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Synergistic effects of pain intensity and experiential avoidance in relation to anxiety symptoms and disorders among economically disadvantaged latinos in a community-based primary care setting

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ABSTRACT

Latinos are subject to numerous health inequalities, including mental health disparity for anxiety and its disorders. In fact, there is strikingly little understanding of transdiagnostic risk factors for the onset and development of anxiety symptoms and disorders among Latinos. To build knowledge in this domain, the present investigation examined the interactive effects of experiential avoidance and pain intensity in relation to anxious arousal, social anxiety, and anxiety disorders among 361 Latino adults with annual incomes of less than $30,000 (87.5% female; M_{age} = 38.8, *SD* = 11.4, and 98.5% used Spanish as their first language) who attended a community-based primary healthcare clinic. As hypothesized, the interaction between experiential avoidance and pain intensity was significantly related to anxious arousal, social anxiety, and a number of anxiety disorders over and above the effects of other factors. The form of the significant interactions indicated that participants reporting co-occurring higher levels of experiential avoidance and pain intensity evinced the greatest levels of anxious arousal, social anxiety, and anxiety disorders. These data provide novel empirical evidence suggesting that there is clinically-relevant interplay between experiential avoidance and pain intensity in regard to a relatively wide array of anxiety problems among Latinos in a primary care medical setting.

1. Introduction

Latinos are among the fastest growing minority groups in the United States (U.S.) and are projected to comprise approximately 40% of the population by 2050 (U.S. Census Bureau, 2000). Yet, notable health disparities for Latinos in the U.S. associated with mental health still exists (U.S. Department of Health & Human Services, 2001). As one illustration, Latinos are less likely than non-Latino whites to utilize mental health services (Miranda & Green, 1999; Ojeda & McGuire, 2006). Additionally, even when Latinos are able to access services, they receive poorer quality of mental health care compared with other ethnicities (Alegria et al., 2008; Lee, Laiewski, & Choi, 2014; Parra-Cardona & DeAndrea, 2016).

Of the mental health problems, anxiety symptoms and disorders are particularly evident among Latinos (Alegria et al., 2008; Grant et al., 2004; Priest & Denton, 2012; Tolin, Robison, Gaztambide, & Blank, 2005; Vega et al., 1998). Lifetime rates of anxiety disorders among Latinos range between 15%–25%, with higher rates among women, U.S. born Latinos, and with a Mexican origin (Alegria et al., 2008; Vega, Sribney, Aguilar-Gaxiola, & Kolody, 2004). Compared to non-Latino Whites, Latinos have been inconsistently reported to have higher, lower, and equal rates of anxiety disorders (Alegria, Sribney, Woo, Torres, & Guarnaccia, 2007; Breslau et al., 2006; Hernandez, Plant, Sachs-Ericsson, & Joiner, 2005). Several factors have impacted such inconsistent results, including measurement variance, and differences among study samples in terms of country of origin, migration/acculturation status, and socioeconomic factors (Chavira & Letamendi, 2015). Yet, it is clear that similar

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to non-Latino Whites, anxiety disorders among Latinos negatively impacts life functioning across domains and is highly related to adverse mental and physical health (e.g. substance abuse and cardiovascular morbidity; Ehlers, Gilder, Criado, & Caetano, 2009; Wassertheil-Smoller et al., 2014).

Physical pain is one health condition that is both highly prevalent and commonly co-occurs with anxiety problems (Gerrits, van Oppen, van Marwijk, Penninx, & van der Horst, 2014; McWilliams, Cox, & Enns, 2003). In fact, pain accounts for more than half of all outpatient primary care visits and primary care patients who endorse more intense pain suffer from more severe forms of anxiety disorders (Bair, Wu, Damush, Sutherland, & Kroenke, 2008). Although limited, available evidence suggests that pain severity is greater among Latinos compared to European Americans. Additionally, among Latinos, heightened pain intensity is related to greater anxiety symptoms and psychopathology (Hastie, Riley, & Fillingim, 2005; Hernandez & Sachs-Ericsson, 2006), as well as disability. Yet, there is limited research on the relation between pain intensity and anxiety and psychopathology among Latinos.

Beyond pain intensity, there has been an increasing recognition of how one reacts to emotional distress in the experience of aversive internal states as an important determinant of mental health (Leventhal & Zvolensky, 2015). One transdiagnostic construct that has received increased scholarly and clinical attention is experiential avoidance. Experiential avoidance reflects individual differences in the tendency to be willing to experience or remain in contact with aversive internal experiences (Hayes et al., 2004; Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). Theoretically, experiential avoidance conceptualizations of anxiety/depressive psychopathology posits that inflexible responding functionally directed at altering the form or frequency of aversive internal experiences (e.g., negative thoughts, bodily sensations) and the contexts that accompany them is a toxic process that distinguishes normal from disordered experiences of emotion (Zvolensky & Forsyth, 2002). Numerous studies among non-Latino Whites, and to a much lesser extent other minority groups (e.g., African Americans; Naifeh, Tull, & Gratz, 2012), have found that experiential avoidance is related to depression (Adams, Tull, & Gratz, 2012; Tull & Gratz, 2008), non-suicidal self injury (Anderson & Crowther, 2012), and anxiety symptoms (Bardeen, Tull, Stevens, & Gratz, 2014; Feldner, Zvolensky, Eifert, & Spira, 2003; Forsyth, Parker, & Finlay, 2003; Karekla, Forsyth, & Kelly, 2004), along with negative mood more generally (Kumpula, Orcutt, Bardeen, & Varkovitzky, 2011). Yet, to the best of our knowledge, experiential avoidance has not been comprehensively explored in relation to anxiety symptoms and disorders among Latinos with the exception of one investigation (Zvolensky et al., 2015a,b). In this study, experiential avoidance was related to depression, suicidality, and anxious arousal symptoms among adult Latinos recruited from a primary care medical center (Zvolensky et al., 2015a,b). Based upon these initial findings, there is a need to broaden our understanding of experiential avoidance as an individual difference variable that may amplify adverse anxiety states among Latinos.

From an integrative perspective, pain intensity and experiential avoidance may also impact one another in their association of anxiety symptoms and disorders among Latinos. Indirect work suggests adaptive emotion regulation strategies (e.g., emotional acceptance) increases tolerance for aversive emotional states and reduce perceptions of emotional intensity (e.g., Kohl, Rief, & Glombiewski, 2012). Informed by these empirical observations, pain intensity and experiential avoidance may operate with one another to increase the probability of greater expression of anxiety symptoms and disorders. This perspective is in accord with diathesis-stress models, which posit elements of emotional vulnerability (experiential avoidance) interact with stress (pain intensity) to 'create' greater risk for negative emotional symptoms (Turk, 2002). Consequently, pain intensity may be exacerbated by an individual's degree of experiential avoidance. Therefore, these psychological processes may function synergistically to confer greater risk for the expression and relative risk for anxiety and symptoms and disorders. From this perspective, a strategic next step in research is to further explore the potential interplay of pain intensity and experiential avoidance as an integrative explanatory process for vulnerability in the expression of anxiety symptoms and disorders among Latinos.

With this background, the aim of the current study was to examine the interactive effect of pain intensity and experiential avoidance in relation to anxiety symptoms and disorders among an economically disadvantaged Latino sample in primary care. It was expected that there would be an interaction between pain intensity and experiential avoidance, such that greater pain intensity and experiential avoidance would be associated with increased anxious arousal and social anxiety symptoms as well as number of anxiety disorders. This set of dependent variables was selected because they are among the most commonly occurring affective symptoms among Latinos with pain problems (Velasco et al., 2016). It also was hypothesized that these interactive effects would be observed over and above the main effects and sex, age, years being in U.S., marital status, education, employment, and negative affectivity.

2. Method

2.1. Participants

Participants ($N = 361$; 87.5% female; $M_{age} = 38.8$, $SD = 11.4$ and 98.5% used Spanish as their first language and self-identified as Latino) were attendees of a community-based primary care integrated healthcare clinic in Houston, Texas. All participants had a household income of less than $30,000 per year. Inclusion criteria for this study included: ability to read, write, and communicate in Spanish and being between 18–64 years old. Participants were excluded based on the following criteria: limited mental competency (inability to produce coherent speech, understand the study, and read the information given) and inability to provide informed, voluntary, written consent; and endorsement of current or past psychotic-spectrum symptoms via structured interview screening. Please see Table 1 for a descriptive summary of the study sample's demographic characteristics. All measures were Spanish language versions (previously translated) and have been employed in past work, as documented below.

As determined by the baseline Mini International Neuropsychiatric Interview 6.0 (MINI), 25.4% of the sample met criteria for current (past year) Axis I psychopathology. Among participants with current psychopathology, the average number of diagnoses per participant was 2.1 ($SD = 1.43$). Approximately 15% of the participants had an anxiety disorder diagnosis. The most common anxiety disorders were agoraphobia (6.1%), posttraumatic stress disorder (5.5%), and panic disorder (3.8%). See Table 1.

2.2. Measures

2.2.1. Demographics questionnaire

Demographic information included sex, age, ethnicity, years in the U.S., educational level, marital status, and employment status.

2.2.2. M.I.N.I. international neuropsychiatric interview 6.0 (MINI)

Trained, Spanish-speaking staff administered the MINI under the supervision of an independent doctoral-level rater. The MINI has demonstrated satisfactory inter-rater reliability, test-retest reliability, and validity (Sheehan et al., 1997). Further, previous research has reported acceptable psychometric properties for the Spanish version of MINI (Bobes, 1998). A random selection of interviews (approximately 12%) were checked for accuracy with no