-Latino Whites in the United States even after controlling for trauma exposure and demographic variables such as socioeconomic status (e.g., Hinton & Lewis-Fernández, 2011; Stephens et al., 2010). However, other studies have found no differences in prevalence rates of PTSD in Afro-Caribbeans and Latinos as compared to non-Latino Whites after adjusting for trauma exposure and type and various demographic variables (Alegría et al., 2013). One study examining patterns of ethnoracial differences in PTSD identified access barriers and clinician bias as possible contributing factors to racial disparities in the diagnosis and treatment of PTSD (Seng, Kohn-Wood, & Odera, 2005). This study examined various explanations for the underrepresentation of Black women among low-income women diagnosed with PTSD and found support for potential clinician bias with Black women being diagnosed with more severe diagnoses, such as schizophrenia and conduct disorder, more frequently than White women. However, additional research investigating these possible contributing factors is needed to better explain observed differences. To date, research examining ethnoracial differences in PTSD diagnosis and treatment has focused on epidemiological data and prevalence rates

and has not directly studied potential clinician bias in diagnosis.

Clinician Bias in Diagnosis

There is a rich literature on the role of various types of bias (e.g., gender, race) in diagnosis in the United States (Becker & Lamb, 1994; Neighbors, Trierweiler, Ford, & Muroff, 2003; Schwartz & Blankenship, 2014; Whaley, 2004). While research on PTSD has burgeoned in the past two decades, studies investigating clinician bias in the diagnosis of PTSD are limited. Research on gender bias in the diagnosis of PTSD versus borderline personality disorder (BPD) has had mixed results. Clinicians were found to diagnose BPD over PTSD more in female clients than male clients in one study (Becker & Lamb, 1994), but another study did not find evidence of this gender bias (Woodward, Taft, Gordon, & Meis, 2009). Interestingly, research that utilizes ambiguous case vignettes with balanced symptoms of PTSD and BPD has suggested that clinician theoretical orientation has a significant impact on diagnosis, with CBT clinicians being more likely to diagnose PTSD than BPD or another diagnosis and psychodynamic clinicians being more likely to diagnose BPD and other diagnoses than PTSD (Woodward et al., 2009). However, similar studies investigating potential racial biases in PTSD diagnosis have not been published.

While research has not investigated the presence and influence of clinician racial bias in the diagnosis of PTSD, myriad studies have been completed examining racial bias in the diagnosis of schizophrenia. Previous research has identified significant differences in the diagnosis of schizophrenia between ethnoracial minority and White populations in the United States. Despite large epidemiological studies showing similar rates of schizophrenia and psychotic disorders across ethnoracial populations, Blacks and Latinos

are diagnosed with schizophrenia at significantly higher rates than Whites (Schwartz & Blankenship, 2014). Data suggests that Blacks are incorrectly diagnosed with schizophrenia rather than affective disorders (Baker & Bell, 1999). A recent review of research on race and ethnicity and psychosis and schizophrenia noted that reviewed studies showed that clinicians' perceptions of symptoms differed by client race, especially when diagnosing schizophrenia (Schwartz & Blankenship, 2014; see also Trierweiler et al., 2000). In addition, clinicians' perception of clients' honesty has been found to be the strongest contributor to racial disparities in the diagnosis of schizophrenia with clinicians rating Black clients as less honest than White clients (Eack, Bahorik, Newhill, Neighbors, & Davis, 2012).

There is significant overlap in the clinical presentations of PTSD and schizophrenia (Seow et al., 2016). A number of symptoms of PTSD may be confused with those of schizophrenia. For example, hypervigilance in PTSD may be mistaken for paranoia, and flashbacks in PTSD may be mistaken for hallucinations in schizophrenia (McCarthy-Jones & Longden, 2015; Scott, Nurcombe, Sheridan, & McFarland, 2007). In addition, both diagnoses include "negative" symptoms (e.g., feelings of detachment from others, anhedonia) that may further complicate differential diagnosis. Given extensive research showing disproportionate schizophrenia diagnoses in ethnoracial minority populations, it is reasonable to suggest that this overlap provides an area in which racial bias may appear in the diagnosis of PTSD.

While recent decades have brought increased attention to PTSD within military populations, there are various other groups that also experience higher rates of PTSD symptoms. One group that has been found to have increased rates of PTSD symptoms is

people with gang involvement. Research examining PTSD and general anxiety symptoms of gang members has predominately been done in juvenile populations. Gang members have been found to have higher rates of PTSD symptoms than non-gang members in prison populations (Wood & Dennard, 2017) and among homeless youth (Petering, 2016). PTSD symptoms were a significant predictor of gang membership in a prison population (Wood & Dennard, 2017). While these higher rates of PTSD symptoms make sense due to gang members' increased exposure to violence, it is unclear how often individuals in this population are misdiagnosed with some suggesting undiagnosed PTSD may be a significant treatment barrier for this population (Bailey, Smith, Huey, McDaniel, & Babeva, 2014). It may be that PTSD goes undiagnosed in this population due to clinician bias in diagnosis. Research examining trauma-related symptoms in youth in violent, impoverished communities, where gangs are more prevalent, found that these symptoms are often misinterpreted by clinicians as conduct disorder symptoms (Bertram & Dartt, 2009). As gang members are more likely to come from these populations, their symptoms may also be similarly misinterpreted thus lending additional support to that assertion.

Clinician biases related to gang membership may contribute to misinterpreted symptoms and misdiagnoses in this population. While research has not examined the role of clinician bias in mental health diagnoses of gang members, considerable research has demonstrated bias related to gangs that exists in the general population and may also influence clinicians. Guilty verdicts by jurors increase when gang affiliation is mentioned (Eisen et al., 2013) demonstrating the presence of biases about gang members. In fact, evidence of a defendant's gang membership has limited admissibility in United States

courts, as its probative value must outweigh its potential for prejudice of the jury (*United State v. Jobson*, 1996). However, bias against people with gang affiliations has also been found outside the judicial system. Dukes and Valentine (1998) found that gang members were perceived to be more dangerous than non-gang members when engaging in non-violent illegal activity (i.e. spray painting a wall), and participants were more likely to report gang members to police and advocate sending them to prison.

Clinician Factors and Diagnoses

In the face of a multitude of definitions and set diagnostic criteria, clinicians are called to make diagnoses. Diagnostic decisions are based on the clinical judgement of individual clinicians who come to assessment and therapy with their own backgrounds, knowledge, biases, characteristics, training, and experience, all of which influence their perceptions and conceptualizations (American Psychological Association [APA], 2002; Arredondo et al., 1996). Both individual and training factors help to shape the lens through which clinicians view their clients and presenting complaints (Constantine, 2001a; Weatherford & Spokane, 2013). As such, it is important to understand how these individual and training factors and their interactions may influence diagnostic conceptualization. Individual factors include personality characteristics and attitudinal orientations. Some individual factors may contribute more than others to clinicians' diagnostic process. A variety of individual factors have been shown to influence the multicultural lenses of clinicians. Thus, these factors may likely impact the diagnostic conceptualizations of clinicians as well and may especially be relevant to potential ethnoracial and cultural biases in diagnosis.

Broadly defined, *cultural competence* is the ability to appreciate, understand, and

work with other cultural groups (e.g., ethnic, racial, gender, sexual orientation, and social class; Sue, 1998). Within the field of psychology, multicultural counseling competence has been defined as consisting of the domains of attitudes and beliefs, knowledge, and skills within three clinician characteristics. These characteristics include self-awareness of assumptions, values, and biases; understanding the worldview of culturally diverse clients; and developing and using culturally appropriate intervention strategies and techniques (Sue, Arredondo, & McDavis, 1992).

Research on multicultural counseling competence has explored a number of individual factors and training factors that may impact clinicians' multicultural counseling competence and multicultural case conceptualization ability. Multicultural training experiences including therapy cases with patients of different backgrounds, workshops on multicultural topics and issues, and classes addressing multicultural issues have been found to influence clinicians' multicultural counseling competence and conceptualization (Weatherford & Spokane, 2013). Examined individual characteristics include personality dispositions and traits (Weatherford & Spokane, 2013); clinician attitudes (Constantine & Gushue, 2003; Neville, Spanierman, & Doan, 2006); theoretical orientation (Berger, Zane, & Hwang, 2014; Constantine, 2001a); clinician demographics such as ethnicity or race, age, and gender (Berger, et al., 2014; Lee, Sheridan, Rosen, & Jones, 2013; Schomburg & Prieto, 2011); and clinician behaviors such as community involvement (Berger et al., 2014). Several types of clinician attitudes and personality characteristics have been associated with clinicians' multicultural counseling competence and conceptualization. Clinicians' diagnostic conceptualizations of patients of different ethnoracial and cultural backgrounds are likely to be impacted by training factors and

some of the same individual factors that influence general multicultural counseling competence, including social dominance orientation (Weatherford & Spokane, 2013), ethnocultural empathy (Dyche & Zayas, 2001), and ethnocentrism.

Social Dominance Orientation. Social dominance orientation (SDO) is one construct that is likely to impact clinicians' case conceptualizations and diagnoses. SDO relates to the degree of importance an individual places on social hierarchies, including status and power differentials (Pratto, Sidanius, Stallworth, & Malle, 1994). SDO is based on social dominance theory which suggests the group-based hierarchy in a society is justified through the use of societal ideologies and stereotypes that either promote or diminish group inequality. Thus, these types of ideologies, stereotypes, policies, and attitudes can fall along a spectrum that runs from hierarchy-enhancing to hierarchy-attenuating. SDO is conceptualized as a broad attitudinal orientation toward intergroup relations (Pratto et al., 1994) rather than a personality trait. Pratto et al. (1994) conceptualize SDO as a normal human propensity with variations among individuals that is likely influenced by socialization and temperament. Individuals' preferences differ on a continuum of egalitarian to hierarchical relations among groups. Individuals who are high in SDO tend to favor hierarchy-enhancing ideologies and policies and are more likely to participate in institutions and roles that maintain or increase social inequality (Pratto et al., 1994). Those who are low in SDO favor hierarchy-attenuating ideologies, institutions, and roles, or those that address or increase equality.

SDO has been studied extensively within the field of social psychology, especially in regard to its relationships to prejudice and discrimination. It is related to prejudice (Cargile, 2015; Dru, 2007), anti-immigrant attitudes (Van Hiel & Mervielde,

2005), racist and sexist attitudes (Fraser, Osborne, & Sibley, 2015; Nicol & Rounding, 2013), and discrimination (Bahns & Crandall, 2013). The beliefs, attitudes, and prejudices clinicians hold may influence their work in a variety of ways, such as through the questions asked, case conceptualizations, chosen interventions, and the empathy expressed in therapy (Mintz et al., 2009). Thus, SDO may be related to the ways in which clinicians interact with clients as well as their diagnostic conceptualizations of clients.

In one study that evaluated SDO in clinicians (Weatherford & Spokane, 2013), SDO was significantly and negatively correlated with clinicians' multicultural case conceptualization treatment scores which measured the extent to which clinicians differentiated and integrated cultural variables in their treatment conceptualizations. The SDO scores of clinicians-in-training were significantly and negatively associated with openness to experience, a significant predictor of multicultural case conceptualization ability (Weatherford & Spokane, 2013).

Multicultural training and SDO have also been found to be associated. The number of multicultural courses and workshops that clinicians attended were significantly related to SDO scores of clinicians-in-training (Weatherford & Spokane, 2013). The direction of the relationship between SDO and multicultural training is unclear. It may be that clinicians-in-training who are higher in SDO show less interest in and participate less in multicultural training opportunities. Alternatively, the SDO of clinicians-in-training who take part in more multicultural training opportunities may be decreased by those trainings. Regardless of the direction of this relationship, multicultural courses and workshops were part of clinicians' multicultural exposure which was a significant predictor of their ability to conceptualize cases from a multicultural perspective

(Weatherford & Spokane, 2013).

On the whole, clinicians are likely to be low in their levels of SDO given their role in what can be considered a hierarchy-attenuating field. This is consistent with Sidanius, Pratto, Martin, & Stallworth's (1991) findings. Based on previous research, clinicians' SDO scores may be highly related to their levels of prejudice, even at low overall levels of SDO, and may play a mediating relationship between their social position and prejudice (Guimond, Dambrun, Michinov, & Duarte, 2003). As prejudice reflects attitudes towards other groups, it is an important consideration in case and diagnostic conceptualization with multicultural clients. Thus, SDO may be related to clinicians' attitudes toward clients and may influence diagnosis.

One way in which SDO may shape clinicians' diagnostic conceptualizations is by influencing what information a clinician values from different clients. Clinicians high in SDO may give more consideration to information that is in line with the types of cultural myths that are associated with high SDO scores. Thus, they may focus more on the agency and internal locus of control of clients who are ethnoracially or culturally different than them while not considering external forces that may be impacting the client's situation. Therefore, it is reasonable to suggest that clinicians who are high in SDO may focus more on aspects of the client's presentation and symptoms that fit with hierarchy-enhancing cultural myths. The impact of SDO on clinicians' diagnoses of diverse clients has yet to be investigated.

Ethnocultural Empathy. General empathy is the ability to put oneself "in another's shoes" and feel the feelings of others or to know and understand the internal experience of another person. Empathy has been extensively researched within the field

of psychology (Elliott, Bohart, Watson, & Greenberg, 2011). Clinician empathy is a necessary factor in the therapeutic relationship and greatly impacts treatment outcomes in therapy (Elliott et al., 2011). Numerous studies have looked at the relationship between clinicians' empathy and multicultural competence (Constantine, 2001a; Fuertes et al., 2006; Love, Smith, Lyall, Mullins, & Cohn, 2015). Clinicians' cognitive and affective empathy significantly and positively contribute to their multicultural case conceptualization abilities in etiology and treatment (Constantine, 2001a).

Clinicians who are perceived as more empathetic are also perceived as being more multiculturally competent (Fuertes & Brobst, 2002). More specific to multicultural counseling, ethnocultural empathy has been defined as empathy that is specifically directed toward individuals from ethnic and racial cultural groups different from one's own ethnocultural group (Wang et al., 2003). Ethnocultural empathy was developed as a construct to better measure empathy in cross-cultural contexts and includes four factors: empathic feeling and expression, empathic perspective taking, acceptance of cultural differences, and empathic awareness. Empathic feeling and expression relates to concern about the expression of discriminatory or prejudiced attitudes or beliefs and items that revolve around emotional responses to the experiences and/or emotions of people from different ethnic or racial groups. Empathic perspective taking includes attempting to take the perspective of ethnically or racially different people in viewing the world in order to understand their emotions and experiences. Acceptance of cultural differences consists of valuing, understanding, and accepting cultural traditions and customs of those from different ethnic and racial groups. The final factor, empathic awareness, includes awareness and knowledge about ethnically and racially different persons' experiences in

society. Ethnocultural empathy has been found to be positively associated with general empathy (Wang et al., 2003; Rasoal, Jungert, Hau, & Andersson, 2011) and negatively associated with prejudice (Albiero & Matricardi, 2013).

While there is some debate in the literature about whether measures of ethnocultural empathy and general empathy are measuring separate constructs (Rasoal, Jungert, et al., 2011), there are a number of arguments for ethnocultural empathy as a separate construct (Rasoal, Eklund, & Hansen, 2011). Ethnocultural empathy includes the additional aspect of the need to consider a person's cultural context and understanding their experience *within* rather than *independent of* that context. Also uniquely important to ethnocultural empathy is the awareness and control of one's own biases and prejudices towards people from different ethnic and cultural backgrounds. In addition, exposure to and contact with individuals of different cultures is posited to be necessary to develop ethnocultural empathy. Ethnocultural empathy is also likely to be more difficult than general empathy for people due to differences in experience as similarity of experience contributes to empathy (Rasoal, Eklund, & Hansen, 2011).

The relationship between ethnocultural empathy and multicultural training has not been adequately explored. Multicultural exposure and contact is necessary for the development of ethnocultural empathy, and it also relates to clinicians' multicultural case conceptualization ability (Weatherford & Spokane, 2013). Thus, multicultural training is likely to enhance clinicians-in-training's ethnocultural empathy through increased exposure to and contact with individuals from various ethnocultural backgrounds.

The characteristics represented by the construct of ethnocultural empathy are likely to have a strong influence on clinicians' diagnostic conceptualizations, especially

when the person receiving the diagnosis is of a "different" ethnocultural group. Clinicians who are higher in ethnocultural empathy may be more likely to consider contextual factors contributing to their clients' unique presentations. In other words, clinicians are more likely to be aware of cultural differences. In addition, clinicians who are high in ethnocultural empathy are more likely to be aware of their own biases and may consider how those might impact their perception of their client's problems, including reported symptoms. However, research is still needed to examine the relationship between ethnocultural empathy and clinicians' diagnostic processes.

Ethnocentrism. Ethnocentrism is "a tendency [for an individual] to judge people of other groups, societies, or lifestyles according to the standards of one's own in-group or culture, often viewing out-groups as inferior" (Matsumoto & Juang, 2004, pp. 62–63). This in-group bias does not require negativity towards out-groups, but is rather a relative positive bias of one's in-group that all individuals exhibit (Brewer, 2007). Thus, all individuals are ethnocentric to some extent and their understanding of the world and the way they think is shaped by their cultural in-group. However, those lower in ethnocentrism are more easily able to identify with people from different groups (McFarland, 2015), and they are more likely to consider different viewpoints and ways of thinking than those who are more ethnocentric (McFarland, 2010).

Ethnocentrism refers directly to the way in which people perceive and think about the world with their own culture or in-group as the standard to which everything is compared (Matsumoto & Juang, 2004). It makes sense then that ethnocentrism has been found to be negatively related to cultural competence among health care providers (Capell, Dean, & Veenstra, 2008). Clinicians who are lower in ethnocentrism may be

able to more easily think about their clients in different ways and consider the perspectives of their clients. However, the relationship between clinicians' ethnocentrism and the diagnostic process has not been studied.

Multicultural approaches and conceptualizations are considered antithetical to ethnocentrism (McAuliffe & Milliken, 2009; Sue et al., 1998). Thus, multicultural training may impact clinicians-in-training's ethnocentrism or vice versa. Greater contact and training with clients from different ethnic and racial backgrounds may be associated with less stereotyped views of ethnoracial minority clients and decreased ethnocentrism, as these factors improve multicultural competency (Constantine, 2001b). Conversely, it may be that clinicians-in-training with higher levels of ethnocentrism may not benefit from multicultural training opportunities as much as those with lower levels of ethnocentrism. These relationships and their impact on diagnosis need to be further explored.

Individual and training factors may impact clinicians' case and diagnostic conceptualizations with multicultural clients. While these factors have been found to be related, some factors may play a stronger role in influencing clinicians' conceptualizations. For example, ethnocentrism may have a greater impact on diagnostic conceptualizations than SDO when working with clients from various ethnoracial and cultural backgrounds. However, no research to date has examined this possibility. An individual factor may also be of more influence with specific groups of clients than with others. For example, ethnocultural empathy may be a greater influence when a client is a former gang member as opposed to a veteran. In addition, multicultural training may have a greater impact than trauma training on diagnostic biases when considering clients

with the same contextual/cultural background (e.g., veterans or former gang members), while trauma training may have a greater impact on diagnosis when looking across these groups. The influence of these various factors on clinicians' diagnostic conceptualizations and the strengths of such influence has yet to be explored.

The Present Study

This research attempts to investigate the potential presence of clinician bias in the diagnosis of PTSD based on race and context and to identify factors that contribute to that bias. It examines whether clinicians are more likely to diagnose PTSD in a Black or White man due to combat or gang violence. In addition, the study examines the impact of various individual clinician characteristics and training experiences on clinicians' conceptualization. Specific hypotheses are as follows:

1: (a) Clinicians will diagnose PTSD more frequently for men who have experienced combat than gang violence.

(b) White men will be diagnosed with PTSD more frequently than Black men.

2: There will be an interaction between race and context on the diagnosis of PTSD, with Black gang members being diagnosed with PTSD less than all other groups.

3: (a) Multicultural training will moderate the relationship between vignette (race and context) and the PTSD diagnostic impression variable, with the following expected interactions:

PTSD diagnostic impressions will differ less across race conditions for clinicians with higher multicultural training scores than those with lower scores.

PTSD diagnostic impressions will differ less across context conditions for clinicians with higher multicultural training scores than those with lower scores.

The greatest difference in PTSD diagnostic impressions will occur between the Black gang condition and the White combat condition for clinicians with lower multicultural training scores.

(b) Clinician individual factors (SDO, ethnocultural empathy, ethnocentrism) will moderate the relationship between vignette (race and context) and PTSD diagnostic impression, with the following specific expected interactions:

There will be a smaller difference in PTSD diagnostic impressions across race condition for clinicians with lower SDO scores than those with higher scores.

There will be a smaller difference in PTSD diagnostic impressions across race condition for clinicians with higher ethnocultural empathy scores than those with lower scores.

There will be a smaller difference in PTSD diagnostic impressions across race condition for clinicians with lower ethnocentrism scores than those with higher scores.

There will be a smaller difference in PTSD diagnostic impressions across context condition for clinicians with lower SDO scores than those with higher scores.

There will be a smaller difference in PTSD diagnostic impressions across context condition for clinicians with higher ethnocultural empathy scores than those with lower scores.

There will be a smaller difference in PTSD diagnostic impressions across context condition for clinicians with lower ethnocentrism scores than those with higher scores.

The greatest difference in PTSD diagnostic impressions will occur between the Black gang condition and the White combat condition in clinicians with higher SDO scores compared to those with lower scores.

The greatest difference in PTSD diagnostic impressions will occur between the Black gang condition and the White combat condition in clinicians with higher ethnocentrism scores compared to those with lower scores.

The greatest difference in PTSD diagnostic impressions will occur between the Black gang condition and the White combat condition in clinicians with lower ethnocultural empathy scores compared to those with higher scores.

Methods

Participants. Participants were pre-licensure clinicians-in-training who were actively seeing therapy clients. A total of 415 individuals accessed the informed consent and screening questions, with 318 individuals meeting eligibility requirements. Of the 318 eligible individuals, 294 participants completed at least the vignette portion of the online survey. An a priori power analysis revealed that a minimum of 180 participants were needed to ensure adequate power for main analyses. Demographic data for the 294 participants is presented in Table 1. All participants reported their age, and 277 participants provided complete demographic data. The mean age for this sample was 28.46 (SD = 6.097). Participants were majority female (75.9%) and White (70.1%). They were mostly full-time students (90.1%), in Clinical Psychology programs (55.4%), and

working towards a Ph.D. (53.1%). The average of participants' years in their program was 3.15 (SD = 1.348).

Procedure. Participants were recruited from master's and doctoral programs in clinical psychology, counseling psychology, and counselor education. Programs were identified through the American Psychological Association's (APA) online accreditation database and the Council for Accreditation of Counseling & Related Educational Programs' online directory. Students were recruited through emails to program directors. Interested participants were asked to read a statement of informed consent and indicate their agreement to participate before study measures were presented. Consenting participants were directed to screening questions (Appendix H) to confirm their eligibility. Eligible participants were directed to a confidential online survey through Qualtrics, a survey development portal, that took approximately 20 – 30 minutes to complete. Participants were assigned to condition in blocks of 20 to one of four vignettes such that participants were approximately equally distributed across conditions. They were asked to read a vignette and answer diagnostic questions and respond to a diagnostic impressions measure. They were then presented with a brief demographics form (See Appendix C). Participants were then presented with the MEI-R (Appendix G) and individual clinician characteristics measures (i.e., the SDO_7 (Appendix D), the Scale of Ethnocultural Empathy (Appendix E), and the Revised Ethnocentrism Scale (Appendix F)). The MEI-R, SDO_7, SEE, and RES scales were presented in a randomized order for each participant in order to minimize order effects between the measures. Participants were invited to provide an email address at the completion of all measures to be entered in a drawing for one of sixteen $50 VISA gift cards. Participants needed to complete 90%

of the study items to enter the drawing. Odds of winning the drawing were approximately 1/16, with 251 participants entering the drawing.

Measures. ***Vignette and diagnostic questions.*** Vignettes presented the case of a man seeking treatment with a set of posttraumatic symptoms that could also be interpreted as symptoms of schizophrenia. The reported symptoms included negative cognitions about others (paranoia); flashbacks (hallucinations); persistent inability to experience positive emotions (anhedonia); markedly diminished interest or participation in significant activities and feelings of detachment or estrangement from others (avolition, asociality); irritable behavior and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects; hypervigilance; and sleep disturbance. Vignettes presented these symptoms and client information identically, however, the race and name of the man were altered to more strongly identify the client as either a Black or White man. In addition, the context of what could be considered a Criterion A event was altered to be related to either war or gang violence. Thus, participants were presented with one of four vignettes. Following the vignette, participants were asked to provide a primary diagnosis and identify three to five characteristics they remembered about the patient and his situation. See Appendix A.

Diagnostic Impressions. Participants were also asked to rate the extent to which the vignette fit various diagnoses on a 7-point Likert scale (1 = disorder is not present, 7 = meets all criteria for the disorder). This was consistent with a similar measure used in Becker & Lamb's (1994) study looking at sex bias in diagnosis of PTSD and borderline personality disorder. Presented diagnoses included PTSD, schizophrenia, borderline personality disorder, major depressive disorder, generalized anxiety disorder, delusional

disorder, brief psychotic disorder, and bipolar disorder. The PTSD item in this set was used to provide an integral measure of PTSD diagnosis for analyses. See Appendix B.

Social Dominance Orientation Scale (SDO_7). Participants were asked to complete the SDO_7 (Ho et al., 2015), the latest version of the SDO Scale developed by Pratto et al. (1994). The SDO_7 is a 16-item measure that measures preferences for group-based hierarchy and inequality. Participants will rate their favor or opposition with the statements on a 7-point Likert scale (1 = strongly oppose, 7 = strongly favor). Sample SDO_7 items include: "Some groups of people must be kept in their place;" "It's probably a good thing that certain groups are at the top and other groups are at the bottom;" and "We should work to give all groups an equal chance to succeed." Con-trait items are reversed-coded before a composite scale mean is computed. Scores on this measure range from 16 to 112, with higher scores indicating stronger social dominance orientations. The SDO_7 is highly correlated with the SDO_6 (Pratto et al., 1994) with a mean correlation of .92 across four large samples of U.S. Blacks and Whites (range = .88 - .95). The SDO_7 showed good internal consistency across six large national samples, including a representative sample of U.S. Blacks and Whites, with alpha coefficients ranging from .89 to .95. The SDO_7 had good internal consistency in the current study, $\alpha = .81$. See Appendix D.

Scale of Ethnocultural Empathy (SEE). The SEE is a 31-item measure that assesses individuals' empathy towards people who are culturally different from themselves (Wang et al., 2003). Items are rated on a 6-point Likert-type scale (1 = *Strongly disagree that it describes me* to 6 = *Strongly agree that it describes me*). Sample SEE items include: "I feel uncomfortable when I am around a significant number of

people who are racially/ethnically different than me;" "It is easy for me to understand what it would feel like to be a person of another racial or ethnic background other than my own;" and "I seek opportunities to speak with individuals of other racial or ethnic backgrounds about their experiences." The scale consists of four subscales: Empathic Feeling and Expression (EFE), Empathic Perspective Taking (EP), Acceptance of Cultural Differences (AC), and Empathic Awareness (EA). Scores from all items across the subscales are summed to get a total SEE score, which can range from 31 to 186 with higher scores indicating higher levels of ethnocultural empathy. Internal consistency was .91 for the full measure and ranged from .71 to .90 for the subscales across two samples of undergraduate students that were predominately female (66% and 63%) and White (83% and 79%). Test-retest reliability was good for the full scale (r = .76) and for the subscales (range of .64 - .86) (Wang et al., 2003). The SEE had good internal consistency in the current study (α = .87). See Appendix E.

Revised Ethnocentrism Scale (RES). The RES is a 22-item Likert measure of ethnocentrism (Neuliep & McCroskey, 1997; Neuliep, 2002). Ethnocentrism is an individual psychological characteristic in which the attitudes, values, and behaviors of one's ingroup are used as the standard to evaluate an outgroup's attitudes, values, and behaviors (Neuliep, 2002). Participants will rate their agreement with statements from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample RES items include, "Most other cultures are backward compared to my culture," and "My culture should be the role model for other cultures." Possible scores on the RES range from 15 to 75, with higher scores indicating higher levels of ethnocentrism. The RES has good internal reliability, with Cronbach's alphas across multiple studies ranging from .82 to .92. In a sample of 88

undergraduate students, internal reliability was .84 (Neuliep, 2002). In the current study, the internal consistency of the RES was acceptable (α = .77). See Appendix F.

Revised Multicultural Environmental Inventory (MEI-R). The MEI-R is a 27-item Likert measure of individual's perceptions of the degree to which graduate counseling programs incorporate multicultural issues within curriculum, supervision, climate, and research (Pope-Davis, Liu, Nevitt, & Toporek, 2000). The curriculum and supervision subscale of this measure will be used as a measure of participant's perception of their multicultural training. Participants will rate the degree to which the statement represents their program from 1 (*not at all*) to 5 (*a lot*). Sample items of the curriculum and supervision subscale of the MEI-R include: "I am encouraged to integrate multicultural issues into my courses;" and "Awareness of and responsiveness to multicultural issues is part of my overall evaluation." In a sample of 208 graduate and faculty members of APA-Accredited counseling psychology programs, internal reliability for the curriculum and supervision subscale was 0.92. This sample consisted of 70% women, 27% men, and 3% unidentified gender, 58% White, 17% Black, 7% Asian Pacific American, 7% Latino, 1% Native American, 7% "other" racial affiliation, and 3% unidentified race. Scores on the MEI-R range from 27 to 135, with higher scores indicating a greater degree of focus on multicultural issues within the program. Scores for the subscale that were used in the current study range from 11 to 55. The curriculum and supervision subscale of the MEI-R had excellent internal consistency in the current study (α = .92). See Appendix G.

Results

Missing Data Analysis

Prior to performing analyses, the extent and pattern of missing data was assessed. Data was found to be missing at random per Little's MCAR test (p = 1.00). Univariate and multivariate outliers were identified and examined. Analyses were run with and without outliers and results were equivalent in all analyses, thus outliers were included. Listwise deletion of missing data was used in all analyses. Table 2 presents descriptive statistics for each of the continuous variables of interest.

Hypothesis 1

It was posited that diagnosis of PTSD (PTSD as primary diagnosis) would differ significantly between combat and gang violence conditions and between White and Black conditions. (a) Clinicians were expected to diagnose PTSD more frequently for men who experienced combat than gang violence. This hypothesis was supported, $\chi^2 = 7.197$, p = .007, with a small effect size (ϕ = -0.16). Overall, clinicians made a diagnosis of PTSD 95.89% of the time for veterans and 87.16% of the time for former gang members; and gang members had an odds ratio of 0.147/0.043 = 3.44 for a non-PTSD diagnosis. (b) It was also hypothesized that clinicians would be more likely to diagnose White men with PTSD than Black men. This hypothesis was not supported, $\chi^2 = .019$, p = .890, with clinicians diagnosing PTSD 91.72% in the Black conditions and 91.27% in the White conditions.

Hypothesis 2

It was hypothesized that there would be an interaction between race and context of the vignettes on the presence of a primary PTSD diagnosis, with Black gang members being diagnosed with PTSD the least. A standard binary logistic regression was run to model the binary variable of PTSD diagnosis. The predictor variables in this analysis

were race (Black or White) with Black as the focus category, context (gang or combat) with gang as the focus category, and an interaction term for race x context. This hypothesis was not supported, as the interaction was not a significant predictor of a PTSD diagnosis, Wald = 1.412, (*df*) = 1, $p = .235$. Table 3 presents the partial regression coefficients, the Wald test, odds ratio, and the 95% confidence intervals (CI) for odds ratios for each predictor. Vignette context was the only significant predictor in this model, Wald = 5.706, (*df*) = 1, $p = .017$, consistent with the findings in the previous chi-square analyses.

Hypothesis 3a

It was predicted that multicultural training (as measured by the Curriculum and Supervision subscale of the Revised Multicultural Environmental Inventory; MEI-R) would moderate the relationship between vignette (race and context) and the PTSD diagnostic impression variable, with a greater difference in PTSD diagnostic impressions between the Black gang vignette and the White combat vignette for clinicians with lower multicultural training scores. Regressions were used to test this hypothesis.

The relationship between the PTSD diagnostic impression variable, or the extent to which participants thought PTSD symptoms were present, and the presence of a PTSD diagnosis was examined. These variables were highly correlated, $r = .47$, $p < .001$, and the PTSD diagnostic impression variable was significantly related to the presence of a PTSD diagnosis, Wald = 27.486, (*df*) = 1, $p < .001$.

A correlation matrix with clinician demographics (Appendix C) and the PTSD diagnostic impression variable (PTSD item from Appendix B) was run first to test for potential covariates. Table 4 presents the correlation matrix. As several of the

demographic variables were categorical with three or more categories, separate one-way ANOVAs were run with each of the demographic variables as the independent variable and the PSTD diagnostic impression as the dependent variable in order to identify potential covariates. Table 5 presents results of the ANOVAs. None of the entered variables was found to be significantly correlated with PTSD diagnostic impression, thus no additional covariates were entered in the regression. For the regression, race, context, and multicultural training were entered in the first step; two-way interaction terms for race x multicultural training, context x multicultural training, and race x context were entered in the second step; and a three-way interaction for race x context x multicultural training was entered in the third step. Multicultural training scores were centered first and the centered scores were used in the regression and to create the interaction terms.

The three-way interaction was not significant, $\beta = .013$, $t = .102$, $p = .919$, and of the two-way interaction terms, only the context x multicultural training term was found to be a significant predictor, $\beta = .205$, $t = 2.419$, $p = .016$, in the second step of the model. Thus, a second regression was run without the insignificant interaction terms. In the first step, race, context, and the centered multicultural training variable were included. These variables accounted for a significant amount of the variance of PTSD diagnostic impression, $R^2 = .072$, $F\ (3, 266) = 6.855$, $p < .001$. The effect size for this model was small, $f^2 = .078$. The context x multicultural training interaction term was added to the regression model, which accounted for a significant proportion of the variance, $\Delta R^2 = .020$, $\Delta F\ (1, 265) = 5.884$, $p = .016$, $\beta = .203$, $t\ (265) = 2.426$, $p = .016$. This change was small, $f^2 = .02$, but significant. The effect size of the final overall model was medium, $f^2 = .101$. The context x multicultural interaction term accounted for 2.02% of the variance in

the PTSD diagnostic impression variable, semipartial $r^2 = .0202$. Examination of scatter plots revealed that multicultural training had an effect on PTSD diagnostic impression scores in the gang conditions, with PTSD diagnostic impression scores increasing as multicultural training scores increased (Figure 1). This effect was not present in the veteran conditions, where PTSD diagnostic impression scores were consistent across multicultural training scores. Thus, this hypothesis was partially supported. Table 6 presents regression results for the final model.

A separate logistic regression was run to examine the relationship of multicultural training to the presence of a PTSD diagnosis, with race and condition included as covariates. Multicultural training was not a significant contributor to the presence of a PTSD diagnosis, Wald = .252, (df) = 1, $p < .615$.

Hypothesis 3b

It was expected that clinician individual factors (SDO, ethnocultural empathy, ethnocentrism) would moderate the relationship between vignette and PTSD diagnostic impression scores. Three separate regressions were run to test this hypothesis, one for each of the clinician factors.

Each of the individual factor scores (SDO, SEE, and RES scores) were centered prior to computing interaction terms for each of the regressions. Since none of the clinician demographics were found to be significantly correlated with PTSD diagnostic impression, as noted previously, no additional covariates were entered in the regressions. In the first regression, race, context, and SDO were entered in the first step. In the second step, interaction terms for race and SDO, context and SDO, and race and context were entered. Finally, a three-way interaction for race x context x SDO was entered in the third

step. While the regression model was significant, F (7, 260) = 2.104, p = .044, none of the interaction terms, nor SDO, were found to be significant contributors to the model. In all steps of the regression, SDO accounted for less than 1% of the variance in the PTSD diagnostic impression variable, with only .04% of the variance accounted for by SDO in the final model, semipartial r^2 = .0004. The effect size for the overall model was small, f^2 = .057. Table 7 presents regression results for the final model.

In the second regression, race, context, and standardized SEE scores were entered in the first step. Interaction terms for race and SEE, context and SEE, and race and context were entered in the second step. Finally, a three-way interaction for race x context x SEE scores was entered in the third step. Again, the regression model was significant, F (7, 255) = 2.174, p = .037, but none of the interaction terms or SEE scores were significant contributors to the model. Ethnocultural empathy accounted for .23% of the variance in the PTSD diagnostic impression in the final model, semipartial r^2 = .002. The effect size for the overall model was small, f^2 = .059. Table 8 presents regression results for the final model.

In the third regression, which examined ethnocentrism and PTSD diagnostic impressions, race, context, and RES scores were entered in the first step. Interaction terms for race and RES, context and RES, and race and context were entered in the second step, and a three-way interaction for race x context x RES was entered in the third step. The final regression model was significant, F (7, 262) = 2.124, p = .041; however, neither RES scores nor any of the interaction terms were significant contributors to the model. In all steps of the regression, ethnocentrism accounted for less than .1% of the variance in the PTSD diagnostic impression variable, with only .09% of the variance

accounted for by RES scores in the final model, semipartial $r^2 = .0009$. The effect size for the overall model was small, $f^2 = .057$. As none of the individual clinician factors had an effect, this hypothesis was not supported. Table 9 presents regression results for the final model.

Secondary Analyses

A number of secondary analyses were run to further examine the relationships of the variables in this study. These analyses revealed that multicultural training scores for participants in clinical psychology programs ($M = 43.06$) differed significantly from those in counseling psychology ($M = 45.70$) and counselor education ($M = 45.54$) programs, $F\ (2, 268) = 3.10$, $p = .047$, $\eta^2 = .023$. However, the presence of a PTSD diagnosis did not differ according to program type, $\chi^2 = 1.78$, $p = .41$, or degree type, $\chi^2 = 1.41$, $p = .70$. Multicultural training scores were significantly correlated with perceived ethnocultural empathy scores, $r = .14$, $p = .026$, and perceived ethnocentrism scores, $r = -.19$, $p = .002$. Table 10 presents a correlation matrix of the clinician individual factors.

Additional secondary analyses examining only White clinicians ($n = 206$) found similar results to those of the sample as a whole for the most part. White clinicians-in-training did not diagnose PTSD equivalently across contexts, $\chi^2 = 11.229$, $p = .001$. A PTSD diagnosis was given to veterans 97.94% of the time and to former gang members 84.40% of the time by White clinicians-in-training. However, when analyses explored these same questions with only the ethnoracial minority clinicians in the sample ($n = 71$), the same results were not found. Specifically, there was no evidence of contextual bias in the diagnosis of PTSD in ethnoracial minority clinicians, $\chi^2 = .008$, $p = .931$. Within this subset of clinicians-in-training, a PTSD diagnosis was given to veterans 94.59% of the

time and to former gang members 94.12% of the time. In contrast to results of main analyses, secondary analyses examining the relationship between multicultural training and diagnosis in White clinicians (n = 201) had slightly different results than those of the whole sample. Multicultural training scores, β = .198, t = 2.922, p = .004, vignette context, β = -.178, t = -2.626, p = .009, and vignette race, β = -.147, t = -2.171, p = .031, were all significant contributors to the PTSD diagnostic impression score in the first step of a regression, although multicultural training was no longer significant, β = .120, t = 1.067, p = .287, when interaction terms were added in the second step. None of the interaction terms were significant.

Discussion

Bias is universally present in the way people perceive and interpret the world. Clinicians are not exempt from these cognitive and social biases. Thus, there is the possibility that bias may influence mental health diagnoses made by clinicians. Differences and disparities found in mental health care for various groups could be a result of such biases (Seng et al., 2005). This study sought to examine two possible biases in regards to race and context in the diagnosis of PTSD. Contrary to the author's hypothesis, a difference was not found in the diagnosis of PTSD across vignettes depicting Black and White mental health clients. There was, however, a significant difference in diagnoses of PTSD between veteran and former gang member vignettes. Thus, evidence of racial bias was not found while evidence of a contextual bias was found in this study. Further exploration into possible contributing factors of biases revealed that multicultural training moderated the impact of contextual bias on PTSD diagnosis. No other examined individual clinician factors were found to impact the

diagnosis of PTSD. These findings and their implications will be further discussed in the following sections.

Hypothesis 1

The expected presence of differences in diagnoses between Black and White vignettes was not found. While this hypothesis was not supported, there is some prior research in the field of social psychology that may provide some possible explanations for this finding. Research examining automatic attitudes and stereotypes has found that those biases can be influenced by other factors. Social roles have been found to reduce or reverse typical racial biases (Barden, Maddux, Petty, & Brewer, 2004). Further, Barden et al. (2004) demonstrated that racial bias resulted from the interaction of role and race, with different roles being evaluated differently for different races, supporting the differential role evaluation hypothesis. That study further explored the results of a previous study (Wittenbrink, Judd, & Park, 2001) that found that participants' racial attitudes were influenced by context with the positive context of a church scene erasing the effect of automatic group attitudes towards Blacks and Whites. These studies provide some potential insight into the current study's findings. It is possible that the veteran social role and context is related to positive evaluations that override any automatic racial bias. In other words, veterans may be admired and respected to such a degree that the positive associations related to their position are more powerful than any stereotypes and prejudices related to their race. However, this does not explain the lack of a racial effect within the gang vignettes.

Given the lack of racial bias both across and within contextual roles, there was no evidence of racial bias in the diagnosis of PTSD in this study. This possibly provides

support for the absence of racial bias in the diagnosis of PTSD overall. However, previous research has found support for the presence of racial bias in diagnosing PTSD (Seng et al., 2005). The lack of racial bias found in this study is promising and may indicate that racial attitudes are fairly equitable in current clinicians-in-training. However, it may reflect less racial bias in this particular cohort of clinicians and not be representative of mental health providers overall. The most recent report on the demographics of the active psychology workforce found that 68.3% of active psychologists were female and 83.6% were White (APA, 2015) while the current sample was 75.9% female and 70.1% White, further demonstrating that this is not a representative sample. These numbers do, however, reflect trends and changes in the demographics of the psychology workforce over the last one to two decades (APA, 2015). Similar studies conducted with licensed and practicing clinicians from various generations and cohorts would provide further insight into this question.

Another possible explanation for the lack of racial effects in this study could be the contexts used. It may be that the veteran and former gang member roles specifically are ones that attenuate racial bias (Barden et al., 2004). That is, the veteran and former gang member roles may dominate the participants' impressions of the patients as stereotypes related to those roles were more salient than racial stereotypes in this situation, thus eliminating racial biases related to the vignettes. Previous research examining racial bias related to gang membership has used current gang membership or associations rather than past affiliations (Maeder & Burdett, 2013; Eisen et al., 2013). This could be further explored by studies comparing former gang members to current gang members. Former gang members may be perceived as having gotten themselves out

of a negative situation and activate attitudes related to American myths, such as “rags to riches” and “pulling oneself up by the bootstraps” type stories. The lack of a racial effect in this study may reflect the impact of training and equitable diagnosis. Although, the presence of a contextual bias may signal limitations of that impact. However, given the historical context and issues of race in the United States, it may be that training, in general, addresses issues of race more than other types of bias that may also play a role in diagnosis. This finding is notable and may indicate a shift in clinician biases, as well as improved training regarding race and diagnosis. Similar studies examining other diagnoses with a history of racial bias would help determine whether this trend holds across diagnoses.

The presence of a main effect for context on diagnosis indicates that diagnosis was impacted by a contextual bias, consistent with the author’s hypothesis. Former gang members were less likely than veterans to be diagnosed with PTSD even with identical symptom presentations and nearly identical traumas. Clinicians failed to provide an accurate PTSD diagnosis in almost 13% of gang members versus less than 5% in veterans. This demonstrates that biases held by the general population are present in clinicians as well and can impact the diagnostic process. While this effect was small (ϕ = -0.16), in practice, over 10% of a clear diagnosis being misdiagnosed is significant. Secondary analyses showed that this effect was only present in White clinicians, with ethnoracial minority clinicians showing no evidence of a contextual bias in the diagnosis of PTSD.

The accurate diagnosis of PTSD across populations and trauma types is essential for proper and effective treatment. It is crucial that clinicians correctly identify Criterion

A events, regardless of the setting or context in which they occur, and that PTSD symptoms are recognized in individuals from all backgrounds. This finding reveals the continued presence of clinician bias in the diagnosis of PTSD and indicates that there is work to be done to address and attenuate that bias. While the study found no evidence of racial bias in a PTSD diagnosis, this study further demonstrates that other biases impact the diagnostic process as well. Further attention should be paid to various types of bias in the training of clinicians in order to minimize the negative effects of that bias on diagnosis and treatment. Research examining ways to attenuate contextual bias in the diagnosis of PTSD may help to guide training programs in addressing this. Future research should explore the presence of various types of bias on diagnoses and ways to attenuate that bias or mitigate its impact on diagnosis to help ensure that the correct treatment is provided to individuals from different backgrounds.

Hypothesis 2

The lack of an interaction effect of race and context indicates that race did not influence the extent of the contextual bias in this study. This was not expected, and previous research examining bias has found that racial bias can vary across contexts. Additionally, research that used gang affiliation to examine bias found that bias against gang-affiliated minorities is stronger than that directed toward their white counterparts (Maeder & Burdett, 2013). This absence of an interaction may point to differences in the presence of biases in clinicians, such as diminished racial bias, or to differential impact of clinician biases on diagnosis. It may also be that the cultural competence of the current sample was high and impacted this expected interaction. Another possible explanation for the lack of an interaction could be the lack of ambiguity in the vignettes regarding the

reported symptoms, and therefore, leaving less opportunity for clinician racial bias to influence interpretation of those symptoms. Similar studies with increased ambiguity in the client's presentation and measures of perceived multicultural competence could help examine these possibilities.

Hypothesis 3a

The contextual main effect was moderated by multicultural training, which provides information about how to address and mitigate the impact of this bias in clinicians-in-training. This moderation effect was small, but significant; and the impact of multicultural training on accurate PTSD diagnosis across groups is of significant practical importance. Clinicians who reported higher levels of multicultural training were more consistent in the identification of the presence of PTSD symptoms across veteran and former gang contexts while those with less reported multicultural training were less likely to identify PTSD symptoms in the former gang member conditions compared to the veteran conditions. However, further investigation into these findings revealed that multicultural training did not significantly contribute to the provision of a PTSD diagnosis by clinicians. It may be that the PTSD diagnostic impression variable measured something other than the presence of PTSD symptoms and the full disorder as intended. The variable possibly may have measured confidence in diagnosis rather than the mere presence of a diagnosis. As confidence in each diagnosis was not directly assessed, this cannot be confirmed from the data collected in this study.

These findings indicate that increasing the multicultural training of students in psychology programs may reduce the impact of contextual biases on diagnosis and/or improve clinicians' confidence in diagnosing PTSD in individuals from diverse

backgrounds. It also highlights the importance of being aware of the ways in which context can elicit biases in clinical practice. Those participants with more multicultural training may have been more aware of contextual biases and could then lessen the impact of that bias on their diagnostic process. Hence, multicultural training is an essential component of training competent and effective mental health clinicians. This finding can also inform training programs regarding important areas of content that should be included in multicultural training efforts.

Future studies could specifically examine clinician-in-training's awareness of various types of bias and how that influences the diagnostic process. In addition, research investigating the impact of various components of multicultural training on clinician biases will increase understanding of how training programs can best minimize the impact of clinician bias in clinical practice. Given the differences in multicultural training across program types, future research could also examine how training differs between types of programs, and how those differences impact multicultural competence.

Hypothesis 3b

Contrary to the author's hypotheses, none of the examined individual clinician factors were found to significantly influence diagnosis. Thus, it appears these factors did not play a role in the diagnostic process. This is especially interesting as perceived ethnocultural empathy ($r = .14$, $p = .026$) and perceived ethnocentrism ($r = -.19$, $p = .002$) scores were significantly correlated with perceived multicultural training scores, and showed a small, but significant relationship between ethnocultural empathy, ethnocentrism, and multicultural training. This could indicate that multicultural training impacts these individual factors as well as clinician biases separately. Additional research

could help to elucidate these relationships further such as whether multicultural training changes these individual factors over time.

As SDO has been found to be related to clinicians' multicultural conceptualization in previous research, the lack of a significant relationship between SDO and diagnosis in the current study raises some additional questions. Participants in the current study were low in SDO (M = 1.51, SD = .576), which is consistent with previous studies that included psychology students (Guimond et al., 2003; M = 1.72, SD = .65). Although a direct comparison cannot be made, the mean SDO of this study was lower than the mean in the Weatherford & Spokane (2013) study (M = 1.87), and the standard deviation was low. Thus, limited range of SDO scores in the current sample may have influenced the lack of significant results. Research examining SDO in mental health clinicians and its relationship to various clinical competencies and practices could help to clarify this question.

Limitations

While the current study had several strengths such as a large sample size and being one of the first to look directly at racial and contextual bias in the diagnosis of PTSD, it also has some limitations that should be considered when interpreting the results and developing future research. First, the participant's diagnoses were made in a hypothetical context. This study was done entirely online and did not involve any human interaction. As the diagnosis of mental disorders typically occurs in-person or over telehealth, the vignettes used in the study may not activate biases and dynamics that influence diagnosis. Moreover, the measures used to examine participants' personality characteristics could not capture all aspects of a clinician-in-training's personality and

relied on self-report that may have been sensitive to social desirability and impression management efforts. The instrument used to measure multicultural training also relied on self-reported experience of training, and may be influenced by the participants' value or awareness of diversity and multicultural issues. In addition, the use of a single item measure as a dependent variable (i.e., PTSD diagnostic impression) is a limitation as it likely does not fully represent the construct being examined.

Furthermore, the current study's sample was predominately female and Caucasian with other racial groups within the psychology field being underrepresented. African-American clinicians-in-training were particularly underrepresented. Male clinicians-in-training were also underrepresented in the current study These demographic differences from the overall population of interest may limit the generalizability of the results.

Additionally, while a large number of participants ($N = 318$) were eligible for this study, a significant portion of participants did not complete all individual and training measures (7.54 – 17.61%). This may have skewed the results in some way and may impact the generalizability of the study's results. Also, this study was completed online and participants were provided with possible compensation for completion. While the validity of the SDO has been found to be equivalent in online and in-person administration (Gamblin, Winslow, Lindsay, Newsom, & Kehn, 2017), the other measures used in this study have not been directly validated for online use. Therefore, this should be considered when interpreting results (Naglieri et al., 2004). Another limitation of this study was range restriction in the clinician measures used, with both ceiling and floor affects potentially affecting the possibility of finding significant effects in this sample.

Finally, this study was conducted in a cross-sectional manner. Training may impact biases differentially over time. Understanding the effects of multicultural training on diagnostic processes throughout the training process may provide additional valuable information regarding the impact of training on potential biases. Hence, future studies using a longitudinal design would be beneficial in examining and understanding those relationships.

Conclusions and Future Directions

Contextual bias was found in the diagnosis of PTSD by clinicians-in-training, with clinicians-in-training more likely to diagnose PTSD in veterans than former gang members. Multicultural training, as measured in this study, was found to moderate the relationship between context and diagnosis. Racial bias in the diagnosis of PTSD was not found in this study. Diagnosis of PTSD was also not related to the individual clinician characteristics of SDO, ethnocultural empathy, or ethnocentrism. Future research can build on the current study in a variety of ways. Given the lack of ambiguity in the reported symptoms used in the vignettes, future studies should examine whether clinician diagnostic bias is more likely to be found when given more ambiguous or less clear reports of symptoms as client reports in practice are seldom as straight forward as the vignettes in the current study. Additional research confirming the independence of diagnosis from clinician SDO, ethnocultural empathy, and ethnocentrism would also be beneficial. Studies further examining the impact of multicultural training on bias in diagnosis could look at additional types of bias that may be present in diagnosis such as class or age biases. Research exploring the key, influential components of multicultural training related to diagnostic bias would also help to further illuminate the relationship

found in the current study. Furthermore, replications of the current study with different cohorts of clinicians would also provide important information about possible effects of bias on the diagnosis of PTSD across cohorts and generations of clinicians and provide additional guidance about continuing education needs.

The lack of evidence of a racial bias in the diagnosis of PTSD is promising. These findings may indicate that racial disparities in PTSD that have been found in previous studies may be the result of other factors than clinician racial bias. The presence of contextual bias in this study may also help to explain those disparities as they have been found in low-income samples (e.g., Medicaid-eligible women) with whom there are likely additional contextual factors other than race that may be influencing diagnosis. Alternatively, it may be that training around the diagnosis of PTSD and awareness of racial biases has improved within the field of psychology, and those disparities will decrease as new cohorts of clinicians enter the mental health care system.

However, the presence of contextual bias in the diagnosis of PTSD in the current study, along with the moderating effect of multicultural training on this bias, lends support to increasing and improving multicultural training in health service psychology programs. These findings indicate that the attention to multicultural training that has been implemented in the APA's accreditation requirements (American Psychological Association, Commission on Accreditation, 2015) may be decreasing bias in the diagnostic process of clinicians-in-training. Programs should continue to improve on their multicultural training in order to further decrease the impact of clinician bias and improve trainees' competence. This study also highlights the impact of clinician bias on the

diagnosis of PTSD and the continued need of mental health clinicians to be aware of different types of biases they may have to mitigate the impact of that bias in their work.

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Table 1

Participant Demographics

Characteristic	Frequency (*N* = 294)	Percentage
Missing	17	5.8
Race/Ethnicity		
Black/African-American	11	3.7
White, non-Hispanic	206	70.1
American Indian	1	.3
Asian	16	5.4
Hispanic	20	6.8
Another	3	1.0
Multiracial	20	6.8
Gender		
Male	52	17.7
Female	223	75.9
Another	2	.7
Program Type		
Clinical Psychology	163	55.4
Counseling Psychology	67	22.8
Counselor Education	47	16.0
Degree-in-Progress Type		
Master's	61	20.7
Ph.D.	156	53.1
Psy.D.	55	18.7
Other	5	1.7
Program Region		
New England	21	7.1
Mid-Atlantic	35	11.9
East North Central	39	13.3

West North Central	26	8.8
South Atlantic	62	21.1
East South Central	14	4.8
West South Central	25	8.5
Mountain West	27	9.2
Pacific West	28	9.5
Student Status		
Full-time	265	90.1
Part-time	12	4.1
Theoretical Orientation		
Cognitive/Behavioral	121	41.2
Psychodynamic	30	10.2
Psychoanalytic	2	.7
Humanistic	16	5.4
Existential	10	3.4
Integrative/Eclectic	68	23.1
Gestalt	4	1.4
Feminist	5	1.7
Family/Systems	6	2.0
Other	15	5.1

	Range	Mean	Std. Deviation
Age	22 - 66	28.46	6.097
Year in Program	1 - 7	3.15	1.348

Table 2

Descriptive Statistics of All Continuous Variables

Variable	N	Potential Range	Range in Current Sample	Mean	Standard Deviation
PTSD Diagnostic Impression	280	1 – 7	1 – 7	6.26	.972
MEI-R	271	11 – 55	12 – 55	44.12	8.464
SDO	269	16 – 112	1 – 4.44	1.51	.576
SEE	265	31 – 186	100 – 185	156.21	14.691
RES	272	15 – 75	15 – 45	21.05	5.637

Table 3

Logistic Regression Analysis Predicting Presence of PTSD Diagnosis

	B	*SE*	Wald	Exp(*B*)	95% C.I. for Exp(*B*)	
					Lower	Upper
Race	-.808	.882	.838	.446	.079	2.514
Context	-1.882*	.788	5.706	.152	.033	.713
Race x Context	1.204	1.013	1.412	3.332	.458	24.252
Constant	3.611***	.717	25.391	37.000		

Note. CI = confidence interval.
*p <.05, ***p < .001

Table 4

Correlation Matrix of Participant Demographic Factors and PTSD Diagnostic Impression

Variable	1	2	3	4
1. PTSD Diagnostic Impression	—			
2. Gender	.03	—		
3. Age	.02	-.04	—	
4. Year in Program	-.01	-.07	.23***	—
5. Status	-.05	.01	.16**	.08

Note. $N = 277$. Gender coded 1 = Male, 2 = Female. Status coded 1 = Full-time, 2 = Part-time.
** $p < .01$, ***$p < .001$

Table 5

One-way ANOVA Results Examining Potential Covariate Demographic Factors for PTSD Diagnostic Impression

Participant Factor	*F*	*p*
Theoretical Orientation	1.02	.421
Program Type	.44	.647
Degree Type	.45	.721
Program Region	.40	.922

Note. $N = 277$.

Table 6

Regression Analyses of Multicultural Training Moderation Between Vignette and PTSD Diagnostic Impression

	PTSD Diagnostic Impression					
	Model 1			Model 2		
Variable	*b*	*ß*	*t*	*b*	*ß*	*t*
Constant	7.077		27.593***	7.092		27.896***
Race	-.200	-.102	-1.725	-.205	-.105	-1.786
Context	-.346	-.176	-2.983**	-.346	-.177	-3.018**
MEI-R	.019	.166	2.798**	.002	.020	.236
Context x MEI-R				.033	.203	2.426*
R^2		.072			.092	
F		6.855***			6.707***	
ΔR^2		.072			.020	
ΔF		6.855***			5.884*	

Note. $N = 270$.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 7

Regression Analyses of SDO Moderation Between Vignette and PTSD Diagnostic Impression

Variable	*b*	*ß*	*t*
Constant	6.396		55.155***
Race	.082	.042	.489
Context	-.462	-.239	-2.806**
SDO	.073	.044	.330
Context x SDO	-.164	-.073	-.557
Race x SDO	-.021	-.009	-.066
Context x Race	.241	.108	1.026
Context x Race x SDO	-.125	-.040	-.304
R^2		.054	
F		2.104*	
ΔR^2		.000	
ΔF		.092	

Note. $N = 268$.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 8

Regression Analyses of SEE Moderation Between Vignette and PTSD Diagnostic Impression

Variable	*b*	*ß*	*t*
Constant	6.419		53.989***
Race	.060	.031	.355
Context	-.459	-.240	-2.762**
SEE	.008	.115	.792
Context x SEE	.000	.004	.027
Race x SEE	-.002	-.020	-.141
Context x Race	.240	.110	1.021
Context x Race x SEE	-.001	-.005	-.040
R^2		.052	
F		2.174*	
ΔR^2		.000	
ΔF		.002	

Note. $N = 263$.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 9

Regression Analyses of RES Moderation Between Vignette and PTSD Diagnostic Impression

Variable	*b*	*ß*	*t*
Constant	6.425		53.626***
Race	.053	.027	.309
Context	-.527	-.270	-3.158**
RES	.012	.072	.497
Context x RES	-.012	-.052	-.361
Race x RES	-.017	-.073	-.504
Context x Race	.291	.131	1.231
Context x Race x RES	.017	.057	.396
R^2		.054	
F		2.124*	
ΔR^2		.001	
ΔF		.157	

Note. $N = 270$.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 10

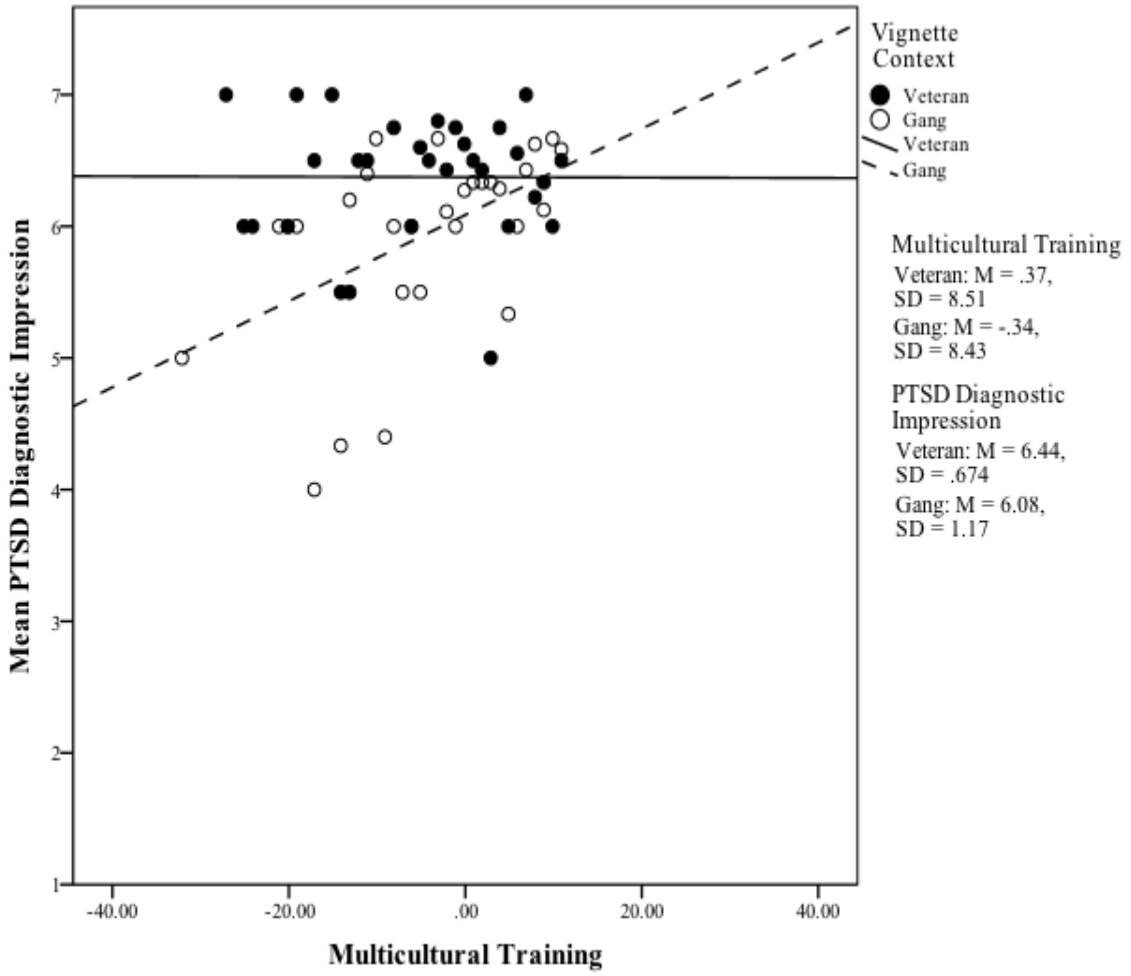
Correlation Matrix of Individual Clinician Factors and Multicultural Training

Variable	1	2	3	4
1. SDO	—	262	266	267
2. SEE	-.51***	—	265	262
3. RES	.44***	-.42***	—	268
4. MEI-R	-.06	.14*	-.19**	—

Note. Correlations presented below the diagonal. Sample sizes (*n*) for correlations presented above the diagonal. SDO = Social Dominance Orientation. SEE = Scale of Ethnocultural Empathy. RES = Revised Ethnocentrism Scale. MEI-R = Revised Multicultural Environmental Inventory.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 1

Moderating Effect of Multicultural Training on PTSD Diagnostic Impression



Note. Multicultural Training on the X-axis represents Centered MEI-R scores. PTSD Diagnostic Impression on the Y-axis represents a measure of the extent to which clinicians identified the presence of PTSD symptoms on a scale of 1 (not present) to 7 (meets all criteria).

Appendix A

Client Vignettes and Questions

Black Military Group Vignette

Jamal is a 22-year old Black male veteran who was referred by his primary care physician for psychological treatment. Jamal presents as guarded and very reserved and does not show much emotion except anger and irritation during the interview. Jamal joined the military at the age of 17 and was active in the army until about eight months ago. He reports having difficulties finding and keeping a job after separating from the military. He also reports relationship issues with his romantic partner and his family and difficulty sleeping over the past eight to ten months. Jamal states that he does not like to be around other people and that this upsets his partner and his family, who do not understand his need for space. Jamal indicates that he does not trust other people and is constantly watching out for danger and potential attackers. He states that he has had difficulty finding a job as he has not felt like searching and applying for positions, preferring to stay in his room where he feels the most secure. Jamal reports that he has added locks to his doors and windows at home to make sure people cannot get in and harm him or his partner. When pushed by his partner to find a job, he was fired after becoming agitated and verbally abusive towards his coworkers. Jamal was unable to provide a reason for his outburst, stating simply that his coworkers were irritating. Jamal also reports regularly hearing the voices of his former fellow soldiers yelling. He indicates that his partner is concerned as he has acted as though he is in a gunfight and yelled at people to get down on occasion since his separation from the military, often after hearing a car backfire. Jamal states that he does not feel close to anyone. He says that he no longer goes out with friends, avoids family events, and spends most of his days in his room playing video games or lying in bed. Jamal reports that he feels numb and has not felt happy since months before leaving the military. When asked about his time in the army, he states that he "just did" what his fellow soldiers did. He reports being in a number of gunfights as well as engaging in hand-to-hand combat on multiple occasions. Jamal indicates that he lost several close companions to violence during his time in the military. He states that he just wants the voices to stop so he can go about living his life.

White Military Group Vignette

Jacob is a 22-year old White male veteran who was referred by his primary care physician for psychological treatment. Jacob presents as guarded and very reserved and does not show much emotion except anger and irritation during the interview. Jacob joined the military at the age of 17 and was active in the army until about eight months ago. He reports having difficulties finding and keeping a job after separating from the military. He also reports relationship issues with his romantic partner and his family and difficulty sleeping over the past eight to ten months. Jacob states that he does not like to be around other people and that this upsets his partner and his family, who do not understand his need for space. Jacob indicates that he does not trust other people and is

constantly watching out for danger and potential attackers. He states that he has had difficulty finding a job as he has not felt like searching and applying for positions, preferring to stay in his room where he feels the most secure. Jacob reports that he has added locks to his doors and windows at home to make sure people cannot get in and harm him or his partner. When pushed by his partner to find a job, he was fired after becoming agitated and verbally abusive towards his coworkers. Jacob was unable to provide a reason for his outburst, stating simply that his coworkers were irritating. Jacob also reports regularly hearing the voices of his former fellow soldiers yelling. He indicates that his partner is concerned as he has acted as though he is in a gunfight and yelled at people to get down on occasion since his separation from the military, often after hearing a car backfire. Jacob states that he does not feel close to anyone. He says that he no longer goes out with friends, avoids family events, and spends most of his days in his room playing video games or lying in bed. Jacob reports that he feels numb and has not felt happy since months before leaving the military. When asked about his time in the army, he states that he "just did" what his fellow soldiers did. He reports being in a number of gunfights as well as engaging in hand-to-hand combat on multiple occasions. Jacob indicates that he lost several close companions to violence during his time in the military. He states that he just wants the voices to stop so he can go about living his life.

Black Gang Group Vignette

Jamal is a 22-year old Black male former gang member who was referred by his primary care physician for psychological treatment. Jamal presents as guarded and very reserved and does not show much emotion except anger and irritation during the interview. Jamal joined a gang at the age of 17 and was active in the gang until about eight months ago. He reports having difficulties finding and keeping a job after separating from his former gang. He also reports relationship issues with his romantic partner and his family and difficulty sleeping over the past eight to ten months. Jamal states that he does not like to be around other people and that this upsets his partner and his family, who do not understand his need for space. Jamal indicates that he does not trust other people and is constantly watching out for danger and potential attackers. He states that he has had difficulty finding a job as he has not felt like searching and applying for positions, preferring to stay in his room where he feels the most secure. Jamal reports that he has added locks to his doors and windows at home to make sure people cannot get in and harm him or his partner. When pushed by his partner to find a job, he was fired after becoming agitated and verbally abusive towards his coworkers. Jamal was unable to provide a reason for his outburst, stating simply that his coworkers were irritating. Jamal also reports regularly hearing the voices of his former fellow gang members yelling. He indicates that his partner is concerned as he has acted as though he is in a gunfight and yelled at people to get down on occasion since his separation from the gang, often after hearing a car backfire. Jamal states that he does not feel close to anyone. He says that he no longer goes out with friends, avoids family events, and spends most of his days in his room playing video games or lying in bed. Jamal reports that he feels numb and has not felt happy since months before leaving the gang. When asked about his time in the gang, he states that he "just did" what his fellow gang members did. He reports being in a number of gunfights as well as engaging in knife fights on multiple occasions. Jamal

indicates that he lost several close companions to violence during his time in the gang. He states that he just wants the voices to stop so he can go about living his life.

White Gang Group Vignette

Jacob is a 22-year old White male former gang member who was referred by his primary care physician for psychological treatment. Jacob presents as guarded and very reserved and does not show much emotion except anger and irritation during the interview. Jacob joined a gang at the age of 17 and was active in the gang until about eight months ago. He reports having difficulties finding and keeping a job after separating from his gang. He also reports relationship issues with his romantic partner and his family and difficulty sleeping over the past eight to ten months. Jacob states that he does not like to be around other people and that this upsets his partner and his family, who do not understand his need for space. Jacob indicates that he does not trust other people and is constantly watching out for danger and potential attackers. He states that he has had difficulty finding a job as he has not felt like searching and applying for positions, preferring to stay in his room where he feels the most secure. Jacob reports that he has added locks to his doors and windows at home to make sure people cannot get in and harm him or his partner. When pushed by his partner to find a job, he was fired after becoming agitated and verbally abusive towards his coworkers. Jacob was unable to provide a reason for his outburst, stating simply that his coworkers were irritating. Jacob also reports regularly hearing the voices of his former fellow gang members yelling. He indicates that his partner is concerned as he has acted as though he is in a gunfight and yelled at people to get down on occasion since his separation from the gang, often after hearing a car backfire. Jacob states that he does not feel close to anyone. He says that he no longer goes out with friends, avoids family events, and spends most of his days in his room playing video games or lying in bed. Jacob reports that he feels numb and has not felt happy since months before leaving the gang. When asked about his time in the gang, he states that he "just did" what his fellow gang members did. He reports being in a number of gunfights as well as engaging in knife fights on multiple occasions. Jacob indicates that he lost several close companions to violence during his time in the gang. He states that he just wants the voices to stop so he can go about living his life.

Vignette Questions

1. What would your primary diagnosis be for Jamal/Jacob?

(Drop down menu provided including the following diagnoses: acute stress disorder, agoraphobia, alcohol use disorder, antisocial personality disorder, bipolar I disorder, bipolar II disorder, borderline personality disorder, brief psychotic disorder, conduct disorder, delusional disorder, generalized anxiety disorder, major depressive disorder,

obsessive-compulsive disorder, panic disorder, paranoid personality disorder, posttraumatic stress disorder, schizoaffective disorder, schizophrenia, schizotypal personality disorder, substance/medication-induced psychotic disorder, unspecified depressive disorder, other.)

2. What are three to five details you remember about the patient?

Appendix B

Diagnostic Impressions

Please indicate the extent to which the client in the vignette appeared to have each of the following disorders.

1	2	3	4	5	6	7
Disorder is Not Present						Meets all Criteria for the Disorder

1. Bipolar disorder
2. Borderline personality disorder
3. Brief psychotic disorder
4. Delusional disorder
5. Generalized anxiety disorder
6. Major depressive disorder
7. Posttraumatic stress disorder
8. Schizophrenia
9. Other (if applicable) _____ (Please indicate)

Appendix C

Demographic Questions

Please provide the following information about yourself:

1. Gender (Check one: M/F/Another)

2. Age

3. Race/Ethnicity (check all that apply):

White
Black or African-American
American Indian and Alaska Native
Asian
Native Hawaiian and Other Pacific Islander
Hispanic
Another

4. Theoretical Orientation (Please check one):
Cognitive/behavioral
Psychodynamic
Psychoanalytic
Humanistic
Existential
Integrative/Eclectic
Gestalt
Feminist
Family/systems
Other _____

5. What type of program are you in?
(Drop down: clinical psych, counseling psych, counseling, social work, other)

6. What year are you in your program?
(Drop down 1 – 10)

7. What degree will you receive when you complete your program?
(Drop down: Master's, Ph.D., Psy.D., other)

8. Are you a full- or part-time student in your program? (Check box)

9. In what region is your program? (Map with defined regions next to question, using official Census Bureau divisions.)

(Check one – New England, Mid-Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain West, Pacific West)

Appendix D

SDO_7 Scale

(Ho et al., 2015)

Instructions
Show how much you favor or oppose each idea below by selecting a number from 1 to 7 on the scale below. You can work quickly; your first feeling is generally best.

1	2	3	4	5	6	7
Strongly Oppose	Somewhat Oppose	Slightly Oppose	Neutral	Slightly Favor	Somewhat Favor	Strongly Favor

1. Some groups of people must be kept in their place.

2. It's probably a good thing that certain groups are at the top and other groups are at the bottom.

3. An ideal society requires some groups to be on top and others to be on the bottom.

4. Some groups of people are simply inferior to other groups.

5. Groups at the bottom are just as deserving as groups at the top.

6. No one group should dominate in society.

7. Groups at the bottom should not have to stay in their place.

8. Group dominance is a poor principle.

9. We should not push for group equality.

10. We shouldn't try to guarantee that every group has the same quality of life.

11. It is unjust to try to make groups equal.

12. Group equality should not be our primary goal.

13. We should work to give all groups an equal chance to succeed.

14. We should do what we can to equalize conditions for different groups.

15. No matter how much effort it takes, we ought to strive to ensure that all groups have the same chance in life.

16. Group equality should be our ideal.

Appendix E

Scale of Ethnocultural Empathy (SEE)

(Wang et al., 2003)

Instructions: Please indicate your level of agreement with each statement using the following scale.

1	2	3	4	5	6
Strongly disagree that it describes me	Moderately disagree that it describes me	Slightly disagree that it describes me	Slightly agree that it describes me	Moderately agree that it describes me	Strongly agree that it describes me

____ 1. I feel annoyed when people do not speak standard English.

____ 2. I don't know a lot of information about important social and political events of racial and ethnic groups other than my own.

____ 3. I am touched by movies or books about discrimination issues faced by racial or ethnic groups other than my own.

____ 4. I know what it feels like to be the only person of a certain race or ethnicity in a group of people.

____ 5. I get impatient when communicating with people from other racial or ethnic backgrounds, regardless of how well they speak English.

____ 6. I can relate to the frustration that some people feel about having fewer opportunities due to their racial or ethnic backgrounds.

____ 7. I am aware of institutional barriers (e.g., restricted opportunities for job promotion) that discriminate against racial or ethnic groups other than my own.

____ 8. I don't understand why people of different racial or ethnic backgrounds enjoy wearing traditional clothing.

____ 9. I seek opportunities to speak with individuals of other racial or ethnic backgrounds about their experiences.

____ 10. I feel irritated when people of different racial or ethnic backgrounds speak their language around me.

____ 11. When I know my friends are treated unfairly because of their racial or ethnic backgrounds, I speak up for them.

____ 12. I share the anger of those who face injustice because of their racial and ethnic backgrounds.

____ 13. When I interact with people from other racial or ethnic backgrounds, I show my appreciation of their cultural norms.

____ 14. I feel supportive of people of other racial and ethnic groups, if I think they are being taken advantage of.

____ 15. I get disturbed when other people experience misfortunes due to their racial or ethnic background.

____ 16. I rarely think about the impact of a racist or ethnic joke on the feelings of people who are targeted.

____ 17. I am not likely to participate in events that promote equal rights for people of all racial and ethnic backgrounds.

____ 18. I express my concern about discrimination to people from other racial or ethnic groups.

____ 19. It is easy for me to understand what it would feel like to be a person of another racial or ethnic background other than my own.

____ 20. I can see how other racial or ethnic groups are systematically oppressed in our society.

____ 21. I don't care if people make racists statements against other racial or ethnic groups.

____ 22. When I see people who come from a different racial or ethnic background succeed in the public arena, I share their pride.

____ 23. When other people struggle with racial or ethnic oppression, I share their frustration.

____ 24. I recognize that the media often portrays people based on racial or ethnic stereotypes.

____ 25. I am aware of how society differentially treats racial or ethnic groups other than my own.

____ 26. I share the anger of people who are victims of hate crimes (e.g., intentional violence because of race or ethnicity).

____ 27. I do not understand why people want to keep their indigenous racial or ethnic cultural traditions instead of trying to fit into the mainstream.

____ 28. It is difficult for me to put myself in the shoes of someone who is racially and/or ethnically different from me.

____ 29. I feel uncomfortable when I am around a significant number of people who are racially/ethnically different than me.

____ 30. When I hear people make racist jokes, I tell them I am offended even though they are not referring to my racial or ethnic group.

____ 31. It is difficult for me to relate to stories in which people talk about racial or ethnic discrimination they experience in their day to day lives.

Appendix F

Revised Ethnocentrism Scale (RES)

(Neulip & McCroskey, 1997)

Below are items that relate to the cultures of different parts of the world. Work quickly and record your first reaction to each item. There are no right or wrong answers. Please indicate the degree to which you agree or disagree with each item using the following five-point scale:

Strongly Disagree = 1; Disagree = 2; Neutral = 3; Agree = 4; Strongly Agree = 5;

_____1. Most other cultures are backward compared to my culture.

_____2. My culture should be the role model for other cultures.

_____3. People from other cultures act strange when they come to my culture.

_____4. Lifestyles in other cultures are just as valid as those in my culture.

_____5. Other cultures should try to be more like my culture.

_____6. I am not interested in the values and customs of other cultures.

_____7. People in my culture could learn a lot from people in other cultures.

_____8. Most people from other cultures just don't know what's good for them.

_____9. I respect the values and customs of other cultures.

_____10. Other cultures are smart to look up to our culture.

_____11. Most people would be happier if they lived like people in my culture.

_____12. I have many friends from different cultures.

_____13. People in my culture have just about the best lifestyles of anywhere.

_____14. Lifestyles in other cultures are not as valid as those in my culture.

_____15. I am very interested in the values and customs of other cultures.

_____16. I apply my values when judging people who are different.

_____17. I see people who are similar to me as virtuous.

_____18. I do not cooperate with people who are different.

_____19. Most people in my culture just don't know what is good for them.

_____20. I do not trust people who are different.

_____21. I dislike interacting with people from different cultures.

_____22. I have little respect for the values and customs of other cultures.

Appendix G

Revised Multicultural Environmental Inventory (MEI-R)

(Pope-Davis et al., 2000)

For the purposes of this instrument, please consider the definition of multicultural issues to mean ethnic and racial issues. The term "minority" refers to those persons of Asian American, African American, Latino/a American, and Native American backgrounds.

Please rate the degree to which each statement is reflective of your program using the following 5-point scale:

1	2	3	4	5
not at all		moderately		a lot

1. I believe that multicultural issues are integrated into coursework.

2. The course syllabi reflect an infusion of multiculturalism.

3. Multicultural issues are considered an important component in supervision.

4. Awareness of and responsiveness to multicultural issues is part of my overall evaluation.

5. Being multiculturally competent is valued.

6. I am encouraged to integrate multicultural issues into my courses.

7. I am encouraged to integrate multicultural issues into my work.

8. During exams, multicultural issues are reflected in the questions.

9. A diversity of cultural items (pictures, posters, etc.) are represented throughout my program/department.

10. All course evaluations ask how/if multicultural issues have been integrated into courses.

11. All courses and research conducted by faculty address, at least minimally, how the topic affects diverse populations.

Appendix H

Screening Questions

To be eligible, potential participants will need to check yes to item 1 and either item 2 or 3.

1. Are you training to become a licensed mental health clinician who will make DSM 5 diagnoses? (Check one: Yes/No)
2. Do you currently provide therapy to one or more clients? (Check one: Yes/No)
3. Do you currently conduct psychological assessments and provide diagnostic impressions? (Check one: Yes/No)