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# Structural Stress and Otherness: How Do They Influence Psychological Stress?

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## Abstract

**Background:** This study represents the initial steps in researching the cultural distress model and explores the cumulative layering of stressors that place the patient at risk for cultural distress, including structural stress and otherness. **Method:** A cross-sectional descriptive correlational analysis of intersecting identities (Structural Stressors), ethnicity-related stressors (Otherness) and ethnic-identity (Otherness) on psychological stress. Participants were also asked to define the word culture. **Results:** Results indicated that structural stressors did not significantly influence on psychological stress but were associated with perception of discrimination. The experience of otherness significantly influenced psychological stress. **Discussion:** Given the association between structural stress and perceived discrimination, additional research and tool development is needed to better understand how structural stressors influence psychological stress. Participant definitions of culture fell into two primary themes: Collectiveness and Individualness, indicating that the way we live is influenced by shared experiences, yet also a product of individual choices.

## Keywords

culture, person-centered care, intersectionality, structural stress, otherness, perceived stress, ethnicity-related threat, ethnic identity, culturally congruent care, cultural competence

## Background and Significance

As diversity in the population increases, the concepts of cultural competence and congruence have become increasingly central in service-related industries, including health care (Agency for Healthcare Research and Quality, 2013, 2016; American Nurses Association, 2017; Human Rights Campaign, 2016; Kagawa-Singer, Dressler, George, & Elwood, 2014; The Joint Commission, 2014). Fostering the cultural competence of providers has been proposed (American Nurses Association, 2015; Andrews & Boyle, 2015; Campinha-Bacote, 2015; Casillas et al., 2014; Douglas et al., 2014; Fleming, Thomas, Shaw, Burnham, & Charles, 2015; Giger, 2016; Jeffreys, 2015; McFarland & Wehbe-Alamah, 2015; Papadopoulos, Shea, Taylor, Pezzella, & Foley, 2016; Purnell, 2013; Schwarz et al., 2015; Waite, Nardi, & Killian, 2013); however, an association between culturally competent and congruent care and patient outcomes has not been established (Kagawa-Singer et al., 2014). Though we have seen an increase in use of race and ethnicity as cultural variables in the past 20 years, use of these simplistic measures as proxy for culture may incorrectly presume that these nominal markers imply homogenous and static populations (Kagawa-Singer et al., 2014). Additionally, with

minimal data that were collected inconsistently, our ability to adequately and holistically assess the dynamic nature of culture and its influences on behavior and beliefs, social norms, practices, and knowledge of groups as they relate to health and well-being is underdeveloped (Kagawa-Singer et al., 2014). This research explores how the administration of culturally competent and congruent care may affect patient outcomes by examining the influence of structural stress and otherness on the psychological stress of patients.

## Conceptual Framework

The theory of cultural distress (Figure 1) builds on the foundations of Leininger's (1988) culture care theory and offers a framework for understanding potential physiological and

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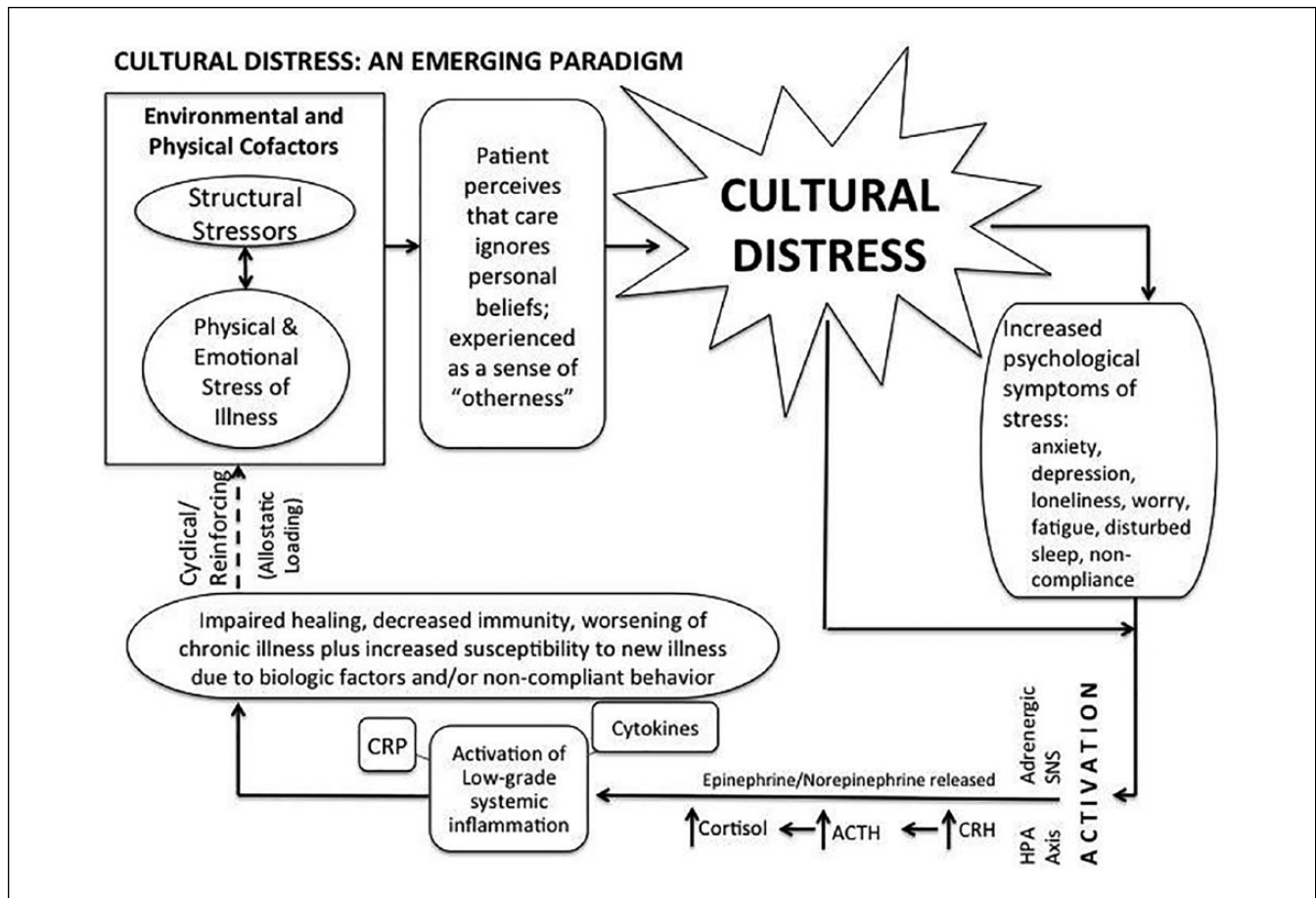
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**Figure 1.** Cultural distress: An emerging paradigm.

behavioral outcomes in patients who do not receive care that incorporates their cultural beliefs (DeWilde & Burton, 2017). Cultural distress is defined as, “a negative response rooted in a cultural conflict in which the patient lacks control over the environment and the practices taking place in the patient-provider encounter” (DeWilde & Burton, 2017), and suggests that patients may experience cultural distress via the simultaneous experiences of being ill, living within a society in which they do not culturally “fit,” and receiving care that ignores their cultural beliefs (DeWilde & Burton, 2017). The theory further postulates that this experience may manifest in both behavioral and physiologic pathways. The concepts addressed in the model include *othering*, *structural stress*, and *allostatic load*.

Othering is defined as the experience of feeling marginalized and/or excluded because of visible differences from the population majority or dominant group (Bayat, 2015; Bruno, Balottin, Berlincioni, Moro, & Moro, 2016; Canales, 2000, 2010; Fortin & Maynard, 2018; Gilles et al., 2013; Halliday, Boughton, & Kerridge, 2014; Higgs & Gilleard, 2014). The process of othering marks those who are perceptibly different than the dominant society such that individuals being “othered” view themselves as “less than” in

relation to the rest of society (Lewis-Fernández et al., 2014). Similarly, structural stress proceeds from living under political, societal, economic, and social structures that disempower and can create and sustain otherness (Canales, 2010; DeWilde & Burton, 2017; Hoy-Ellis & Fredriksen-Goldsen, 2016; Kagawa-Singer et al., 2014; Letiecq, Grzywacz, Gray, & Eudave, 2014; Martinez Tyson, Jacobsen, & Meade, 2016; Michalopoulos, Jiwatram-Negrón, Choo, Kamarulzaman, & El-Bassel, 2016; Viruell-Fuentes, Miranda, & Abdulrahim, 2012). Structural stress and othering usually co-occur because the individual experiencing otherness also experiences stress from existing outside of the expected dominant social structures (Canales, 2010; Kagawa-Singer et al., 2014)

Allostasis is the maintenance of homeostasis in an environment of change or stress (Sterling & Eyer, 1988). Whereas homeostasis minimizes and maintains a static biologic response, allostasis dynamically adapts to changing environments and stressful events (Juster, McEwen, & Lupien, 2010; Karatsoreos & McEwen, 2011; Logan & Barksdale, 2008; McEwen & Wingfield, 2010). With repeated activation of the allostasis mechanism, the potential stress response is reduced, rendering physiologic systems unable to adapt

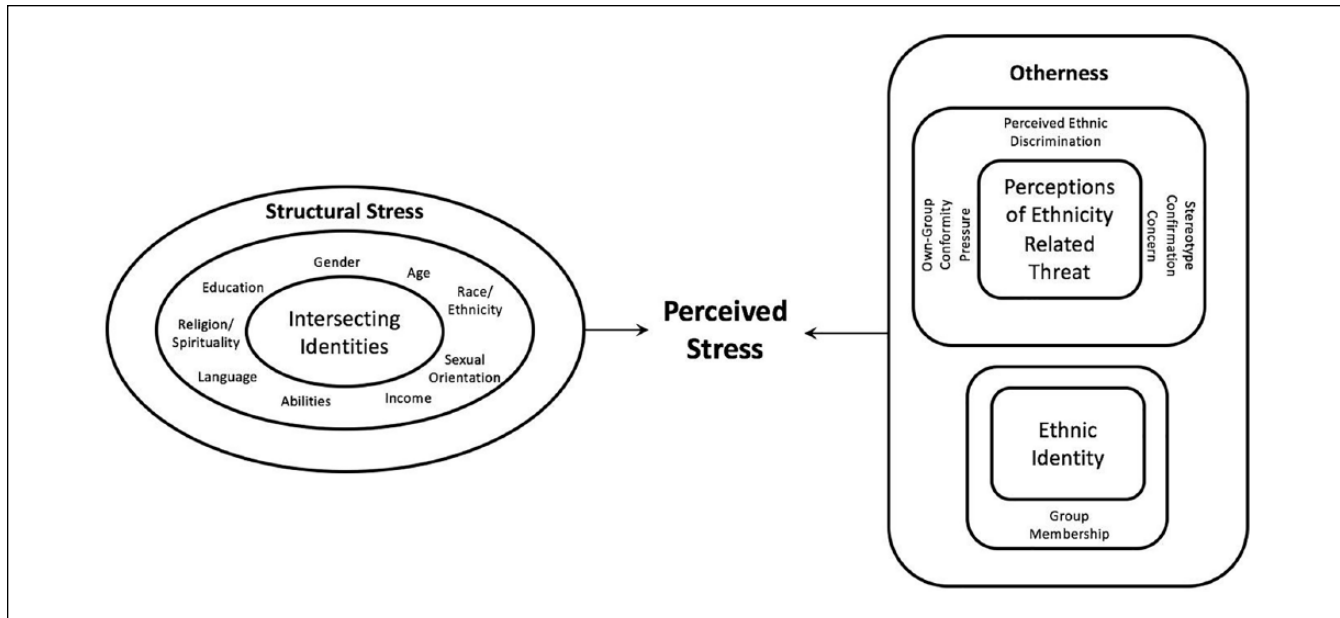


Figure 2. Empirical model.

IDENTITIES	DISADVANTAGED	PRIVILEGED
Age	Children/Elderly	Adult
Gender	Female	Male
Religion/Spirituality	Non-Western Religions	Judeo-Christian
Sexual Orientation	Nonconforming/Transgender	Congruent
Race/Ethnicity	Underrepresented Groups	White/European decent
Abilities	Disability/cognitive impairment/mental illness	Abled body/mind
Education	=/< HS	> HS
Language	Limited English/1st language is not English	English
Income	< Median	=/> Median

**POTENTIAL SOURCES OF STRUCTURAL STRESS**

Figure 3. Intersecting identities as potential sources of structural stress.

Source. Adapted from Lor, Crooks, and Tluczek (2016).

(Seeman et al., 2004). The result is an overabundance of neural, endocrine, and immune stress mediators, which causes dysregulation of the hypothalamic pituitary adrenal axis, sympathetic nervous system, and mediators of low-grade systemic inflammation (Gay et al., 2015; Gray, Kogan, Marrocco, & McEwen, 2017; Guidi et al., 2016; McEwen, 2017; McEwen & McEwen, 2016; McEwen & Seeman, 1999; Sawyer, Major, Casad, Townsend, & Mendes, 2012; Schulz et al., 2012).

Guided by the theory of cultural distress (Figure 1) and the empirical model proposed in Figure 2, this study explored structural stress and otherness to better understand the potential cumulative psychological stress burden for patients. Relevant concepts include intersectionality, ethnicity-related stress, ethnic identity, and psychological stress. *Intersectionality* refers

to the simultaneous experiences of identities including, but not limited to those of race, ethnicity, gender, gender identity, and class (Hancock, 2007). The identities fall along a continuum of disadvantage to privilege (Figure 3) and represent potential sources of structural stress. *Ethnicity-related stress* is defined as

The outcome of a person–situation interaction in which perception of features of the social environment, in the light of knowledge of one’s ethnicity, leads either to the anticipation of psychological or physical harm, or to the belief that such harm has already occurred. (Contrada et al., 2001, p. 1777)

*Ethnic identity* is defined as “an enduring, fundamental aspect of the self that includes a sense of membership in an ethnic

group and the attitudes and feelings associated with that membership” (Phinney, 1996, p. 922). The concepts of *ethnicity-related stress* and *ethnic identity* are congruent with the concept of otherness in that they address the potential stresses and repercussions of existing outside of the dominant culture. *Psychological stress* has been defined as what occurs when demands exceed what an individual perceives as their capacity for coping (Cohen, Janicki-Deverts, & Miller, 2007).

This early testing of the cultural distress model is focused on exploring the cumulative layering of stressors that increase risk for cultural distress. Figure 2 illustrates the empirical model.

## Purpose

This study sought to discover if the concepts of intersectionality, ethnicity-related stress, and ethnic identity adequately captured the experience of stress for patients as it relates to the receipt of health care services—specifically for patients of any cultural, ethnic, or racial heritage. As such, the primary aim of this study was to explore the impact of structural stressors and otherness on psychological stress. Additionally, this study aimed to determine if the concept of culture, as proposed in the cultural distress model, aligns with definitions of culture provided by participants.

## Method

### Design, Sample, and Setting

Using a cross-sectional descriptive correlational analysis of intersecting identities, ethnicity-related stressors, and ethnic identity, this study sought to develop understanding of the potential effects of these variables on psychological stress (Figure 2).

With a medium effect size ( $f^2 = 0.15$ ), an  $\alpha = .05$  and a desired power of 80%, 92 subjects were needed to determine a nonzero correlation. A convenience sample of 100 participants (44 men and 56 women) was recruited from five outpatient clinics serving patients with chronic illness in the Virginia Commonwealth University Health System. Clinics included cardiology, infectious disease, gastroenterology, sickle cell, and pulmonary medicine. Inclusion criteria included being 18 years of age and older, and having had at least four health care encounters over the preceding 12-month period. Exclusion criteria included inability to provide informed consent, prisoners, wards of the state, and inability to speak and read English well enough to complete the study questionnaires.

### Data Collection

Following institutional review board approval, potential participants were approached for consent as they awaited health care appointments. The first participant was enrolled on October 2, 2017. The last participant was enrolled on

December 14, 2017. Participants were fully informed about the study and given an opportunity to ask questions. Prior to completing the questionnaires, participants provided a free-text response to the question, “How do you define the term culture?” This was used to explore similarities and differences in the complex meaning of culture for participants and to develop a taxonomic structure for the concept. Participants then completed the demographic questionnaire and study questionnaires. Responses were collected and managed using REDCap (Research Electronic Data Capture) electronic data capture tools hosted at Virginia Commonwealth University (Harris et al., 2009). REDCap is a secure, web-based application designed to support data capture for research studies, providing (a) an intuitive interface for validated data entry, (b) audit trails for tracking data manipulation and export procedures, (c) automated export procedures for seamless data downloads to common statistical packages, and (d) procedures for importing data from external sources. On completion of questionnaires, participants received a \$10 gift card to a large retailer.

### Variables and Measures

**Independent Variables.** The theoretical model (Figure 1) depicts structural stress as a major contributor to baseline psychological stress for those existing outside of the expected and established norms of a society; however, there is no established tool for measuring structural stress. The concept of intersecting identities (Figure 3) was therefore used as a proxy for potential sources of structural stress. Potential sources of structural stress included nine “intersecting identities.” Information on age, gender, religion/spirituality, sexual orientation, race/ethnicity, abled/disabled, education level, language, and income were dichotomized as 0 = privileged and 1 = disadvantaged (Lor et al., 2016). Responses were summed to calculate a score of 0 to 9 with higher scores indicating greater potential structural stress.

A validated measure of “otherness” does not currently exist, therefore, the concepts of ethnicity-related stress and ethnic identity were used to explore the experience of otherness. The Measures of Ethnicity-Related Threat and Ethnic Identity (METEI) consist of four Likert-type scales developed by Contrada, et al. (2001) and include the Perceived Ethnic Discrimination Questionnaire, Stereotype Confirmation Concern Scale, Own-Group Conformity Pressure Scale, and the Group Membership Questionnaire.

Each of these measures has been shown to be psychometrically sound, able to detect meaningful differences between ethnic groups, and to offer constructs that may aid in understanding the implications of ethnicity-related stress on physical and mental health. The METEI has been used as a measure of ethnicity-related stress in several studies and is intended for use across racial and ethnic groups (Brondolo et al., 2005; Chávez & French, 2007; Contrada et al., 2001; French & Chavez, 2010; Ojeda, Navarro, Meza, & Arbona,

2012). Originally designed to assess global ethnicity-related stress over a 3-month period of time (Contrada et al., 2001), the measures have been modified with permission of the author, and renamed Measures of Ethnicity-Related Stress and Ethnic Identity-Health Care version (METEI-HV). The modified instrument surveys perception of experiences receiving health care services over a 6- to 12-month period. Scoring for each measurement is computed as the mean of the item responses. Higher scores indicate higher stress related to ethnicity and is assessed as a higher potential to experience otherness.

The 21-item Perceived Ethnic Discrimination Questionnaire measures seven forms of perceived ethnic discrimination (Brondolo et al., 2005; Chávez & French, 2007; Contrada et al., 2001; French & Chavez, 2010; Ojeda et al., 2012). In the adapted version used here, one item was omitted because it was not applicable to the health care setting. Forms of discrimination included devaluation (five items), threat/aggression (five items), verbal rejection (three items), avoidance (three items), and exclusion and denial of equal treatment (five items). The measure uses a 7-point Likert-type scale (1 = *never* to 7 = *very often*; Contrada et al., 2001). Previous reliability estimates have been reported as  $\alpha = .65$  to  $.90$  and in this study, the Cronbach's  $\alpha = .97$ .

The Stereotype Confirmation Concern Scale is designed to measure stereotype confirmation concern. It includes 11 items indicating respondents' level of concern that by demonstrating specific behaviors they may be confirming stereotypes about their ethnic group. Behaviors include, but are not limited to, eating, dressing, sports, shopping, and speech behaviors. Respondents answered the items via a 7-point Likert-type scale (1 = *never* to 7 = *always*; Contrada et al., 2001). Previous reliability estimates have been reported as  $\alpha = .89$  to  $.91$  and in this study, the Cronbach's  $\alpha = .95$ .

The Own-Group Conformity Pressure Scale is a measure of the degree of pressure members of the same ethnic group feel to conform to certain behaviors. The tool has 16 items and uses a 7-point Likert-type scale, 1 = *not at all pressured* to 7 = *quite a bit pressured*, and refers to style/interests (7 items), social relations (5 items), and academics and partying (4 items; Contrada et al., 2001). Previous reliability estimates have been reported as  $\alpha = .79$  to  $.89$  and in this study, the Cronbach's  $\alpha = .97$ .

The final measure, the Group Membership Questionnaire, addresses how members of an ethnic group feel about being a member of that group and experience ethnicity-related stress because of group. It consists of 12 statements which refer to public regard (four items), private feelings (three items), and identity centrality (four items) and utilizes a 7-point Likert-type scale for responses. One additional question did not fit into any of the subscales and refers to participant's perception of benefits of membership in their ethnic group. Previous reliability estimates have been reported as  $\alpha = .74$  to  $.86$  and in this study, the Cronbach's  $\alpha = .55$ .

**Dependent Variable.** Perceived stress was used to capture the baseline level of psychological stress to better understand the potential cumulative burden of cultural stressors leading to cultural distress. Psychological stress was measured using the Perceived Stress Scale-10 (PSS-10), which assesses the degree to which people perceive their lives as stressful (Cohen, Kamarck, & Mermelstein, 1983). The tool has 10 items and uses a 5-point Likert-type scale ranging from 1 (*never*) to 4 (*very often*) to indicate how often participants have found their lives unpredictable, uncontrollable, and overloaded in the past month. Higher scores reflect higher levels of perceived stress. In previous studies, the reliability estimates have been reported as  $\alpha = .78$  and in this study, the Cronbach's  $\alpha = .86$ .

## Analysis

A systematic and iterative process, using a codebook, was used to code the free-text transcripts (Bernard, Wutich, & Ryan, 2016). Themes and subthemes were identified. Each theme was then defined with inclusion criteria and typical exemplars. Participant definitions were reviewed and classified into a typology scheme based on codebook rules and analyzed for frequency of use (Table 1). The relationships between primary and subtheme frequencies were explored to identify participant definitions of culture. Results were then evaluated in relation to the definition of culture as offered by the theory of cultural distress (DeWilde & Burton, 2017).

Demographics measured included gender, age, race, and ethnicity. Continuous variables were reported as mean and standard deviation and categorical variables as frequency and percentage. Each continuous variable was summarized using mean and standard deviation. A correlation analysis was performed to assess for multicollinearity among independent variables as well as to determine the direction and strength of relationship between independent and dependent variables. A multiple regression using the five independent variables to assess the effect on perceived stress was computed.

## Results

### Sample Characteristics

Indeed, 44 of the 100 participants were male (44%) and mean age of 55 years ( $SD = 14$ ). All participants reported identifying as their gender at birth. Race and ethnicity was consistent with that of Virginia Commonwealth University Health System and Richmond, VA as reported in the 2016 U.S. Census Bureau with 39 = Black, 44 = White, 7 = multiracial, and 6 = Hispanic. Other sample characteristics included self-reports of mental and/or physical disability = 36, religious affiliation = 77, less than high school education = 14, family income  $< \$56,516 = 69$ , and English as a first language = 94 (Table 2).

**Table 1.** Theme and Subtheme Definitions and Exemplars for Codebook Development.

	Description	Exemplars <sup>a</sup>
<i>Primary theme</i>		
Collectiveness	Refers to a group or environment that is composed of more than one individual	Social institutions, nation, people, social group, social behavior, common language, behavior, beliefs, actions of a group or people, and family
Individualness	Referring to one person	Different backgrounds and origins, how we are accepted and viewed as an individual, depends on you, who you are
Scientific sample	Refers to a biologic or medical sample used for research	Medical sample, bacteria smear, and collection of bacteria
High art	Refers to the creation or observance or reading of literature, music, visual arts, and performing arts	Refers to what is typically called “high arts,” in music, literature, dance, etc.
<i>Subthemes</i>		
Lifeways	Refers how one lives their life. The specific practices of a person or group of people	Customs, the way people live their lives, how you are raised, the way things are done, food, dress hair, music, actions of a group of people, behavior, how we celebrate holidays and religious beliefs, the way you love and treat your body and living, actions within a group, organization, or country, family way of raising a child with customs, language, and ideas nature to the area or country (manners, music, foods, and relationships), how a group of people live, work, play, how the world around you causes you to think and do
People	Refers human beings	People, nation, social group, and person
Demographics/ classifications	Refers to descriptors of human attributes	Age, race, medical condition, ethnicity, socioeconomics, and color
Environment	Refers to a region of the world or a physical place where one lives, is from, or goes. Can be regional or structured	Where you are from, medical center, schools, and refers to a specific place
History	Refers to past events and experiences of the individual, individual’s family, or society	How you are raised, your background, life generations, your roots from the time you were born into the world, the environment you were raised in, environmental effect of people around you, grows up in, and my experience of where I come from
Beliefs	Refers to something one accepts as true or real; a firmly held opinion or conviction	What you believe, your beliefs, your religion, how we are influenced by society, code of ethics, set of traditions, behaviors, and norms shared by a group of people, how the world around you causes you to think and do
Preferences	Refers to a greater liking for one alternative over another or others and may or may not affect a person’s way of life	Music, dress, hair, food, and how we are influenced by society
Feelings	Refers to an emotional state or reaction	Way you feel
Knowledge	Refers to an awareness or familiarity gained by experience of a fact or situation	Your education and manifestation of your intellectual achievement
Situation	Refers to an individual’s or groups’ place (nonphysical) in relation to other humans in the world or and the influence of others on the individual	Place in relation to the rest of humanity, the atmosphere in which we live, and the environment you live in
Identity	Refers to the characteristics of determining who or what a person, group of people, or thing is	How we define ourselves, how we are perceived in the world, defines who you are, and your identity
Worldview	Refers to how a person interprets the world	How a person views life itself, sees the world, the attitudes of people, and the way you perceive the world
Adaptable	Refers to the adjustment to new conditions; being flexible or fluid	People can belong to multiple different cultures, culture is a wish-mash of many different cultural aspects blended together, we can adapt to various cultures if we choose to

<sup>a</sup>All exemplars are direct quotes from participant written responses.

**Table 2.** Sample Characteristics (N = 100).

Variable	f (%)	M (SD)	Range
Age, years		54.69 (13.79)	23-82
23-40	14 (14)		
41-60	44 (44)		
61-80	30 (30)		
81-82	2 (2)		
Did not respond	10 (10)		
Race			
American Indian/Alaskan Native	1 (1)		
Asian	1 (1)		
Black	39 (39)		
White	44 (44)		
Multiracial	7 (7)		
Other	8 (8)		
Ethnicity			
Hispanic	6 (6)		
Non-Hispanic	51 (51)		
Did not respond	43 (43)		
Gender at birth			
Male	44 (44)		
Female	56 (56)		
Gender identity			
Identifies as gender at birth	100 (100)		
Religion/spirituality			
Judeo Christian	66 (66)		
Non-Western	3 (3)		
Not religious	23 (23)		
Did not respond	1 (1)		
Did not designate a religion	7 (7)		
Ability			
Mentally/physically disabled	33 (33)		
Did not respond	8 (8)		
Education			
<High school	13 (13)		
≥High School	83 (83)		
Did not respond	4 (4)		
Language			
English as a first language	91 (91)		
Did not respond	3 (3)		
Family income			
<\$56,516	66 (66)		
≥\$56,516	29 (29)		
Did not respond	5 (5)		

Note. These sample characteristics were used in the calculation of intersecting identities.

### Participant Definitions of Culture

The four primary themes identified in the participant responses included the following: (a) Collectiveness, (b) Individualness, (c) Scientific sample, and (d) High arts. Indeed, 13 subthemes were identified for Collectiveness and Individualness; no subthemes were identified for Scientific sample or High arts (Figure 4; see Table 3). Responses indicated that culture is primarily viewed as a shared phenomenon with 103 responses falling within the Collectiveness theme. Participants also significantly viewed the concept of

culture as an individual phenomenon with 92 responses falling into the Individualness theme. Three responses were included within the Scientific sample theme and one within High arts. While these responses reflect existing and valid definitions of culture, the frequency of use was too low for consideration in this sample. Eight responses did not address the question or were not interpretable and were not coded. Four participants did not provide a response. The subthemes identified most frequently within the Collectiveness theme were *Lifeways* ( $f = 28$ ), *Beliefs* ( $f = 19$ ), and *People* ( $f = 14$ ).



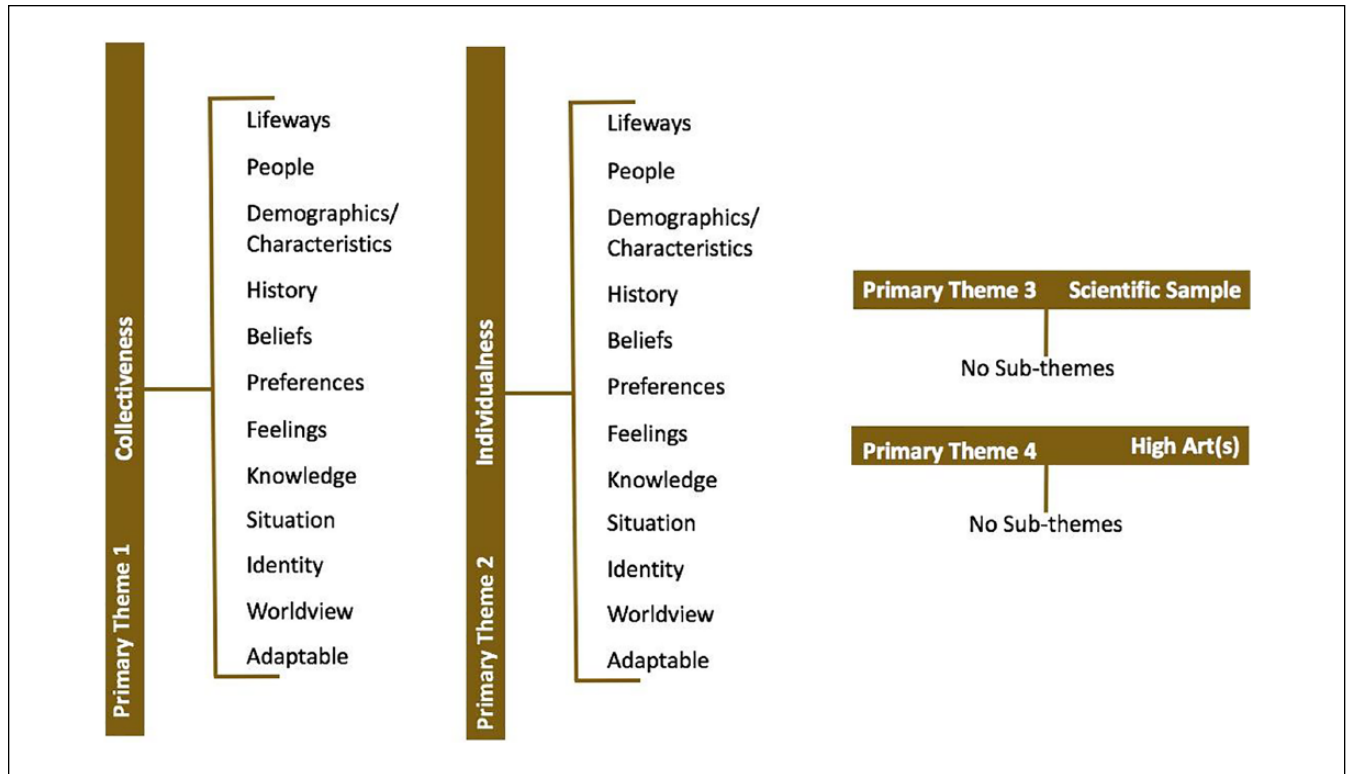


Figure 4. Themes and subthemes utilized for coding participant definitions of culture.

Table 3. Theme Frequencies.

	Collectiveness	Individualness	Total
Adaptable	1	3	4
Beliefs	19	12	31
Demographics and characteristics	5	6	11
Environment	13	14	27
Feelings	0	1	1
History	8	21	29
Identity	3	4	7
Knowledge	5	2	7
Lifeways	28	20	48
People	14	2	16
Preferences	2	3	5
Situation	1	1	2
World view	4	3	7
Total	103	92	195

Subthemes most frequently identified within the Individualness theme were *History* ( $f = 21$ ), *Lifeways* ( $f = 20$ ), and *Environment* ( $f = 14$ ).

**Descriptive Statistics of the Model Variables**

**Otherness.** Otherness was characterized by two variables: ethnicity-related threat and ethnic identity. The three variables characterizing ethnicity-related threat included the following:

(a) perceived ethnic discrimination, (b) stereotype confirmation concern, and (c) own-group conformity pressure. On average, participants perceived low ethnic discrimination ( $M = 1.41, SD = 0.93, range = 1-7$ ), low stereotype confirmation concern ( $M = 1.46, SD = 0.95, range = 1-7$ ), and low own-group conformity pressures ( $M = 1.19, SD = 0.70, range = 1-6.5$ ). Ethnic identity, characterized as group membership, was perceived as a neutral influence on way of life and ethnic group ( $M = 4.49, SD = 0.78, range = 1-6.25$ ).

**Structural Stress.** Potential structural stress was examined via intersecting identities. On average participants reported approximately three identities depicting disadvantage ( $M = 2.84, SD = 1.85, range = 1-6$ ).

**Perceived Stress.** Perceived stress scores were relatively low ( $M = 18.02, SD = 7.65, range = 4-37$ ; see Table 4).

**Correlations Among Model Variables**

Spearman’s Rho was used as some independent variables were nonnormally distributed. Table 5 shows correlations among the variables. Stereotype confirmation concern was significantly associated with perceived stress ( $\rho = 0.468, p \leq .001$ ). Experience of intersecting identities (intersectionality) was not significantly associated with perceived stress ( $\rho = 0.125, p = .222$ ) but was significantly associated with perceived ethnic discrimination ( $\rho = 0.262, p = .008$ ).

**Table 4.** Descriptive Statistics of Model Variables.

Variable	M (SD)	Range
<b>Otherness (METEI)</b>		
Ethnicity-related threat		
Perceived ethnic discrimination	1.41 (0.93)	1-7
Stereotype confirmation concern	1.46 (0.95)	1-7
Own group conformity pressure	1.19 (0.70)	1-6.5
Ethnic identity		
Group membership	4.49 (0.78)	1-6.25
Intersectionality	2.84 (1.35)	1-6
Perceived stress	18.02 (7.65)	4-37

Note. METEI = Measures of Ethnicity-Related Threat and Ethnic Identity.

Perceived ethnic discrimination was also significantly associated with perceived stress ( $\rho = 0.401, p \leq .001$ ) as was own-group conformity pressure ( $\rho = 0.267, p = .008$ ). Group membership had a significant inverse association with perceived stress ( $\rho = -.332, p \leq .001$ ). Correlations are depicted in Table 5.

### Regression Analysis

The initial model examining predictors of perceived stress included ethnicity-related threat, ethnic identity, and intersectionality. The three variables characterizing ethnicity-related stress (perceived ethnic discrimination, stereotype confirmation concern, and own-group conformity pressure), the variable characterizing ethnic identity (group membership), and intersectionality were used in the regression analysis (see Table 4). Using a backward stepwise elimination model-building approach described by Hosmer, Lemeshow, and Sturdivant (2013), the model was trimmed of nonsignificant variables (perceived ethnic discrimination and intersectionality). This iterative process resulted in a model incorporating stereotype confirmation concern ( $\beta = .502, t = 3.443, p = .001$ ), own group conformity pressure ( $\beta = -.308, t = -2.148, p = .034$ ), and group membership ( $\beta = -.265, t = -2.808, p = .006$ ) as the significant predictors of perceived stress (Table 6). Specifically, participants with greater concern for stereotype confirmation and who experience greater pressure to conform by members of their own group experienced higher levels of perceived stress. Conversely, participants with a greater affinity for group membership experienced lower levels of perceived stress. The model explained 21.6% of the variance ( $R^2 = .216, F = 8.647, p \leq .001$ ).

### Discussion

The cultural distress theory suggests a relationship between structural stressors, experience of otherness, and patient's perception that their care ignores their cultural preferences—resulting in heightened stress burden

(DeWilde & Burton, 2017). This research represents a necessary first step in the study of cultural distress through exploration of the foundational concepts of the theory (structural stress and otherness) and their potential impact on baseline stress levels.

### Structural Stress

This research utilized demographic intersectionality to explore associations of the multiplicative nature of multiple disadvantages on psychological stress. On average, participants reported approximately three disadvantaged identities, but this was not significantly associated with perceived stress nor was it a predictor thereof. However, intersectionality did have a significant association with perceived ethnic discrimination. Given that perceived ethnic discrimination has been associated with activation of the stress response system (Perry, Harp, & Oser, 2013), an adequate approach to research on intersecting identities and subsequent experience of stress in patients as it relates to health outcomes is crucial.

### Otherness

The concepts of ethnicity-related threat and ethnic identity were used to explore the relationship between the experience of otherness and psychological stress. On average, participants rarely perceived ethnic discrimination or stereotype confirmation concern. Similarly, participants did not perceive own-group conformity pressures. Ethnic identity, characterized as group membership, was perceived as having a neutral influence on participant way of life. It did, however, function as a protective component such that participants who identified strongly with their ethnic group, or with those sharing a similar way of life, had lower PSS scores. These findings align with previous research indicating that ethnicity-related stressors and ethnic identity may affect perceptions of well-being, life satisfaction, and self-reported health in minority populations (Brondolo et al., 2005; Chávez & French, 2007; Contrada et al., 2001; French & Chavez, 2010; Ojeda et al., 2012). Also, these results support the relationships proposed in the cultural distress framework: that the experience of otherness could contribute to a heightened stress baseline on its own or combined with additional stresses resulting from living outside of the dominant societal norms (DeWilde & Burton, 2017).

### Defining Culture

It was of interest to explore participant definitions of culture to determine congruency with the definition offered within the theory of cultural distress (DeWilde & Burton, 2017). The theory of cultural distress suggests that, “. . . the concept of culture is inclusive of race, ethnicity, language, gender and gender identity, spirituality and religion, communication style, employment, socioeconomic status, political views,

**Table 5.** Correlations Among Model Variables ( $\rho$ ,  $p$  Value).

Variable	Perceived ethnic discrimination	Stereotype confirmation concern	Own-group conformity pressure	Group membership	Intersectionality	Perceived stress
		Spearman $\rho$ ( $p$ )	Spearman $\rho$ ( $p$ )	Spearman $\rho$ ( $p$ )	Spearman $\rho$ ( $p$ )	Spearman $\rho$ ( $p$ )
Perceived ethnic discrimination	1	0.628 (<.001)	0.621 (<.001)	-0.341 (<.001)	0.262 (.008)	0.401 (<.001)
Stereotype confirmation concern		1	0.617 (<.001)	-0.408 (<.001)	0.004 (.970)	0.468 (<.001)
Own-group conformity pressure			1	-0.299 (.003)	0.094 (.352)	0.267 (.008)
Group membership				1	0.026 (.799)	-0.332 (<.001)
Intersectionality					1	0.125 (.222)
Perceived stress						1

**Table 6.** Regression Analysis: Factors Influencing Perceived Stress.

	$\beta$	$t$	$p$
Stereotype confirmation concern	.502	3.443	.001
Own-group conformity pressure	-.308	-2.148	.034
Group membership	-.265	-2.808	.006

Note.  $R^2 = .216$ ,  $F = 8.647$ .  
 $p \leq .001$ .

education, and personal preferences” (DeWilde & Burton, 2017). While there is overlap between participant definitions of culture and that offered within the theory of cultural distress, it is notable that participants specifically referred to beliefs, way of life, history, and environment—elements not covered by the theory of cultural distress. Also notable is that the subtheme, Lifeways, was seen through both a Collectivist and Individualist lens in approximately 25% of the total responses ( $f = 48$ ), indicating belief that the way we live is highly influenced by shared experiences, but also a product of individual choices. This finding is supported by previous research indicating that while culture is informed and passed down through generations as a shared body of information or knowledge, it is received and interpreted by the individual to create a personal social context, making it flexible or fluid by nature (Garneau, 2015; Kagawa-Singer et al., 2014). Last, as shown in Table 3, demographics were not identified as a common theme in the definitions of culture (Collectiveness  $f = 5$ , Individualness  $f = 6$ ), nor was intersectionality (primarily driven by demographic data) found to have a significant association with perceived stress. This suggests that the application of intersectionality theory in health research may need further refinement.

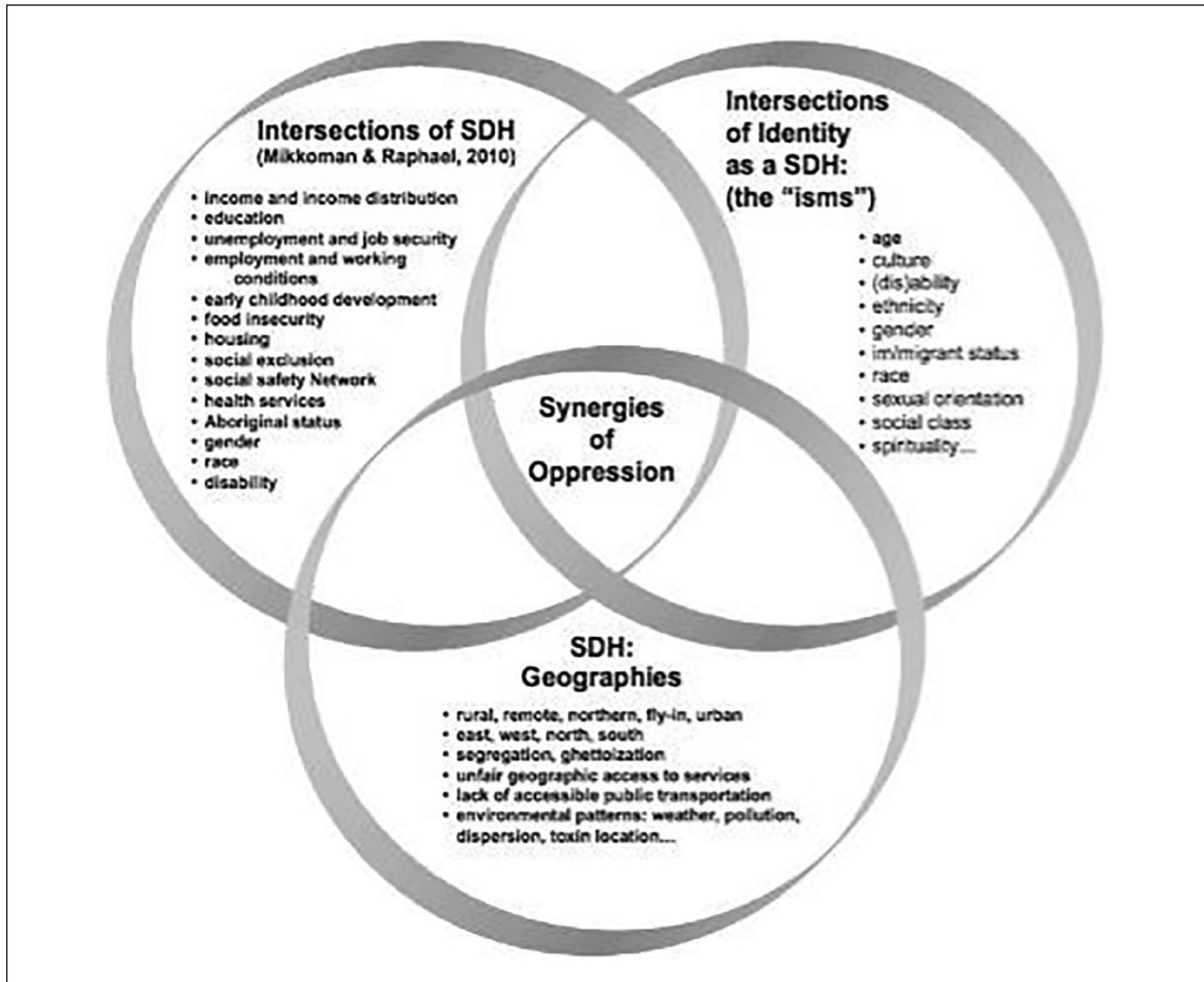
### Limitations

This study was conducted in one city and within one hospital. Surveys were administered only in English to a convenience sample of 100 participants. The identities used

to capture structural stress may not constitute the multitude of identities which intersect and place individuals along a continuum of disadvantage to privilege. Before concluding that there is no association between intersecting identities and psychological stress, we must consider that (a) there may have been other disadvantaged identities not and/or (b) the PSS may not have been the ideal tool for capturing the implications of disadvantage and privilege. Finally, analysis by race, ethnicity, and gender was not possible in this investigation because of sample size but should be considered in future investigations.

### Implications for Theory Development and Future Research

While the concept of intersectionality has been present within feminist and social science research for the past two decades, it is a relatively new concept within health research (Rogers & Kelly, 2011) and operationalizing the concept for use in health disparities research is complicated (Bauer, 2014). Specifically, deciding which “identities” to include when applying intersectionality to health disparities and social determinants of health research is still under debate. McGibbon and McPherson (2011, p. 65) suggest a synergistic approach through use of a framework that includes three intersectional components: (a) intersections of social determinants of health, (b) intersections of identity as social determinants of health, and (c) social determinants of health: Geographies (Figure 5). They propose that it is precisely where these identities intersect that reveals complexities of the social impact of health across the life span (McGibbon & McPherson, 2011). To this end, further research determining which identities capture potential sources of structural stress is needed to better understand the potential implications of disadvantage and privilege on health outcomes. Finally, the definitions of culture offered by study participants were robust and sophisticated and should be integrated into further development of the cultural distress theory.



**Figure 5.** Synergies of oppression: A framework for addressing social determinants of health inequities (McGibbon & McPherson, 2011).

## Summary and Conclusions

This study explored how structural stressors and the experience of otherness influence psychological stress. It also explored how participants define the word “culture” to determine congruence with the definition offered in the theory of cultural distress. Results indicated that structural stressors had no influence on psychological stress but were associated with perceived discrimination. The experience of otherness also strongly influenced psychological stress. Given the association between structural stress and perceived discrimination, additional research is needed to better understand how structural stressors influence psychological stress. Additionally, the characteristics of culture in the theory of cultural distress should be refined to reflect the participant responses from this study. Findings

from this study provide early support for the predictors of cultural distress and suggest fruitful avenues for continued study of the model.


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