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Editors

Dr. Rudi Hartono, Universitas Ibn Khaldun Bogor, Indonesia

Dr. Omer Tayfur Ozturk, Necmettin Erbakan University, Turkey

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Contact

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www.istes.org

istesoffice@gmail.com

SECTION I - STUDIES ON SOCIAL SCIENCES

Chapter 1 - Locus of Control Orientation and Pearlin Mastery Scores for Undergraduates Attending Hispanic-Serving Institutions

Christine Dorsett , Michael Preuss , Eric Sosa , Jason Rodin , Jorje Ramos ,
Chenoa Burleson 

Chapter Highlights

- In a project funded by the National Science Foundation, two surveys of students at Hispanic-Serving Institutions (HSI) were completed. The first resulted in input from 463 students at 14 Hispanic-Serving Institutions (HSIs) in New Mexico and Texas. The second included responses from 829 students at four HSIs in north Texas, a state university and three community colleges in its service area.
- This chapter addresses findings from two related subsets of queries, locus of control questions and the Pearlin Mastery Scale.
- On the first survey, Hispanic/Latinx students were found to have both a higher internal and higher external locus of control orientation than their non-Hispanic peers. Regression analysis of Pearlin Mastery Scale scores for the 829 individuals who responded to the second survey showed no significant differences by ethnicity/race, gender, age, status as a first-generation college student, type of institution attended, credit hours completed, years in college, and employment status.
- These results have direct implications for programming at all HSIs in the south-central United States and, by extension, for the over 320 HSIs in the southwest United States.

Introduction

In the US, it is a well-known and recognized fact that students from underrepresented groups have suffered longstanding inequities in educational settings. This includes entrance into and success within the higher education system (Adwere-Boamah, 2015; National Science Board, 2020; Whittaker & Montgomery, 2012). The enormous growth in the Hispanic population of the United States and the growth of the Hispanic population in the higher education system has made the imbalance more evident (Gramlich, 2017; National Center for Education Statistics, 2020). Despite being the largest minority group in the country (US Census Bureau, 2021) and in higher education (Postsecondary National Policy Institute, 2021), persistence in college and degree completion rates paralleling that of persons who identify with a White, European background has not evolved (Chun et al., 2016; Gramlich, 2017). These disparities emphasize the need to understand the characteristics of Hispanic/Latinx students in order to better serve their needs in general and in all spheres of education. As a result, an increasing number of studies are focusing on the background, experiences, and perspectives of Hispanic/Latinx individuals and students in a variety of settings and contexts (Champagne et al., 2016; Flores & Park, 2015; Ramos et al., 2021; Rodriguez Amaya et al., 2018; Zhan & Xiang, 2018).

Hispanic Population

The US has seen a shift in demographics over the last few decades. The country has, for the first time in its history, more than 10% of its citizens in each of the three largest racial groups simultaneously, White, Hispanic, and African American/Black (Abascal, 2015). In addition, the percent of the population that identifies as Hispanic/Latinx has surpassed each of the other groups historically referred to as minorities (Abascal, 2015; U.S Census Bureau, 2016). In 2000, the Hispanics made up 12.5% of the overall population in the US, in 2016 that percentage reached 17.6% (Ruiz et al., 2018; U.S. Census Bureau, 2016) and it is now 18.5% (US Census Bureau, 2021). This represents an increase of nearly 50% in a 20-year period.

In addition, individuals identifying as Hispanic/Latinx are more broadly dispersed across the US (Brooks & Winchell, 2015). Concentration of Hispanic populations was previously more characteristic of states bordering Mexico, such as Texas and California (Brooks & Winchell, 2015). But Hispanic/Latinx individuals have an increasingly large presence in the South and

Midwest as well as the East Coast of the US (Brooks & Winchell, 2015) with even rural Midwestern communities becoming significantly to predominantly Hispanic/Latinx (Kilen, 2017; Kolmar, 2020).

Hispanics and Higher Education

Due to the increase in the Hispanic/Latinx population overall in the US and their having the youngest average age of all ethnic/racial groups in the country (Excelencia in Education, 2020; Flores & Park, 2015), students identifying as Hispanic/Latinx are now entering higher education at all-time highs (Gramlich, 2017). This is paralleled by all-time low high school drop-out rates for Hispanics. A record low was recorded in 2016 with only 6% leaving high school before graduating (Gramlich, 2017; U.S. Census Bureau, 2016). The relative increase in higher education enrollment by Hispanic/Latinx students is larger than that for any other historically underrepresented group in the United States (National Center for Education Statistics, 2017). In 2019, the college enrollment percentage for Hispanics 18-24 years of age was at an all-time high of 36%, only five percentage points behind Whites of the same age (Postsecondary National Policy Institute, 2021).

Although Hispanics are entering higher education at record setting levels, their retention rate is still low (Chun et al., 2016). Excelencia in Education's U.S. Fact Sheet (2020) shows Hispanic/Latinx students discontinue pursuit of degrees at two- and four-year institutions at higher rates than their White peers. Retaining them in study is a significant concern across higher education (Green & Wright, 2017; Lotkowski et al., 2004; Pappamihel & Moreno, 2011).

First Generation Status

A challenge that has been investigated for decades (Pascarella et al., 2004; Terenzini et al., 1997; York-Anderson & Bowman, 1991) and that is often faced by Hispanic/Latinx students is being first-generation college students (Pyne & Means, 2013; Reyes & Nora, 2012). First-generation students are commonly understood to be the first person in their immediate family to attend an institution of higher education a conception slightly broader than the definition in the Higher Education Act of 1965, individuals "whose parents did not complete a baccalaureate degree" (US Department of Health, Education, and Welfare, 1965, para. 19).

Hurtado, Ramirez, and Cho note that over fifty percent of Latinx students entering higher education are first-generation students (as cited in Batista et al., 2018, pg. 7). Support for that assertion was found by the authors of this paper in respect to students attending HSIs in north Texas (Preuss et al., 2021) although the definition of first-generation college student employed included students pursuing degrees at two- and four-year institutions.

First-generation college students have more difficulties transitioning from secondary education to higher education (Pascarella et al., 2004). This can include financial (Hurtado, Rameriz & Cho in Batista et al., 2018), social (Katreovich & Aruguete, 2017; Martinez et al., 2009), cultural (Stephens et al., 2012; Ward et al., 2012), and academic elements (Katreovich & Aruguete, 2017; Martinez et al., 2009) as well as the stress of dislocation if the student moves out or away from their home or community (Pascarella et al., 2004). An unfortunate outcome is that first-generation students are more likely to drop out of higher education after the first year than students whose parents hold college degrees (Goodman et al., 2020; Woosley & Shepler, 2011).

Hispanic/Latinx students whose families have college experience often do not attain the same level of retention as second-generation students from other ethnic groups (Kouyoumdjian et al., 2017; Latino et al., 2020). Correspondingly, Hispanic students, first-generation or otherwise, are also dropping out of higher education at the highest rates of all minority groups in the US (Kouyoumdjian et al., 2017; Latino et al., 2020). Yet, Hispanics are much more likely to complete to degree if they attend an institution designated as an HSI or begin their academic career at a community college (Kouyoumdjian et al., 2017). This is likely due to a combination of factors operating in academic, psychosocial, financial and/or cultural realms (Hurtado, Rameriz & Cho in Batista, Collado & Perez, 2018; Katreovich & Aruguete, 2017; Kouyoumdjian et al., 2017; Ward et al., 2012).

Cultural Influences

Individualism is a primary characteristic of mainstream culture in the United States (Ruiz et al., 2018). Individualism is generally characterized by a cultural orientation towards the self as an independent being with emotional independence, self-reliance, and freedom of choice (McCarty & Shrum, 2001). On the other hand, collectivism emphasizes conformity and group harmony, with the self being seen as a member of a larger group (McCarty & Shrum,

2001). Individualism is typically found in Western cultures, such as the US, Canada, Australia, and the United Kingdom (Cheng et al., 2013). Collectivism is widely recognized as a characteristic of Eastern cultures like Japan, China, and Korea (Cheng et al., 2013).

Collectivism has two subcategories. Harmony collectivism emphasizes balance and harmony in social relationships (Ruiz et al., 2018). Its foundations in Eastern cultures exist in Confucianism, Buddhism, and Daoism, which emphasize the importance of avoiding conflict in social relationships and avoiding displays of negative emotions (Cheng et al., 2013; Lin & Huang, 2014; Ruiz et al., 2018). Harmony collectivism also highlights the ability of one to adapt to his/her environment and cope with changes in the environment (Cheng et al., 2013; Lin & Huang, 2014; Ruiz et al., 2018).

The other subcategory of collectivism is convivial collectivism (Ruiz et al., 2018). Convivial collectivism is the form prevalent in Latinx and Hispanic cultures, especially those in the United States and Central and South America (Ruiz et al., 2018). The focus of convivial collectivism is the construction and maintenance of social relationships through positive emotions, interdependence, and shared activities (Ojeda et al., 2014; Ruiz, 2005). This pattern helps build social capital and communal coping, the ability for members of the group to share and take turns accessing this social capital in times of need (Cheong, 2006; Ruiz et al., 2018). This can include soliciting others for help with family-oriented tasks, including anything from babysitting to assistance with a monthly bill or care of an elderly family member (Calzada et al., 2013). Important values of convivial collectivism include familismo, simpatia, and respeto, the values related to family, interpersonal harmony, and respect (Calzada et al., 2013; Knight et al., 2010; Knight et al., 2018; Lorenzo-Blanco et al., 2012). This research team recently confirmed that non-Hispanics working at HSIs in the south-central United States recognize these as elements of Hispanic culture and that their Hispanics/Latinx peers were even more predisposed to acknowledge them as elements of Hispanic cultures (Preuss, et al. 2019; Preuss et al. 2020).

Familismo

Familismo, also known in the literature as familism, is a key value in convivial collectivism (Calzada et al., 2013; Ruiz et al., 2018). Familismo is defined as strong in-group frame of reference that emphasizes the importance of family goals (Ruiz, 2005; Ruiz et al., 2018). This

value can be seen in Hispanic/Latinx contexts in the emphasis on time with family and reliance on family social support (Calzada et al., 2013; Lorenzo-Blanco et al., 2012).

There are two interrelated forms of familismo, attitudinal and behavioral (Calzada et al., 2013). Attitudinal familismo relates to the individual's perspective of family, which include feelings of familial loyalty, elevating family goals over personal goals, honor for the family, and interconnectedness with family members (Steidel & Contreras, 2003; Stein et al., 2014). Behavior familismo refers to the actions extending from attitudinal familismo and includes family assistance with childrearing, elderly care, and residing near family or shared living arrangements with multigenerational members of the family (Calzada et al., 2013).

Familismo has a continuum of benefits and costs. In a study examining responses to questions asked of Latinx mothers regarding familismo, several benefits found were help with childcare and financial needs as well as easily accessible social capital. Costs were sacrifice of personal space, psychological stress, loss of freedom of choice, and potential sacrifice of one's personal goals like attending college (Calzada et al., 2013). Sacrifices of that type occur when obligations to the family outweigh the wants or needs of the individual (Calzada et al., 2013; Knight et al., 2018).

Simpatia

Simpatia is another cultural concept relating to convivial collectivism in many Hispanic/Latinx cultures. Individuals who possess high simpatia are characteristically polite, agreeable, and friendly (Ramirez-Esparza et al., 2008). In fact, simpatia is commonly thought to align with the "Big Five" personality trait of Agreeableness, which encompasses generosity, kindness, sympathy, and politeness (Knight et al., 2010; Knight, et al., 2018; Ramirez-Esparza et al., 2008). Simpatia is also linked with the promotion of harmony, conflict avoidance, and the limiting of negative behaviors in public settings (Lorenzo-Blanco et al., 2012; Ramirez-Esparza et al., 2008).

Respeto

Respeto is also a cultural concept that is part of convivial collectivism and Hispanic/Latinx cultures. It is valuing and exhibiting respect for family members and elders and encourages

this behavior to protect the harmony in familial relationships (Espinosa-Hernández et al., 2017; Miller, 2013). This, however, is not to be confused with familismo, which advocates for familial loyalty, whereas respeto dictates that family members are to behave and treat others, especially family, with respect and exhibit respectful, polite behavior (Knight et al., 2010; Knight et al., 2018; Lorenzo-Blanco et al., 2012). Respeto involves learning and filling one's place in the social order of the family especially in relation to age, gender, and social status (Calzada et al., 2010). This can include such behavior as being considerate and thoughtful of adults, particularly during conversation, as younger children are expected not to interrupt and to learn how to be polite and take turns (Calzada et al., 2010; Lorenzo-Blanco et al., 2012).

Each of the values discussed, familismo, simpatia, and respeto, is related to convivial collectivism as it is practiced in Hispanic/Latinx contexts. Because each influences formulation of individual identity within family and culture, they have the potential to influence broader psychosocial constructs like locus of control and mastery.

Locus of Control

Because of increasing numbers of the Hispanic/Latinx students entering higher education, it is important to identify possible constructs and variables that might be contributing to the low retention rates of these students (Kouyoumdjian et al., 2017). One important cultural variable that deserves examination is that of locus of control (LOC). Developed by Rotter (1966), LOC refers to the degree to which a person feels s/he is in control of his/her choices and environment. According to Rotter (1996),

an individual perceives the outcome of an event as being either within or beyond his or her personal control and understanding. An 'internal' believes that one has influence over outcomes through ability, effort, or skills. On the other hand, "externals" believe that forces outside the control of the individual determine outcomes.

LOC occurs on a continuum, from high internal locus of control to high external locus of control (Cheng et al., 2013; Rotter, 1966). Internal locus of control, as just noted, is the degree to which a person feels their environment is influenced by their own actions and decisions (Cheng et al., 2013; Kang et al., 2013; Rotter, 1966). In contrast, external locus of control refers to the degree to which a person feels that their environment is influenced by

outside forces, such as luck, chance, or fate (Cheng et al., 2013; Kang et al., 2013; Rotter, 1966).

LOC is one of the many cultural lenses impacting peoples' view of the world that can have implications on different aspects of life. Depending where a person falls on the continuum, there are a wide variety of implications including patterns of cognition and acting to influence one's life and environment (Cheng et al., 2013; Mueller & Thomas, 2001). Measures of LOC have been researched in numerous cultures and countries, and this psychological construct has been found to be consistent across the globe (Cheng et al., 2013; Mueller & Thomas, 2001; Smith et al., 2007). Furthermore, LOC orientation seems to be highly culturally dependent (Cheng et al., 2013; Smith et al., 2007). LOC orientation is thought to be acquired and not an innate process, and its means of transmission and reinforcement are highly dependent on social learning (Cheng et al., 2013; Mueller & Thomas, 2001).

Due to the acquisitional nature of this construct, culture plays a large role in what type of LOC orientation people are likely to possess. For instance, persons in individualistic cultures typically score higher on measures of internal LOC in which a person feels more able to impact or manipulate his/her environment (Cheng et al., 2013; Spector et al., 2001). This includes many Western cultures, such as those of the US, UK, Canada, and Australia. Additionally, persons who score higher on external LOC are likely to be from collectivistic cultures and feel outside forces are more pivotal in the determination of the outcomes (Cheng et al., 2013; Hofstede et al., 2010). External LOC is commonly encountered in Asian and Latin American cultures (Cheng et al., 2013; Spector et al., 2001).

What is especially noteworthy is that LOC orientation has been thoroughly studied and has implications in a variety of areas of life. Many studies have found that having a high internal locus of control is correlated with several other positive constructs. This includes several health and wellness constructs, overall stress levels, academic stress and satisfaction with life, self-efficacy, metacognition, and academic success (Bollini et al., 2004; Hrbáčková et al., 2012; Kang et al., 2013; Karaman et al., 2018; Roddenberry & Renk, 2010).

LOC orientation has also been explored in the health and wellness setting. In a study examining the differences in viewpoints of Hispanic/Latinx individuals in the healthcare setting, it was found that parties with a higher internal health LOC felt that their health care,

such as maintenance care of certain ailments, was more in their own control (Champagne et al., 2016). This type of orientation in the healthcare setting could have implications for how one views ability to impact and control chronic conditions like diabetes or high blood pressure. In a meta-analysis examining health attitudes and acculturation of Hispanics, it was found that parties with higher external LOC orientation exhibited decreased health benefits, likely due to external LOC leading to feeling less control over health and wellness (Valentine et al., 2008).

LOC orientation has also been found to moderate biological measures of stress. Bollini et al. (2004) examined the relationship between LOC orientation and cortisol levels, a symptomatic hormone released by the body during stress. Participants in this study were subjected to a stressful situation and had both cortisol levels and LOC orientation tested (Bollini et al., 2004). Participants who scored higher on external LOC measures had higher cortisol levels and were more likely to report feeling less control, whereas those scoring higher on internal LOC measures had lower cortisol levels and were more likely to report feelings of control during the induced stressful situation (Bollini et al., 2004).

Szabo, Chang, and Chancellor-Freeland's (2015) study also examined the effects of LOC orientation on cortisol levels. This study induced a stressful situation by giving participants a public speaking task and measured their speech performance and cortisol levels. It was found that those who exhibited higher levels of internal LOC had lower levels of cortisol, whereas those that scored higher on external LOC had higher cortisol levels (Szabo et al., 2015). In addition, the individuals who scored higher on internal LOC had better performance ratings on the public speaking task (Szabo et al., 2015).

Karaman and associates (2018) conducted an elaborate study that examined the different mediating effects of achievement motivation and LOC in relation to academic stress and life satisfaction. In a study of over 300 college students, students were given measures of achievement motivation, satisfaction with life, academic stress, and LOC orientation (Karaman et al., 2018). It was found that students who had a higher external LOC also had higher levels of academic stress and lower life satisfaction, and that those who scored higher on internal LOC had less academic stress and higher life satisfaction (Karaman et al., 2018).

There is, however, little research in the area of LOC and Hispanic/Latinx individuals outside of health and wellness setting. There is virtually no information on LOC patterns among Hispanic/Latinx college students. That provided the impetus for the inclusion of the locus of control question set in the 2018 survey.

Pearlin Mastery Scale

The Pearlin Mastery Scale is a 7-question assessment (Pearlin & Schooler, 1978). The scale was developed in the 1970s to assess stress and coping (Pearlin & Schooler, 1978). Mastery is considered to be a coping resource which collectively “is social or personality resources that people use to help manage stressors and [that] might also attenuate the physiological impact of such stressors” (Roepke & Grant, 2011, p. 616). “Individuals with high levels of mastery trust that they are able to adapt their behaviours, or their circumstances, to reach their important goals, whilst those with low sense of mastery commonly feel powerless with regard to both their internal and external forces” (Clench-Aas et al., 2016, pp. 127-128). It is a “global sense of control or the belief that one has control over future important life circumstances” (Roepke & Grant, 2011, p. 616). Thus, mastery is a broad concept that some researchers include as “one of six components that comprise well-being” (Eklund et al., 2012, p. 381). “Those with a high sense of personal mastery may appraise themselves as capable of coping with or controlling problems in life, and therefore might be less physiologically-impacted by psychological stressors” (Roepke & Grant, 2011, p. 616) due to higher levels of this “personal resource related to coping, self-agency, the existence of a continuous self, empowerment, and well-being” (Eklund et al., 2012, p. 382).

These descriptions introduce the need to distinguish mastery from the related concept, locus of control.

Given the heterogeneity within constructs of control, Skinner (1996) proposed basic distinctions regarding control constructs as an organizational framework. Important distinctions regarding definition and classification of control constructs include: 1) aspects of control (e.g., objective control, subjective control, and experiences of control), 2) agents, means, and ends of control, 3) retrospective versus prospective control, and 4) specific versus general control. Within this framework, Pearlin and Schooler’s (1978) construct of personal mastery would be defined as a control belief that is subjective, prospective, general (or global), and involving the self as the agent of

control. Mastery also reflects beliefs about the general controllability of the environment (i.e., contingency beliefs) as opposed to beliefs exclusively involving one's competence in controlling one's environment (Paquet, et al., 2010; Thompson & Spacapan, 1991). (Roepke & Grant, 2011, p. 617)

This description illustrates that mastery is closely related to locus of control (Roepke & Grant, 2011; Togari & Yonekura, 2015). Yet, "locus of control has more limited focus on the control of conditions that individuals regard as important determinants of their own personal lives" (Togari & Yonekura, 2015, p. 1).

"There is a large body of research reporting that personal mastery and related constructs of personal control are associated" (Roepke & Grant, 2011, p. 616) with health and well-being. These include "improved psychological (Mausbach, et al., 2006) and physical health outcomes (Matthews et al., 2006; Mausbach et al., 2007).... reduced risk for mortality (Penninx, et al., 1997)....also buffer[ing] the impact that chronic stress can have on disease (Ma et al., 2007; Mausbach et al., 2007; Mausbach et al., 2008)" (Roepke & Grant, 2011, p. 616).

The applicability of the Pearlin Mastery Scale to cultural and linguistic setting other than North America and English has also been investigated. A small study conducted by Gordon et al. (2018) examined the structural validity of the Pearlin Mastery Scale when translated into Spanish and administered to Hispanic/Latinx patients from community clinics. The patients were diagnosed with ongoing health concerns, such as Type 2 diabetes, and were native Spanish speakers (Gordon et al., 2018). The study found that the Pearlin Mastery Scale, translated to Spanish, was no longer a reliable and valid measure although it is worth noting that the researchers make no mention of back-translation and did not use the full version of the scale, rather a shorter, five question version (Gordon et al., 2018). Similarly, in Togari and Yonekura's (2015) study, the Pearlin Mastery Scale was administered to 5,000 native Japanese men and women to test its validity and reliability in the Japanese language (Togari & Yonekura, 2015). The instrument was translated from English to Japanese and back-translated as a check for accuracy. The study found that the Pearlin Mastery Scale was a poor fit for Japanese (Togari & Yonekura, 2015). Eklund et al (2012) completed a similar process with regard to Swedes and Swedish with a sample of "330 healthy persons and 278 persons with mental illness" (p. 381) with mixed results. Part of the translated scale produced valid and reliable results and the remainder could be "corrected...by collapsing categories"

(p. 381). While it appears the Pearlin Mastery Scale is “not truly generic” (Eklund et al., 2012, p. 381), it is a valid and reliable instrument for English speaking populations in North America (Pearlin et al., 1981; US Bureau of Labor Statistics, n.d.).

Methodology

Data Gathering

The material presented was part of a larger study funded by the National Science Foundation. Four other journal articles (Preuss et al., 2020b; Preuss et al., 2020c; Preuss, et al., 2021; Ramos et al., 2021), a report for a regional non-profit (Preuss et al., 2019b), and seven conference presentations (Dorsett, 2018; Preuss et al., 2019a; Preuss et al., 2019c; Preuss et al., 2020a; Preuss & Sosa, 2019; Preuss & Sosa, 2020; Rodin, 2018) have been completed based on the findings. As that is the case, an abbreviated consideration of methodology will be presented here referencing the more detailed accounts already in print.

The results reported are from the data gathered for National Science Foundation Award # 1764268. The research methodology and materials were submitted for and received approval from an Institutional Review Board at a state university. The initial investigative activity was focus groups at the “Consejos Colectivos conference held in Dallas, Texas in late February of 2018” (Ramos et al., 2021, p. 5). Additional data in the initial stage was gathered following the conference as “targeted interviews with audiences under-represented or not included in the focus groups...[and] all session recordings were transcribed” (Ramos et al., 2021, p. 5). The authors of this article collaborated in “open qualitative coding (Kolb, 2012)” (Preuss et al., 2021, p. 292) of the focus group and interview transcripts. “The results of the coding, material from the literature, suggestions from conference team members, and the professional experience of the authors’ were employed to create surveys that were distributed to 119 HSIs in a four-state region” (Preuss et al., 2021, p. 292). While the original plan had been surveying parties “at all HSIs in a seven-state region (AR, CO, KS, LA, NM, OK, TX)...it was discovered that there were no officially recognized HSIs in three of the states when distribution lists were prepared for the survey” (Ramos et al., 2021, p. 6). Thus, the survey was limited to institutions in “Colorado, Kansas, New Mexico, and Texas” (Preuss et al., 2021, p. 292).

The 2018 survey for students included “33 questions, many of which were multipart queries...[and] was distributed by sending e-mail announcements with an embedded link to over 1,500 faculty, staff, and administrators at the 119 HSIs in the four-state region. A similar e-mail was sent to 39 individuals who had volunteered at the Consejos Colectivos conference to assist with survey distribution. The Texas Association of Chicanos in Higher Education also distributed the survey link to their members” (Ramos et al., 2021, p. 6). This was an indirect means of contact as “the e-mail asked the recipient to share the survey link with students at their institution, should they be in direct contact with students, or with their colleagues who were in direct contact with students” (Preuss et al., 2021, p. 292). To aid in recruitment of participants, “members of the research team solicited participation in person at the dining commons and the student center food court of their institution, through their personal network of faculty contacts, and through college groups at churches” (Ramos et al., 2021, p. 6).

The 2018 survey remained open for submission of responses “for a three-week period from the end of April to the middle of May in 2018” (Ramos et al., 2021, p. 6). The survey was accessed by a “total of 585 students in three of the four states, Colorado, New Mexico and Texas....They attended 15 distinct colleges and universities, ‘one university in Colorado, three four-year and two two-year institutions in New Mexico, and five four-year and four two-year institutions in Texas’ (Preuss et al., 2020b, p. 62)” (Ramos et al., 2021, p. 6). Submissions were reviewed to see that they came from “a student from an HSI...[and for] completeness, and consistency” (Ramos et al., 2021, p.6).

Student self-reports of the institution they attended were “used to check that submissions came from students at HSIs. ‘The limited number of responses from the university in Colorado were not included [for analysis] as it was not an HSI’ (Preuss et al., 2020b, p. 62). This action and removing incomplete responses left a total of 464 usable response sets from students” (Ramos et al., 2021, p. 6) for the 2018 survey. “An additional student’s responses were excluded for being inconsistent leaving a total of 463 respondents attending 14 HSIs in New Mexico and Texas” (Ramos et al., 2021, p. 6).

In the spring of 2019, the research team revised the initial student survey. This involved removing some queries that had proven ineffective, adding a demographic marker, rephrasing some questions, shifting response patterns to 0 to 10 scales from select all that apply and five-point Likert scales, replacing the original familism and locus of

control questions with valid and reliable question sets, and shifting the focus of a subset of questions from role models to mentors (Preuss et al., 2021, p. 293).

The updated survey was made available to students at four Hispanic-Serving Institutions in north Texas.

It was first deployed at a community college in the spring of 2019. The research team solicited student participation by approaching students in the dining commons and the student center. Faculty members were also asked to present in their classes that students had the opportunity to participate in the survey. After initiating solicitation at the community college, respondents were also sought at a state university in the region using the same methods. Following that effort, the focus shifted to a second community college. The research team solicited participation by working with faculty who distributed the link to the survey in their classes or via e-mail (Preuss et al., 2021, p. 293).

Faculty members at a third community college were encouraged by their administration to “distribute the survey link to their students in class or via e-mail” (Preuss et al., 2021, p. 293). In every case, survey “solicitation processes were completed with the permission of the appropriate administrators” (Preuss et al., 2021, p. 293).

When students at all the institutions had been given opportunity to submit responses, 912 individuals “accessed the survey” (Ramos et al., 2021, p. 6) for 2019. Six were eliminated from the data set as they could not be verified as attending an HSI. “Eight more were students who identified themselves as attending an R01 institution in the region that became an HSI in 2017. The remaining...parties accessed the survey without completing it” (Preuss et al., 2021, p. 293). All these responses were “excluded from data analysis as they came from outside the population of interest and/or were without usable information” (Preuss et al., 2021, p. 293) resulting in “829 usable submissions from the four HSIs in north Texas, one regional, comprehensive state university and three community colleges” (Preuss et al., 2021, p. 293).

Data Analysis

Statistical analyses of responses for the 2018 queries addressing locus of control orientation were completed using SPSS. While it was possible to disaggregate submissions by “employment...types of work (i.e., on and off campus, part- and full-time)...hours worked

per week...gender, age, ethnicity, relationship status, and state” (Ramos et al., 2021, p. 6) for analysis, this report focuses on the influence of ethnic identity on responses to LOC and Pearlin Mastery Scale questions. Detailed accounting of differences found for a wide variety of topic areas and based on other factors can be found in Preuss et al (2020a and 2020b), Ramos et al. (2021), and Preuss et al. (2021). Mann Whitney U tests were completed with the locus of control responses in the 2018 response set.

Pearlin Mastery Scale responses must be manipulated to produce a composite score (Pearlin & Schooler, 1978; U.S. Bureau of Labor Statistics, n.d.). This involves reversing several of submitted ratings (Science of Behavior Change, n.d.; U.S. Bureau of Labor Statistics, n.d.). After completing that process, regression analysis was performed with the following factors considered as variables: (1) gender, (2) ethnicity, (3) age, (4) standing as a first-generation college student, (5) type of institution attended (two-year or four-year), (6) number of credit hours earned, (7) years of college completed, (8) employment status (employed versus unemployed), and (9) level of employment (part-time or full-time).

Limitations

Limitations exist for the information being reported. The survey prompts employed for locus of control measures in the 2018 instrument “were developed by the project team and while they were reviewed for face validity by Hispanic/Latinx and non-Hispanic students and higher education professions and were piloted with a group of students, they cannot be seen as having demonstrated validity and reliability” (Preuss et al., 2021, p. 294).

The data was submitted as self-reports. While the questions requested information about the informant and his/her background, experiences, and opinions, there was no means of checking the accuracy of the submissions. “Because the responses were submitted anonymously and none of the information requested is generally considered to be of a sensitive nature, it is possible but unlikely informants felt a need to shield themselves by providing inaccurate information” (Ramos et al., 2021, p. 7).

The findings are descriptive. The focus of the queries in the two question sets considered was student opinion rather than why the opinion was held. “Informants were not asked whether

they were attending college part-time or full-time” (Ramos et al., 2021, p. 7) on the 2018 survey which would have made one additional form of analysis possible.

Gordon et al.’s study indicates that translating the Pearlin Mastery Scale to Spanish results in an instrument that is not reliable. In the authors’ investigation, the percentage of informants who have Spanish as their first language is known, 17.8%, but the impact of taking a survey written in your second language that appears to include linguistic/cultural constructs that do not consistently translate to the informant’s first language (Eklund et al., 2012; Gordon et al., 2018; Togari & Yonekura, 2015) is unknown. Thus, it must be allowed that linguistic/cultural influences may have impacted responses on the Pearlin Mastery Scale for at least some of the Hispanic/Latinx informants in 2019.

Results

Survey Informant Demographics

The demographics for respondents to the 2018 survey aligned well with the student populations of the institutions they attended (Ramos, et al., 2021). Gender distribution was similar; 61.0% of the sample identified as female, 38.1% male, 0.5% nonbinary (0.5% did not submit a response) while 59.4% of the student population of the 14 institutions identified as female and 40.6% as male. The survey sample included a slightly higher percentage of Hispanic/Latinx individuals than the overall student population, 45.9% to 41.7%, and African Americans were undersampled while Whites were slightly over-represented (Ramos et al., 2021). Traditional aged college students made up 84.1% of the 2018 sample though this could not be compared to the population as many of the colleges and universities did not report student age in their institutional student profiles. With a total population calculated at 172,271 the “usable responses exceed the threshold...for a 95% level of confidence with a 5%” (Preuss et al., 2021) interval (i.e., 4.54% interval at the 95% level of confidence).

The estimated student population for the four institutions included in the 2019 survey was “28,259. The 829 usable responses received” (Preuss et al., 2021, p. 295) have a 4.41% confidence interval at the 99% level of confidence. Like for the 2018 survey, it was possible to check the gender, ethnicity, and racial distribution of the sample. Persons identifying as female were 61.0% of the sample and 58.8% of the student population, male 37.7% and 41.2% (Preuss et al., 2021). Hispanic/Latinx parties were 40.4% of the 2019 sample and

34.2% of the student population. The racial distribution was similar in all categories and 83.7% of the students were traditional age for college, 18 to 24 years of age. In both cases, the sample was an appropriate approximation of the student population. The samples were also large enough that the results can be treated with a minimum 95% level of confidence.

LOC Orientation

Four questions related to LOC, all created by the project team, were included in the 2018 survey (Table 1). Three addressed internal locus of control and one focused on external locus of control. Prior to being deployed, the questions were piloted with a group of undergraduate students ($n = 9$) and assessed as having face validity by faculty representatives of the Texas Association of Chicanos in Higher Education. Responses were submitted using a traditional five-point Likert scale that extended from Strongly Disagree to Strongly Agree. The Mann-Whitney U test was employed for analysis. For each of the four questions there were statistically significant differences between responses received from Hispanic/Latinx informants and their non-Hispanic peers.

Table 1. Results of Statistical Analysis for Locus of Control Questions

Prompt	MR Hisp	MR non-Hisp	p value
I feel confident I can achieve my goals in college.	223.19	185.13	< .001
If I work hard, I can reach my goals in college.	221.14	186.15	< .001
I am in control of my own success.	225.86	182.63	< .001
There are obstacles to my success that are outside my control.	216.16	191.57	= .027

Note: Mean rank is abbreviated MR.

Studies published in the health and wellness field (Bollini et al., 2004; Champagne et al., 2016; Jardin et al., 2017; Ruiz et al., 2018) suggest Hispanic/Latinx students would score low on constructs related to internal LOC and high on constructs related to external LOC. However, the students identifying as Hispanic/Latinx, 45.9% of the sample, scored higher than their non-Hispanic peers at statistically significant levels on measures of internal as well as external locus of control.

Pearlin Mastery Scale Findings

Regression analysis completed with the Pearlin Mastery Scale composite scores returned no significant results. The variables considered, as noted above, were student: (1) gender, (2) ethnicity, (3) age, (4) standing as a first-generation college student, (5) type of institution attended (two-year or four-year), (6) number of credit hours earned, (7) years of college completed, (8) employment status (employed versus unemployed), and (9) level of employment (part-time or full-time).

The sample was entirely students enrolled in higher education at HSIs in north Texas. While 40.4% of them identified as Hispanic/Latinx and 17.8% had Spanish as their first language (Preuss et al., 2021), these were persons attending institutions who draw a student population from the region, predominantly Texas, then for the four-year institution to a much smaller degree from New Mexico, Oklahoma, and Kansas, with a limited number of persons from outside that area. The students' backgrounds would, as a result, include extensive background in English-language-based educational settings and substantial experience with American cultural. They were, in fact, sufficiently confident in their skills in English to enroll in college courses taught entirely in that language. These factors, even with an audience of mixed ethnic identity and 17.8% second language speakers of English, suggest that the Pearlin Mastery Scale would return valid and reliable results since it was being deployed in the language and culture in which it was developed (Pearlin et al., 1981). The absence of significant differences can, then, be interpreted in respect to level of mastery. There was no assessed subset of the sample that exhibited consistently higher "levels of mastery [indicating more] trust that they are able to adapt their behaviours...or their circumstances...to reach their important goals" (Clench-Aas et al., 2016, pp. 127-128) than their peers when controlling for all other variables. In fact, the adjusted R^2 value indicated that the model explained little of the variance present in the group, only one-half of one percent. This is an important finding should other studies confirm it. That Hispanic/Latinx students did not exhibit significantly different levels of mastery in comparison to their non-Hispanic peers validates acting on a basic assumption in American higher education, that students believe they have the ability to influence their behavior and circumstances, in instruction and support programming at the more than 120 Hispanic-Serving Institutions in NM, KS, and TX and the 320+ in the southwest United States.

Conclusion

To the best of the authors' knowledge, both data sets discussed are the first of their kind in the breadth of topics addressed specific to students attending HSIs. Thus, conclusions and applications based on the findings must be seen as tentative. It is also important to note that the findings come from a region in which Mexican cultural heritage is the predominant form of Hispanic/Latinx culture (Preuss, et al., 2019b; Preuss et al., 2021) and application of findings in setting with broader diversity in Hispanic cultures may be limited. However, two large samples of students from HSIs returned important findings that align with the cultural milieu of the region and that are mutually supportive. That Hispanic/Latinx students had significantly higher external locus of control than non-Hispanics is what would be expected for members of a collectivist culture (Ojeda et al., 2014; Ruiz, 2005; Ruiz et al., 2018). That they would also have a significantly higher internal locus of control, "the degree to which one attributes reinforcement as being contingent upon one's own behaviors versus a result of environmental forces out of one's control" (Roepke & Grant, 2011, p. 3), aligns with Mexican-American cultural heritage, the predominant Hispanic/Latinx culture in the region, in respect to the emphasis on hard work (Aoki, 2010; Duda, 1985; Luzzo, 1997; Preuss et al., 2019a; Preuss et al., 2019b) and confidence in one's ability to succeed (Arellano & Padilla, 1996; Knight et al., 2010; Preuss et al., 2019a; Preuss et al., 2019b). The finding that students at HSIs who identify as Hispanic exhibited no significant difference from their non-Hispanic peers in respect to mastery supports the above as persons with higher levels of mastery "may appraise themselves as capable of coping with or controlling problems in life" (Roepke & Grant, 2011, p. 616) trusting "that they are able to adapt their behaviours, or their circumstances, to reach their important goals" (Clench-Aas et al., 2016, pp. 127-128). Thus, though these findings need to be confirmed by further investigation, they are consistent with each other. That they resulted from two different but large samples in the same region of the United States one year apart supports their being trustworthy, although for regions with greater variety in Hispanic/Latinx culture, the findings may be less applicable.

Individuals from underrepresented groups in the US have faced increased difficulty succeeding in the higher education system than Whites (Chun et al., 2016; Zepke & Leach, 2005) including Hispanic/Latinx students, especially those who are first- or second-generation students (Garcia, 2010; Pascarella et al., 2004). Understanding cultural norms and values of these persons and groups is pivotal in the promotion of their success in higher

education (Batista et al., 2019; Chun & Evans, 2016; Chun et al., 2016). Understanding aspects of Hispanic culture, such as collectivism, familism, respeto and how they relate to sense of identity, perspectives, and behavior, can facilitate implementation of affirming and culturally responsive programming (Aguilar, 2019; Chun & Evans, 2016; Hutchinson & McAlister-Shields, 2020; Larke, 2013; Wlodowski & Ginsberg, 1995) that can support broader academic success and retention for students identifying as Hispanic/Latinx (Kang et al., 2013; Karaman et al., 2018; Hrbáčková et al., 2012) as well as supporting the health and wellness benefits associated with LOC for them (Bollini et al., 2004; Karaman et al., 2018; Szabo, Chang, & Chancellor-Freeland, 2015; Valentine et al., 2008).

Future Directions

The study results reported are encouraging but require further verification. Additional studies must be completed to confirm the findings, especially those related to LOC for which the questions asked had only face validity and might not be reliable. Confirmation would facilitate application of relatively simple psychological constructs in support of Hispanic/Latinx student success as well as potentially advancing health and wellness benefits associated with internal LOC orientation (Bollini et al., 2004; Karaman et al., 2018; Szabo et al., 2015; Valentine et al., 2008) for them at HSIs and other institutions of higher education across the United States.

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References

- Abascal, M. (2015). Us and them: Black-White relations in the wake of Hispanic population growth. *American Sociological Review*, 80(4), 789-813.
- Adwere-Boamah, J. (2015). Equity of access to higher education: An uncheerful prospect. *Journal of the World Universities Forum*, 8(4), 19-26. DOI: 10.18848/1835-

2030/CGP/v08i04/56875

- Aguilar, R. M. (2019). *Culturally responsive pedagogy and Latinx educators in higher education: A case study* (Publication no. 27545704) [Doctoral dissertation, Texas A&M University – Corpus Christi]. ProQuest Dissertations & Theses Global.
- Aoki, E. (2010). Mexican American ethnicity in Biola, CA: an ethnographic account of hard work, family, and religion. *Howard Journal of Communications*, 11(3), 207-227.
- Arrellano, A. R. & Padilla, A. M. (1996). Academic invulnerability among a select group of Latino university students. *Hispanic Journal of Behavioral Sciences*, 18(4), 485-507. <https://doi.org/10.1177/07399863960184004>
- Batista, A., Collado, S. M. & Perez II, D. *Latinx/a/os in higher education: Exploring identity, pathways, and success*. Washington, DC: National Association of Student Personnel Administrators.
- Bollini, Walker, Hamann, & Kestler. (2004). The influence of perceived control and locus of control on the cortisol and subjective responses to stress. *Biological Psychology*, 67(3), 245-260.
- Brooks, K., & Winchell, D. (2015). Hispanic population in Washington state: Demographic change and spatial clustering. *Papers in Applied Geography*, 1(2), 1-8.
- Calzada, E., Fernandez, Y., & Cortes, D. (2010). Incorporating the cultural value of respeto into a framework of Latino parenting. *Cultural Diversity & Ethnic Minority Psychology*, 16(1), 77-86.
- Calzada, Esther J., Tamis-LeMonda, Catherine S., & Yoshikawa, Hirokazu. (2013). Familismo in Mexican and Dominican families from low-income, urban communities. *Journal of Family Issues*, 34(12), 1696-1724.
- Champagne, B., Fox, R., Mills, S., Sadler, G., & Malcarne, V. (2016). Multidimensional profiles of health locus of control in Hispanic Americans. *Journal of Health Psychology*, 21(10), 2376-2385.
- Cheng, C., Cheung, S., Chio, J., & Chan, M. (2013). Cultural meaning of perceived control: A meta-analysis of locus of control and psychological symptoms across 18 cultural regions. *Psychological Bulletin*, 139(1), 152-188.
- Cheong, P. H. (2006). Communication context, social cohesion, and social capital building among Hispanic immigrant families. *Community, Work and Family*, 9(3), 367-387, DOI: 10.1080/13668800600743495
- Chun, E. & Evans, A. (2016). *Rethinking cultural competence in higher education: an ecological framework for student development*. Hoboken, NJ: John Wiley & Sons.

- Chun, H., Marin, R., Schwartz, J., Pham, A., & Castro-Olivo, S. (2016). Psychosociocultural structural model of college success among Latina/o students in Hispanic-serving institutions. *Journal of Diversity in Higher Education*, 9(4), 385-400.
- Clench-Aas, J., Nes, R. B. & Aaro, L. E. (2017). The perceived constraints subscale of the Sense of Mastery Scale: Dimensionality and measurement invariance. *Quality of Life Research Journal*, 26, 127-138. DOI: 10.1007/s11136-016-1359-6
- Dorsett, C. (2018, November 1-2). *Locus of control among undergraduate students at Hispanic-serving institutions* [Conference presentation]. 15th Annual Pathways Student Research Symposium. West Texas A&M University, Canyon, TX, United States.
- Duda, J. L. (1985). Goals and achievement orientations of Anglo and Mexican-American adolescents in sport and the classroom. *International Journal of Intercultural Relations*, 9, 131-150.
- Eklund, M., Erlandsson, L. K., Reg, O. T. & Hagell, P. (2012). Psychometric properties of a Swedish version of the Pearlin Mastery Scale in people with mental illness and healthy people. *Nordic Journal of Psychiatry*, 66(6), 380-388. <https://doi.org/10.3109/08039488.2012.656701>
- Erlach, D. (2000). Hispanics and higher education: Multicultural myopia. *Journal of Education for Business*, 75(5), 283-285.
- Espinosa-Hernández, G., Bissell-Havran, J., Van Duzor, A., & Halgunseth, L. (2017). Romantic relationships in Mexico: Understanding the role of parenting and respeto in adolescence. *Journal of Social and Personal Relationships*, 34(7), 1070-1079.
- Excelencia in Education. (2020). *Latino college completion: United States*. <https://www.edexcelencia.org/sites/default/files/LCCStateStats/Exc-2020-50StateFS-USA-05.pdf> [Retrieved July 1, 2021]
- Flores, S. & Park, T. (2015). The effect of enrolling in a minority-serving institution for Black and Hispanic students in Texas. *Research in Higher Education*, 56(3), 247-276.
- Garcia, M. (2010). When Hispanic students attempt to succeed in college, but do not. *Community College Journal of Research and Practice*, 34(10), 839-847. <https://doi.org/10.1080/10668926.2010.485003>
- Goodman, J., Heddy, B. J. & Cavazos, J. (2020). First-generation college students' academic challenges understood through the lens of Expectancy Value Theory in an introductory psychology course. *Teaching of Psychology*, 1-12.
- Gordon, J. R., Malcarne, V. L., Roesch, S. C., Roetzheim, R. G., & Wells, K. J. (2018). Structural validity and measurement invariance of the Pearlin Mastery Scale in

- Spanish-speaking primary care patients. *Evaluation & the Health Professions*, 41(3), 393–399. <https://doi.org/10.1177/0163278718774942>
- Gramlich, J. (2017). Hispanic dropout rate hits new low, college enrollment at new high. Retrieved from: <http://www.pewresearch.org/fact-tank/2017/09/29/hispanic-dropout-rate-hits-new-low-college-enrollment-at-new-high/>
- Green, S. L. & Wright, C. F. (2017). Retaining first generation underrepresented minority students: A struggle for higher education. *Journal of Education Research*, 11(3), 323-338.
- Hofstede, G., Van Hofstede, G. & Minkov, M. (2010). Cultures and organizations: Softwares of the mind. New York, NY: McGraw Hill Publishing.
- Hrbáčková, Hladík, & Vávrová. (2012). The relationship between locus of control, metacognition, and academic success. *Procedia - Social and Behavioral Sciences*, 69(C), 1805-1811.
- Hurtado, S., Ramirez, J., & Cho, K. (2018). The current Latinx/a/o landscape of enrollment and success in higher education. In Batista, A. E., Collado, S. M. & Perez II, D. (Eds.). *Latinx/a/os in higher education: Exploring identity, pathways, and success*. Washington, DC: NASPA – National Association of Student Personnel Administrators.
- Hutchinson, L. & McAlister-Shields, L. (2020). Culturally responsive teaching: Its application in higher education environments. *Education Sciences*, 10(5), 124-130. <https://doi.org/10.3390/educsci10050124>
- Jardin, C., Mayorga, N., Bakhshaie, J., Garey, L., Viana, A., Sharp, C., . . . Zvolensky, M. (2017). Clarifying the relation of acculturative stress and anxiety/depressive symptoms: The role of anxiety sensitivity among Hispanic college students. *Cultural Diversity & Ethnic Minority Psychology*, 24(2), 221.
- Kang, H., Chang, K., Chen, C., & Greenberger, E. (2013). Locus of control and peer relationships among Caucasian, Hispanic, Asian, and African American adolescents. 184-194.
- Karaman, & Watson. (2017). Examining associations among achievement motivation, locus of control, academic stress, and life satisfaction: A comparison of U.S. and international undergraduate students. *Personality and Individual Differences*, 111, 106-110.
- Karaman, M., Nelson, K., & Cavazos Vela, J. (2018). The mediation effects of achievement motivation and locus of control between academic stress and life satisfaction in undergraduate students. *British Journal of Guidance & Counselling*, 46(4), 375-384.

- Katreovich, A. V. & Aruguete, M. S. (2017). Recognizing challenges and predicting success in first-generation university students. *Journal of STEM Education*, 18(2), 40-44.
- Kilen, M. (September 21, 2017). Can Iowa's rising Latino population save some of its dying towns? <https://www.desmoinesregister.com/story/news/2017/09/21/latino-population-denison-may-foretell-iowas-future/647264001/> [Retrieved June 30, 2021]
- Knight, P. K., Gonzalez, N. A., Saenz, D. S., Bonds, D. D., German, M., Deardorff, J., Roosav, M. W. & Updegraff, K. A. (2010). The Mexican American Cultural Values Scale for adolescents and adults. *Journal of Early Adolescence*, 33(3), 444-481.
- Knight, P. K., Mazza, G. L. & Carlo, G. (2018). Trajectories of familism values and prosocial tendencies of Mexican American adolescents. *Developmental Psychology*, 54(2), 378-38.
- Kolb, S.M. (2012). Grounded theory and the constant comparative method: Valid research strategies for educators. *Journal of Emerging Trends in Educational Research and Policy Studies*, 3(1), 83-86.
- Kolmar, C. (December 29, 2020). The 10 Nebraska cities with the largest Latino population for 2021. <https://www.homesnacks.com/most-hispanic-cities-in-nebraska/> [Retrieved June 30, 2021].
- Kouyoumdjian, C., Guzmán, B., Garcia, N., & Talavera-Bustillos, V. (2017). A community cultural wealth examination of sources of support and challenges among Latino first- and second-generation college students at a Hispanic serving institution. *Journal of Hispanic Higher Education*, 16(1), 61-76.
- Larke, P. (2013). Culturally responsive teaching in higher education: What professors need to know. *Counterpoints*, 391, 38-50.
- Latino, C. A., Stegmann, G., Radunzel, J., Way, J. D., Sanchez, E. & Casillas, A. (2020). Reducing gaps in first-year outcomes between Hispanic first-generation college students and their peers: The role of accelerated learning and financial aid. *Journal of College Student Retention: Research, Theory & Practice*, 22(3), 441-463.
- Lin, K., & Huang, K. (2014). Moral judgment and ethical leadership in Chinese management: The role of Confucianism and collectivism. *Quality & Quantity*, 48(1), 37-47.
- Lorenzo-Blanco, E. I., Unger, J. B., Baezconde-Garbanati, L., Ritt-Olson, A. & Soto, D. (2012). Acculturation, enculturation, and symptoms of depression in Hispanic youth; the roles of gender, Hispanic cultural values, and family functioning. *Journal of Youth and Adolescence*, 41(10), 1350-1365.
- Lotkowski, V. A., Robbins, S. B. & Noeth, R. J. (2004). The role of academic and non-

- academic factors in improving college retention. ACT policy report. Iowa City, IA: American College Testing Inc. ERIC ref. # ED485476
- Luzzo, D. A. (1997). Correlates of Mexican American college students' perceptions of career related barriers. Paper presented at the Annual Meeting of the American Psychological Association (Chicago, IL, August 1997).
- Martinez, J. A., Sher, K. J., Krull, J. L. & Wood, P. K. (2009). Blue-collar scholars?: Mediators and moderators of university attrition in first-generation college students. *Journal of College Student Development*, 50(1), 87–103. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2742431/> [Retrieved July 2, 2021]
- McCarty, J. A., & Shrum, L. J. (2001). The influence of individualism, collectivism, and locus of control on environmental beliefs and behavior. *Journal of Public Policy & Marketing*, 20(1), 93–104.
- Miller, S. (2013). Living in two worlds: Torn identities and gender expectations of Latinas in the United States. *UC Merced Undergraduate Research Journal*. <https://doi.org/10.5070/M451020764>
- Mueller, S. L. & Thomas, A. S. (2001). Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing*, 16(1), 51–75.
- National Center for Education Statistics. (2017). *The condition of education 2017. Chapter: 4/postsecondary education section: Characteristics of postsecondary students*. Washington, D.C.: U. S. Department of Education.
- National Center for Education Statistics. (2020). *The condition of education 2020. Chapter: 2/postsecondary education; Section: Postsecondary students*. Washington, D.C.: U. S. Department of Education. https://nces.ed.gov/programs/coe/pdf/coe_cpb.pdf
- National Science Board. (2020). *Science and engineering indicators: State of US S&E 2020*. <https://nces.nsf.gov/pubs/nsb20201/u-s-s-e-workforce#women-and-underrepresented-minorities>
- Ojeda, L., Edwards, L. M., Hardin, E. E. & Pina-Watson, B. (2014). The role of behavioral and cognitive cultural orientation on Mexican American college students' life satisfaction. *Journal of Hispanic Higher Education*, 13(1), 63–74.
- Pappamihel, N. E. & Moreno, M. (2011). Retaining Latino students: Culturally responsive instruction in colleges and universities. *Journal of Hispanic Higher Education*, 10(4), 331–344. <https://doi.org/10.1177/1538192711410602>
- Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social*

- Behavior*, 19(1), 2-21.
- Pearlin, L. I., Menaghan, E. G., Lieberman, M. A. & Mulan, J. T. (1981). The stress process. *Journal of Health and Social Behavior*, 22(4), 337-356.
<https://www.jstor.org/stable/2136676>
- Postsecondary National Policy Institute. (2021). Factsheets: Latino students.
<https://pnpi.org/latino-students/>
- Preuss, M. & Sosa, E. (2019, February 17-20). *HSIs in the south-central US: Their nature, variety, and characteristics* [Conference presentation]. 44th Annual Texas Association of Chicanos in Higher Education Conference, Austin, TX, United States.
- Preuss, M. & Sosa, E. (2020, February 19-22). *Students at HSIs in Texas and New Mexico: An in-depth profile of their backgrounds, commitments, and perspectives* [Conference presentation]. 45th Annual Texas Association of Chicanos in Higher Education Conference, Sugar Land, TX, United States.
- Preuss, M. D., Rodin, J. C., Sosa, E. M., Ramos, J. D., Dorsett, C. R. & Burleson, C. R. (2019). Hispanic-Serving Institutions in the South-Central United States: A Research Report for Los Barrios de Amarillo. Canyon, TX: West Texas Office of Evaluation and Research.
- Preuss, M. D., Sosa, E. M., Rodin, J. C., Dorsett, C. R., Ramos, J. D., & Burleson, C. R. (2021). Students at Hispanic-Serving Institutions (HSI) in Texas and New Mexico: An in-depth profile of their backgrounds, commitments, and perspectives. *International Journal of Research in Education and Science (IJRES)*, 7(2), 287-326.
<https://doi.org/10.46328/ijres.1984>
- Preuss, M. D., Sosa, E. M., Rodin, J. C., Ramos, J. D., Dorsett, C. R. & Burleson, C. R. (2020). Competence of faculty, staff, and administrators in Hispanic culture: evidence from three surveys of personnel and students at Hispanic-Serving Institutions. *International Journal of Research in Education and Science*. 6(2), 202-230.
- Preuss, M., Rodin, J., Sosa, E., Ramos, J., Dorsett, C. & Burleson, C. (2019, October 7-10). *Competency of faculty, staff, and administrators in Hispanic culture: Evidence from three surveys of personnel and students at Hispanic-Serving Institutions* [Conference presentation]. International Conference on Social and Education Sciences, Denver, Colorado, United States.
- Preuss, M., Sosa, E., Rodin, J., Dorsett, C., Ramos, J. & Burleson, C. (2020, October 15-20). *Students at HSIs in Texas and New Mexico: An in-depth profile of their backgrounds, commitments, and perspectives* [Conference presentation]. International Conference on

- Social and Education Sciences, Chicago, Illinois, United States.
- Preuss, M., Sosa, E., Rodin, J., Ramos, J., Dorsett, C. & Burleson, C. (2019, October 7-10). *Role models and mentoring relationships: Preferences expressed by Hispanic students attending Hispanic-Serving Institutions* [Conference presentation]. International Conference on Social and Education Sciences, Denver, Colorado, United States.
- Preuss, M., Sosa, E., Rodin, J., Ramos, J., Dorsett, C. & Burleson, C. (2020). Role models and mentoring relationships: Preferences expressed by Hispanic students attending Hispanic-Serving Institutions. *International Journal on Social and Education Sciences*, 2(2), 57-74. <https://www.ijonses.net/index.php/ijonses/article/view/35>
- Pyne, K. B. & Means, D. R. (2013). Underrepresented and in/visible: A Hispanic first-generation student's narratives of college. *Journal of Diversity in Higher Education*, 6(3), 186–198. <https://doi.org/10.1037/a0034115>
- Ramos, J., Rodin, J., Preuss, M., Sosa, E., Dorsett, C., & Burleson, C. (2021). Work patterns and financing college: A descriptive regional report regarding students at Hispanic-Serving Institutions in New Mexico and Texas. *International Journal on Social and Education Sciences*, 3(1), 1-31. <https://doi.org/10.46328/ijonses.60>
- Reyes, N. A. S. & Nora, A. (2012). Lost among the data: A review of Latino first generation college students. Washington, DC: Hispanic Association of Colleges and Universities.
- Roddenberry, A., & Renk, K. (2010). Locus of control and self-efficacy: Potential mediators of stress, illness, and utilization of health services in college students. *Child Psychiatry and Human Development*, 41(4), 353-370.
- Rodin, J. C. (2018, November 1-2). *Self-reported familial support and expectations amongst students at Hispanic-Serving Institutions* [Conference presentation]. 15th Annual Pathways Student Research Symposium. West Texas A&M University, Canyon, TX, United States.
- Rodríguez Amaya, L., Betancourt, T., Collins, K. H., Hinojosa, O., & Corona, C. (2018). Undergraduate research experiences: mentoring, awareness, and perceptions—a case study at a Hispanic-Serving Institution. *IJ STEM Ed*, 5(9). <https://doi.org/10.1186/s40594-018-0105-8>
- Roepke, S. K. & Grant, I. (2011). Toward a more complete understanding of the effects of personal mastery on cardiometabolic health. *Health Psychology*, 30(5), 615-632. DOI:10.1037/a0023480
- Rotter, J. (1966). Generalised expectancies for internal versus external locus of control of reinforcement. *Psychological Monographs*, 80(609), 1–28.

- Ruiz, E. (2005). Hispanic culture and relational cultural theory. *Journal of Creativity in Mental Health, 1*(1), 33-55.
- Ruiz, Sbarra, & Steffen. (2018). Hispanic ethnicity, stress psychophysiology and paradoxical health outcomes: A review with conceptual considerations and a call for research. *International Journal of Psychophysiology, 131*, 24-29
- Science of Behavior Change. (n.d.). *Pearlin Mastery Scale*. <https://scienceofbehaviorchange.org/measures/pearlin-mastery-scale/>
- Smith, P. B., Trompenaars, F. & Dugan, S. (2007). The Rotter locus of control scale in 43 countries: A test of cultural relativity. *International Journal of Psychology, 30*(3), 377-400.
- Smith-Morris, C., Morales-Campos, D., Alvarez, E., Castaneda, A., & Turner, M. (2013). An anthropology of "Familismo": On narratives and description of mexican/immigrants. *Hispanic Journal of Behavioral Sciences, 35*(1), 35-60.
- Spector, P. E., Cooper, C. L., O'Driscoll, M., Sparks, K., Bernin, P., Büssing, A., Dewe, P., Hart, P., Lu, L., Miller, K., de Moraes, L. F. R., Ostrognay, G. M., Pagon, M., Pitariu, H., Poelmans, S., Radhakrishnan, P., Russinova, V., Salamatov, V., Salgado, J.,...Yu, S. (2001). Do national levels of individualism and internal locus of control relate to well-being: An ecological level international study. *Journal of Organizational Behavior, 22*, 815-832.
- Steidel, A. G. L. & Contreras, J. M. (2003). A new familism scale for use with Latino populations. *Hispanic Journal of Behavioral Sciences, 25*(3), 312-330.
- Stein, G. L., Cupito, A. M., Mendez, J. L., Prandoni, J., Huq, N. & Westerberg, D. (2014). Familism through a developmental lens. *Journal of Latina/o Psychology, 2*(4), 224-250.
- Stephens, N. M., Markus, H. R., Fryberg, S. A., Johnson, C. S. & Covarrubias, R. (2012). Unseen disadvantage: How American universities' focus on independence undermines the academic performance of first-generation college students. *Journal of Personality and Social Psychology, 102*(6), 1178-1197.
- Suizzo, M. & Soon, K. (2006). Parental academic socialization: Effects of home-based parental involvement on locus of control across U.S. ethnic groups. *Educational Psychology, 26*(6), 827-846.
- Szabo, Yvette Z., Chang, Andrew, & Chancellor-Freeland, Cheryl. (2015). Locus of control predicts cortisol reactivity and speech performance in response to acute stress in undergraduate students. *College Student Journal, 49*(2), 225-236.
- Terenzini, P. T., Springer, L., Yaeger, P. M., Pascarella, E. T., & Nora, A. (1996). First-

- generation college students: Characteristics, experiences, and cognitive development. *Research in Higher Education*, 37, 1-22. <https://doi.org/10.1007/BF01680039>
- Togari, T., & Yonekura, Y. (2015). A Japanese version of the Pearlin and Schooler's Sense of Mastery Scale. *SpringerPlus*, 4(1), 1–4. <https://doi.org/10.1186/s40064-015-1186-1>
- Trevino, B., & Ernst, F. A. (2012). Skin tone, racism, locus of control, hostility, and blood pressure in Hispanic college students. *Hispanic Journal of Behavioral Sciences*, 34(2), 340-348.
- U.S. Bureau of Labor Statistics. (n.d.). *National longitudinal surveys: NLSY79 appendix 21: Attitudinal scales*. <https://www.nlsinfo.org/content/cohorts/nlsy79/other-documentation/codebook-supplement/nlsy79-appendix-21-attitudinal-scales#pearlin>
- U.S. Census Bureau, 2016. Quick Facts, American Community Survey. Retrieved from: <https://www.census.gov/quickfacts/fact/table/US/PST045216>.
- U.S. Census Bureau. (2021). *QuickFacts: United States*. <https://www.census.gov/quickfacts/fact/table/US/PST045219> [Retrieved July 2, 2021]
- U.S. Department of Health, Education, and Welfare, Office of Education. (1965). *Higher education act of 1965 section-by-section analysis*. Washington, DC: U.S. Department of Health, Education, and Welfare, Office of Education.
- Valentine, S. R., Godkin, J., & Doughty, G. P. (2008). Hispanics' locus of control, acculturation, and wellness attitudes. *Social Work in Public Health*, 23(5), 73–92. <https://doi.org/10.1080/19371910802053257>
- Ward, L., Siegel, M. J. & Davenport, Z. (2012). First-generation college students: Understanding and improving the experience from recruitment to commencement. Hoboken, NJ: Jossey-Bass.
- Whittaker, J. A. & Montgomery, B. L. (2012). Cultivating diversity and competency in STEM: Challenges and remedies for removing virtual barriers to constructing diverse higher education communities of success. *Journal of Undergraduate Neuroscience Education*, 11(1), A44-A51. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3592737/>
- Wlodowski, R. J. & Ginsberg, M. B. (1995). Diversity and motivation: Culturally responsive teaching. San Francisco, CA: Jossey Banks.
- Woosley, S. A. & Shepler, D. K. (2011). Understanding the early integration experiences of first-generation college students. *College Student Journal*, 45(4), 700-714.
- York-Anderson, D. C., & Bowman, S. L. (1991). Assessing the college knowledge of first-generation and second-generation college students. *Journal of College Student Development*, 32(2), 116–122.

Zepke, N. & Leach, L. (2005). Integration and adaptation: Approaches to the student retention and achievement puzzle. *Active Learning in Higher Education*, 6(1), 46-59.
<https://doi.org/10.1177/1469787405049946>

Zhan, M. & Xiang, X. (2018). Education loans and asset building among black and Hispanic young adults. *Children and Youth Services Review*, 121-127.

Author Information

Christine Dorsett

 <https://orcid.org/0000-0003-1034-7158>

West Texas A&M University

USA

Contact e-mail: cdorsett@wtamu.edu

Dr. Michael Preuss

 <https://orcid.org/0000-0001-8659-6164>

Exquiri Consulting, LLC.

Amarillo, TX USA

Dr. Eric Sosa

 <https://orcid.org/0000-0003-3650-7586>

West Texas A&M University

USA

Jason Rodin

 <https://orcid.org/0000-0003-3343-465X>

West Texas A&M University

USA

Jorje Ramos

 <https://orcid.org/0000-0002-6716-7150>

West Texas A&M University

USA

Chenoa Burleson

 <https://orcid.org/0000-0003-2039-0918>

West Texas A&M University

USA

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