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Caroline Perez

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VIA-IS-M AND LATINX CULTURAL STRENGTHS: A STUDY VALIDATION &
CONFIRMATORY FACTOR ANALYSIS.

by

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Bachelor of Arts, Florida international University, 2016
Master of Arts, University of North Dakota, 2020

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In partial fulfillment of the requirements

for the degree of
Doctor of Philosophy

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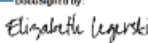
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Degree Doctor of Philosophy

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Caroline Perez
07/23/2023

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ABSTRACT

The purpose of this study, and its focus on Latinx adults is two-fold: to validate the VIA-IS-M in a US-Latinx sample, and to explore whether Latinx cultural values of *personalismo*, *familismo*, and religiosity converge conceptually with the virtues within the VIA-IS-M. The proposed survey uses positive psychology as the theoretical basis (Parks & Biswas-Diener, 2013). A pull within the positive psychological research is addressed, specifically the merits of cultural transcendence or cultural integration (Jeglic, Miranda, & Polanco-Roman, 2016). For many years now, a flagship survey tool by Peterson and Seligman (2004) called the Values-in-Action Inventory of Strengths (VIA-IS) has been used as a marker of character strengths. This survey was critiqued on theoretical and cultural grounds and was inconsistently replicated across samples. 481 individuals were asked to participate in an online, quantitative survey using Qualtrics survey creator. They were asked some demographic questions, including age, gender identity, country of origin, and race/ethnicity. Then took the full VIA-IS-M, as well as scales of Familismo, Personalismo, Acculturation, and Religiosity. This study assumes that the 5-factor VIA-IS-M will have acceptable fit in a US Latinx sample of adults. However, we expect that the 3-factor model replicated in non-US samples will be a better fit than the 5-factor model (Azañedo, Fernández-Abascal, & Barraca, 2014). Presumably, humanity and temperance should correlate with both measures of *familismo* and *personalismo* based on the character strengths that compose them (Peterson & Seligman, 2006). The reliability analysis of the VIA-IS-M 5-factor model showed questionable to good internal consistency across the constructs. Some observed indicators had poor factor loadings and inter-factor correlations were not consistent with

theoretical expectations. Ultimately, the 5-factor model was not a good fit to our sample data. However, the 3-factor model demonstrated significantly better fit to the sample than the 5-factor model, despite overlapping concerns around construct validity and internal reliability. The expected convergent and divergent validity of the Familismo, Personalismo, Humanity, and Temperance constructs were not consistently supported. Further research in strengths-measurement is needed, and evidence supporting cultural-specific strengths were found.

VIA-IS-M AND LATINX CULTURAL STRENGTHS:
A STUDY VALIDATION & CONFIRMATORY FACTOR ANALYSIS

LITERATURE REVIEW

Latinx Sample & Positive Psychological Research

The purpose of this study, and its focus on Latinx adults is two-fold: to validate the VIA-IS-M in a US-Latinx sample, and to explore whether Latinx cultural values of *personalismo*, *familismo*, and religiosity converge conceptually with the virtues within the VIA-IS-M. Latinx adults are being targeted for the sample of this population to address a gap in the literature base, as well as to promote a contextual appreciation of our cultural strengths (Castellanos & Gloria, 2016). It is the case that racial and ethnic minorities have been largely viewed in the literature from a deficit-based perspective (Castellanos & Gloria, 2016). While minimization of disparities is a worthwhile, and ongoing goal, it is equally important to celebrate and acknowledge the ways that people of color, specifically Latinx and Hispanic individuals, have thrived (Castro-Solano & Lupano-Perugini, 2014).

It is necessary then to acknowledge the heterogeneity of US-based Latinx individuals, with some immigrating into the US, and others who were born in the US and have acculturated to Western ideas and society (Castellanos & Gloria, 2016). It is partially expected that the findings from this study may not generalize beyond the initial sample due to these contextual factors (Castro-Solano & Lupano-Perugini, 2014). However, it is for this reason that a Latinx US-based sample becomes an appropriate population for validation of the existing VIA model. This sample demonstrates the cultural variability found within the US, and therefore may be able

to provide a link between US samples who have validated the VIA's 6-factor structure, and international samples who have inconsistently replicated it (McGrath, 2016). Furthermore, study validations of the VIA-IS in people of color in US are limited, and to the authors' current knowledge, has not been conducted with US Latinx individuals (Azañedo, Fernández-Abascal, & Barraca, 2014).

In the singular validation study of the VIA conducted by Azañedo and colleagues (2014) in a Spanish sample, the 5-factor structure was replicated, but with changes to the character strengths that composed virtues. Additionally, theoretical concerns were proposed surrounding the appropriateness of taking pre-constructed virtues into a disparate cultural group and asking about fit, without testing of a comparison model or qualitative support for the 6-factor model proposed (Snow, 2019).

This concern was echoed by Castro-Solano & Lupano-Perugini (2013) who delineated the state of positive psychology in Latin-American countries. The research and theory have depended upon importation of US and Western theories and models, focusing on validation and adaptation, limiting original works or contextual theory creation (Castro-Solano & Lupano-Perugini, 2013). This limitation points toward the need for qualitative research in this population, which may guide more relevant theory production (Delgado-Romero, Singh, & De Los Santos, 2018).

Latinx Cultural Strengths

Yet, thanks to efforts in cross-cultural, positive, and qualitative research, some Latin and Hispanic strengths have been identified repeatedly, namely *familismo*, *personalismo*, and religiosity (Davis, Johnson, & Rothschild, 2019). Other Latinx-specific strengths exist than just the three above, but for the purposes of this study, these strengths have been more “universally” replicated in Latinx populations regardless of acculturation, country of origin, gender, or immigration status (Castellanos & Gloria, 2016; Davis, Johnson, & Rothschild, 2019). *Familismo*, or the centrality of family relationships, is comprised of four domains: self-sacrifice, support, interconnection, and honor/pride in the family (Steidel & Contreras, 2003). Family orientation is seen in other cultural groups as well, and studies have identified strong family and community connection to relate to well-being, meaning in life, satisfaction with life and happiness (Schwartz, Weisskirch, et al., 2010). Additionally, acculturation and inter-generational differences have been seen to decrease these values over time, but attitudes toward the importance of *familismo* appear to be consistent (Sabogal et al., 1987). In one church-based qualitative study, Spanish speaking Latinx men and women identified thriving social relationships with friends and family, faith, physical health, self-acceptance, and financial security as keys to well-being (Castellanos & Gloria, 2016).

This finding is supported by cross-cultural research highlighting *personalismo*, or the focus on warm interpersonal relationships with others, and *simpatia*, which is a way of interacting with others that strives for understanding and tolerance, even when interactions are becoming negative (Castellanos & Gloria, 2016). In a study by Hernandez and colleagues (2016)

a qualitative study was conducted to understand what factors lead to well-being in a mixed sample of church going Latinx adults. Religion and spirituality were considered prime among these aspects of “the good life”, and in fact, was seen as impossible to achieve without them (Hernandez et al., 2016; Peterson & Seligman, 2004). This finding has been replicated by others as central to *Latinidad* and is fundamental to the mind-body-spirit orientation of many Latinx individuals (Castellanos & Gloria, 2016; Jeglic, Miranda, & Polanco-Roman, 2016).

Positive Psychology

The proposed survey uses positive psychology as the theoretical basis, as the field is dedicated to the study of human flourishing, and thusly focuses on ways in which to increase and understand well-being (Parks & Biswas-Diener, 2013).

Cultural transcendence vs. Cultural integration in Positive Psychology

A pull within the positive psychological research is addressed within this proposed study, specifically the merits of cultural transcendence or cultural integration (Jeglic, Miranda, & Polanco-Roman, 2016). Early positive psychological measures like the VIA-IS were developed based on cultural transcendence, or the assumption that our common “humanity” has aspects that are “culture free” and more universal (Jeglic, Miranda, & Polanco-Roman, 2016; Seligman & Csikszentmihalyi, 2000). This contains a post-positivist bias, assuming a universal truth exists, and that objectivity and empiricism can be used to find it (Ponterotto, 2005). As Castro-Solano and Lupano-Perugini (2014) identified, these biases are not inherently a problem, however the bias means that movement toward understanding culturally integrated perspectives has been

limited and slower by comparison (Castellanos & Gloria, 2016; Jeglic, Miranda, & Polanco-Roman, 2016). Moreover, as with many dichotomous markers, the answer is usually a combination or is dependent on outside limiting factors (Lewkowicz, 2011). This study will be a small step in teasing apart the impact of contextual factors on a “universal” model like the VIA-IS.

VIA-IS Strengths

For many years now, a flagship survey tool by Peterson and Seligman (2004) called the Values-in-Action Inventory of Strengths (VIA-IS) has been used as a marker of character strengths. The authors proposed that 6 categories of character strengths can be seen cross-culturally and meet moralistic and philosophical criteria as 'desirable' (Ruch & Proyer, 2015). The original study by Peterson and Seligman (2004) purported a system of virtues that are largely endorsed by varying philosophical and religious traditions across several cultures (Miller, 2019; Peterson, & Seligman, 2006; Snow 2019). The six general factors proposed include wisdom, courage, humanity, justice, temperance, and transcendence (Peterson, & Seligman, 2004). Within these broad categories are 24 other strengths that are hypothesized to be part of the larger factors (Peterson, & Seligman, 2006). For instance, the broad virtue of wisdom is theoretically composed of creativity, curiosity, judgment, love of learning, and perspective (Peterson, & Seligman, 2006). These strengths are further defined by two to four descriptors, for instance, creativity includes cleverness, originality, adaptability, and problem solving (Peterson, & Seligman, 2006).

The definitions being used by the VIA for these virtues and underlying character strengths are key for establishing convergent validity with the Latinx cultural strengths proposed by our study (Peterson, & Seligman, 2004; 2006). The virtue *Humanity* is composed of the character strengths love, kindness, and social intelligence (Peterson, & Seligman, 2004; 2006). According to the VIA, love is conceptually defined as “experience close, loving relationships that are characterized by giving and receiving love, warmth, and caring” (Peterson, & Seligman, 2004; 2006). Kindness is defined as “helpful and empathetic and regularly do nice favors for others without expecting anything in return” (Peterson, & Seligman, 2004; 2006). Social Intelligence looks like being “aware of and understand my feelings and thoughts, as well as the feelings of those around me” (Peterson, & Seligman, 2004; 2006).

The virtue *Temperance* is composed of the character strengths forgiveness, humility, prudence, and self-regulation (Peterson, & Seligman, 2004; 2006). According to the VIA, forgiveness is conceptually defined as “I forgive others when they upset me and/or when they behave badly towards me, and I use that information in my future relations with them” (Peterson, & Seligman, 2004; 2006). Humility is defined as “I see my strengths and talents but I am humble, not seeking to be the center of attention or to receive recognition” (Peterson, & Seligman, 2004; 2006). Prudence looks like being “I act carefully and cautiously, looking to avoid unnecessary risks and planning with the future in mind” (Peterson, & Seligman, 2004; 2006). Lastly, Self-Regulation looks like “I manage my feelings and actions and am disciplined and self-controlled” (Peterson & Seligman, 2004;2006).

The Latinx strength of familism is defined broadly as “a cultural grounded way of valuing family, which emphasizes an ideal for family relationships to be warm, close, and supportive, and that family be prioritized over self” (Campos et al., 2020). This implies that the concepts of love, kindness, humility, prudence, and social intelligence should be part of *familismo* as well (Seligman, Park, & Peterson, 2004). Personalism is defined as “a value for interacting with persons with whom one has a warm, caring, and trusting personal relationship” (Cuéllar, Arnold, González, 1995). Based on these conceptualizations, the virtues of humanity and temperance should correlate highly with the strengths of *familismo* and *personalismo*, (Seligman, Park, & Peterson, 2004).

Cultural Critiques of the VIA

Even with these examples, it is clear to see that definitional and cultural discrepancies likely exist (Khumalo, Wissing, & Temane, 2008). In one study, the full VIA-IS was given to caregivers in Kenya, Cambodia, Ethiopia, Hyderabad, and Nagaland (Kinghorn et al., 2019). The most commonly endorsed strengths by both residential and non-residential caregivers were Love and Honesty (Kinghorn et al., 2019). However, when asked to define some of these strengths, conceptual deviations from the VIA emerged (Kinghorn et al., 2019). For example, spirituality is defined as “I feel spiritual and believe in a sense of purpose or meaning in my life; and I see my place in the grand scheme of the universe and find meaning in everyday life” (Kinghorn et al., 2019). Caregivers provided other specifiers including “God”, “faith” and “religion” in their responses (Kinghorn et al., 2019). Additionally, some respondents spoke about spirituality in

terms of practices and behaviors: “volunteering to work for God without complaining or tiring” (Kinghorn et al., 2019).

Notably, 22 alternative strengths that are considered important for caregiving were identified by participants that are not included within the VIA (Kinghorn et al., 2019). When asked to rank these strengths in order of importance to caregiving, caring, self-drive, good-heartedness, initiative, and a teachable spirit were emphasized (Kinghorn et al., 2019). This, and other studies like it, highlight the importance of conceptual definitions and nuances that are potentially missed when validating a universal survey like the VIA-IS (Kinghorn et al., 2019).

Theoretical Critiques of the VIA

Understandably these variations in the scale have been critiqued on three main grounds: cultural critiques like those above, theoretical constructions of the virtues and strengths, and measurement issues (Snow, 2019). This was one of the greatest areas of contention with the VIA survey, as individual factors loading into one category were also assumed to be aligned across traditions or cultures, which runs into definitional concerns (Khumalo, Wissing, & Temane, 2008; Snow, 2019). An example in the analysis by Snow (2019) demonstrates this error by comparing Eastern and Western ideas of justice. Not only are the operationalized behaviors different, it is also likely that justice is valued for different reasons, though the same word is used in both cultures (Snow, 2019; Titova, Wagstaff, & Parks, 2017).

This is also a comparative fallacy, as similarities “outweighing the differences” and “loading better on one core value than another” in an EFA does not mean that strengths are

theoretically aligned or contextually appropriate across populations (Dahlsgaard, Peterson, & Seligman, 2005; Snow, 2019; Warner 2012). Additionally, references have been made in previous positive psychological studies that underestimated the western-bias in the creation of their strengths and virtue scales (Titova, Wagstaff, & Parks, 2017).

Differing Factor Structure of the VIA

As summarized above, the classifications used to derive these virtues, and their respective strengths, were theoretically-driven, not empirically based (Kinghorn, 2017). This is a critical rationale for the proposed study, because we hypothesize that the definitions of these constructs likely contribute to the inconsistent factor-structure seen in replication studies with diverse groups (Kinghorn, 2017). Methodologically, an EFA was used to determine whether the VIA's 6-factor arrangement worked, but the authors instead found a 5 factor model that was classified very differently (Kinghorn, 2017; Ruch & Proyer, 2015). Specifically, the exploratory factor analysis conducted by Peterson and Seligman (2004) yielded a 5-factor model consisting of strengths of restraint (fairness, modesty, forgiveness, prudence), intellectual strengths (creativity, curiosity, love of learning, appreciation of beauty, and excellence), emotional strengths (bravery, hope, self-regulation, zest), interpersonal strengths (kindness, love, leadership, teamwork, and humor), and theological strengths (gratitude and spirituality). Furthermore, other replicability studies have most often found between 3 and 5 factors under different qualitative labels (Macdonald, Bore, & Munro, 2008; McGrath, 2016). In attempting to address these inconsistent findings, McGrath (2016; 2017) conducted an EFA/CFA using the total sample available of the

VIA on the Institute of Character Strengths website. McGrath (2016) identified a 3-factor model was best represented by the data, and this model was added to the survey. However, this 3-factor exploratory model was only included as a secondary explanation to the retained 6-factor structure in analyses of the VIA (McGrath, 2016; 2017; 2019).

Other researchers that have conducted studies in this area of strengths have used a psycholexical approach, qualitatively deriving an exhaustive list of words that fit the category “strengths, morals, or virtues” (Cawley, Martin, & Johnson, 2000; De Raad & Van Oudenhoven, 2011). These words that are generated are consolidated down into the smallest number of words that still “fit” in the larger category of “strengths and virtues” (De Raad & Van Oudenhoven, 2011). This process is mixed-method and generated several different factor levels and characteristics (De Raad & Van Oudenhoven, 2011). Using this approach, the most common derivative in EFA’s was a two-factor model composed of a strong self-other orientation, as well as an internal-external pole (De Raad & Van Oudenhoven, 2011). The self-other orientation highlights a strong sense of self-love and acceptance, while also showing caring for others, using traits like accountability, religiosity, confidence, and discipline (De Raad & Van Oudenhoven, 2011). Yet another model using a psycholexical approach derived a 4 factor model composed of empathy, order, resourcefulness, and serenity (Cawley, Martin, & Johnson, 2000). The gap in these findings between other virtue measures and the VIA-IS lead to questions surrounding the conceptual soundness of the VIA’s virtues, despite the replicability and acceptability of its psychometric properties across groups (McGrath, 2016; 2017)

VIA-IS-M

Since its initial publication, the authors of the VIA-IS have created different versions of the original 240 question survey described above, including the VIA-120, and most recently, the VIA-IS-R, which is a revised version undertaken by McGrath (2017). The VIA-IS-R ($r = .80$) and its shorter derivatives, the VIA-IS-M ($r = .71$) and VIA-IS-P ($r = .74$), maintained “good” psychometric properties compared to the 120 and 240 question versions (McGrath, 2017). The 192 question VIA-IS-R is the recommended test and is the one given for the public to take on the VIA Institute on Character website (McGrath, 2017).

However, when the consideration is to balance “length with psychometric properties”, the 96 item VIA-IS-M is the recommended measure (McGrath, 2017). Moreover, the proposed study will be given in an online format, and the VIA-IS-M contains both positively and negatively valanced items, reducing yay/nay-saying and some social desirability responding that can bias online studies (McGrath, 2017).

The Current Study

The current study is seeking to validate the VIA-IS-M in a sample of US-Latinx adults. Additionally, we will administer scales of *familismo*, *personalismo*, and religiosity to verify whether convergent validity can be replicated in this study. We aim to discover how these Latinx specific strengths correlate with the comparable factors within the VIA-IS-M. A low or non-significant correlation between related constructs will be an argument against the cultural

transcendence model. Additionally, the VIA-IS model would be brought under question as an appropriate model of strengths and virtues for Latinx individuals.

Hypotheses

1. This study assumes that the 5-factor VIA-IS-M will have acceptable fit in a US Latinx sample of adults.
2. However, we expect that the 3-factor model replicated in non-US samples will be a better fit than the 5-factor model (Azañedo, Fernández-Abascal, & Barraca, 2014; Khumalo, Wissing, & Temane, 2008; Singh, & Choubisa, 2010).
3. We also posit that the scales of *familismo*, *personalismo*, and religiosity will correlate moderately with their comparable virtues. Presumably, the virtue transcendence should correlate with our measure of religiosity, and two virtues, humanity and temperance, should correlate with both measures of *familismo* and *personalismo* based on the character strengths that compose them (Peterson & Seligman, 2006).

Keeping in mind the “crud factor” in social and psychological research, it would be unlikely and inappropriate to hypothesize that these constructs are not overlapping statistically in some way (Meehl, 1990). However, various studies have attempted to account for this factor, and varying small correlations have been proposed (Standing, Sproule, & Khouzam, 1991). According to Coenen (2020), the presence of strong relationships is one indicator that an argument beyond the crud factor exists, so this will be our metric for correlational analyses and interpretation of our findings.

METHODS

Participants

As this study will be based on a CFA, a general metric is to have 5 to 10 participants per item that is being evaluated (Warner, 2012). Based on this rough estimate, a predicted sample of 480 participants would be considered conservative as a minimum sample size for the proposed research (Warner, 2012). Using G*Power, at a sample size of 480 for the main CFA, with 95% confidence interval, we would be able to detect a medium effect or larger (Faul et al., 2020). This is sufficient, given that we expect some degree of correlation between factors, as all of them are strengths (Coenen, 2020).

Demographics of the Sample

The study included a total of 481 participants, consisting of 323 males (67%), 140 females (29%), and 18 individuals who opted to provide no response (4%). The age of the participants ranged from 18 to 88 years, with a mean age of 33.56 years (SD = 10.04). Regarding ethnicity, inclusion into the study required identification with being racially or culturally Latin(x) or Hispanic, but of the 482 participants, 104 identified as bi-racial or multiracial, with 9 individuals preferring not to disclose their second racial identity, and 7 identifying with a race that was not provided by our listing.

Procedure

Individuals were asked to participate in an online, quantitative survey using Qualtrics survey creator. For participants that decided to take part in this research study, they were asked

to sign an informed consent form online, and then were asked some demographic questions, including age, gender identity, country of origin, and race/ethnicity. This section took no more than 5 minutes to complete. Enrollment for the actual survey was open in phases, from early December 2022 to Late May 2023. Enrollment was open until the minimum sample was reached, at least 480 participants. A link to the study was available at the recruitment sites. This is a convenience sample that was obtained primarily from social media platforms, Amazon Mechanical Turk, and university/division listservs. All participants recruited, exempting those from Amazon Mechanical Turk, were eligible for a 50% chance to win a \$5 Amazon gift card from November 2022 until January 2023.

An IRB amendment was requested to increase recruitment, meaning some participants received a random chance for a \$100 Amazon gift card from January until March 2023. Still other participants were paid the equivalent directly, \$2.50, as Amazon Mechanical Turk participants who are disallowed to participate in random chance drawings. Of the 482 participants, 403 were collected from MTurk, 70 were collected from Facebook, and 9 were collected from university listservs. Data for participants was de-identified once dispensation of the raffle occurred.

Measures

Values in Action Inventory of Strengths-Mixed (VIA-IS-M).

The VIA-IS-M is a 96-item scale measuring six virtues and 24-character strengths which compose these larger virtues (Landrine & Klonoff, 1994, 1996). The 6 virtues are wisdom,

courage, humanity, justice, temperance, and transcendence (Seligman, Park, & Peterson, 2004). Under each of the 6 virtues there are between 3- and 5-character strengths that conceptually compose the virtues (Seligman, Park, & Peterson, 2004). For instance, the virtues *Wisdom* and *Transcendence* contain 5-character strengths each, *Courage* and *Temperance* contain 4 strengths each, and *Humanity* and *Justice* each have 3 strengths (Seligman, Park, & Peterson, 2004). The survey contains 4 items per character strength, with two that are positively valenced and two negatively valenced items, except for *Teamwork*, which has three positive and one negative item (McGrath, 2017; 2019).

Participants respond to each item by indicating how much they identify with each statement on a 5-point rating scale from 1 (*very much like me*) to 5 (*very much unlike me*) (McGrath, 2017; 2019). Example items of some positively valenced items include “I am a brave person” and “I am a spiritual person” (McGrath, 2017; 2019). Negatively valenced items are reversed scored, from 5 (*very much like me*) to 1 (*very much unlike me*) (McGrath, 2017; 2019). These mixed items and reversed scoring assist in identifying “yay and nay saying” as well as “random responding”, which are particularly prevalent in online surveys like the one proposed (McGrath, 2017; 2019). A score for each character strength is calculated by summing up all 4 valenced items per character strength, which can range in score from 4 to 20 (McGrath, 2017; 2019). Those character strength scores are added and averaged with those strengths in the same virtue category to create a total virtue score (McGrath, 2017; 2019). These virtue scores are compared to determine the relative endorsement of each virtue in the individual (McGrath, 2017;

2019). Higher scores are indicative of greater endorsement of that character strength or virtue. As of 2017, the internal consistency reported using Cronbach's alpha for the six virtues range from .62 to .83 (McGrath, 2017). For the 3-factor model, Cronbach's alpha ranged from .75 to .79 (McGrath, 2017). For the original VIA, discriminant validity was moderate with social desirability and a measure of political stance (Peterson & Seligman, 2004). However, in the revision(s) by McGrath (2014,2017), the questionable validity of this scale is discussed. It points out specifically some measurement issues of strengths, including Spirituality, Self-Regulation, Leadership (McGrath,2017).

Sabogal's Familism Scale.

This scale of *familismo* is a 14-item attitudinal measure. Subscales evaluate primary social supports, importance of family in decision making, and obligations to family (Sabogal et al., 1987). However, the total score is usually used to evaluate level of *familismo* expressed (Sabogal et al., 1987). Ratings of this scale are on a 5-point rating scale from 1 (*strongly disagree*) to 5 (*strongly agree*) (Sabogal et al., 1987). Example items include “When someone has problems, she/he can count on help from his/her family”, and “One of the most important goals in life is to have children” (Sabogal et al., 1987). The items are reverse scored, so that higher ratings translate into higher endorsement of *familismo* (Campos et al., 2020).

This scale has recently had its psychometric properties re-confirmed by Campos and colleagues (2020). The researchers confirmed the three-factor structure of the original authors, with Cronbach alphas of the overall sample between .64 for *family as referents* and .71 for

familial obligations (Campos et al., 2020). These results demonstrated adequate internal consistency of the scale for both English-speaking and Spanish samples (Campos et al., 2020). Convergent validity was determined using scales of Simpatia and Fatalism (Campos et al., 2020). *Familismo* and its subscales were positively, and significantly correlated with Simpatia ($.11 < r < .26$). Fatalism was positively and significantly correlated with subscales of family obligation and family as referents ($.04 < r < .11$), but not with perceived support from the family ($r = .03$) (Campos et al., 2020). Divergent validity was evaluated using The Short Acculturation scale for Hispanics (SASH) and was negatively and significantly correlated with all subscales of Familism ($-.06 < r < -.22$) (Campos et al., 2020). It is important to understand that acculturation status has been previously demonstrated to exert a small, but significant effect on overall endorsement of *familismo* in both the original study and this confirmatory study (Campos et al., 2020; Sabogal et al., 1987).

Personalismo Scale.

This 12-item measure of *Personalismo*, includes a likelihood subscale and an importance subscale (Davis et al., 2019). The first 6 questions are rated on a 4-point rating scale from 1 (*not important*) to 4 (*very important*) (Davis et al., 2019). These questions assess how the participant values close behaviors with close others and strangers (Davis et al., 2019). An example of these questions is “How important is it to you to have long-lasting friendships?” (Davis et al., 2019). The second set of 5 questions is rated on a 4-point rating scale from 1 (*not likely*) to 4 (*very likely*) (Davis et al., 2019). The twelfth question is a gender-specific question, and assesses

physical closeness with a same-gendered, close others (Davis et al., 2019). Both parts of the last item are not intended to be given to the same participant, leading each person to only answer 11 questions for this scale (Davis et al., 2019). Though Importance subscales and Likelihood subscales have 4 response options, the authors of the scale recommend in Table 6 to “combine the middle two response options for analysis”, as respondents seemed not to differentiate between “a little important” and “important” in the study (Davis et al., 2019, p. 119-120). All items are summed and averaged to create a total *personalismo* score between 1 and 4 (Davis et al., 2019).

Important considerations for this scale include known differences in the total level of *personalismo* between genders and country of origin, and a potential small effect of acculturation of the scale (Davis et al., 2019). This scale appears to be invariant between Mexican, Puerto Rican, and Cuban populations ($\alpha = .78-.83$), and between English and Spanish versions, giving some confidence in the use of this scale for other Latinx individuals (Davis et al., 2019). Convergent validity was supported with the Latino Orientation scale, though weakly (Davis et al., 2019). Previous research by Steidel and Contreras (2003) found similarly weak values, implicating that acculturation may be a poor proxy for endorsement of culturally specific behaviors.

Religious Orientation Scale (ROS).

Questions related to religious orientation are from Gorsuch and McPherson’s (1989) revised Intrinsic/Extrinsic Orientation Scale. This scale contains 14 questions: eight questions

that measure intrinsic religious orientation, three questions that measure personal-extrinsic religious orientation, and three questions that measure social-extrinsic orientation. Each question is asked on a five-point rating scale from 1 (strongly disagree) to 5 (strongly agree). The intrinsic scale ranges from 8–40, and the extrinsic scale ranges from 6–30 (Merrill, Steffen, & Hunter, 2012). Three of the items in the intrinsic scale are reverse scored, and higher total scores indicate greater religious orientation (Merrill, Steffen, & Hunter, 2012). The classifications and the score cut-offs are as follows: (1) Intrinsically Religious, (2) Extrinsically Religious, (3) Pro-religious and (4) Nonreligious (Merrill, Steffen, & Hunter, 2012). Intrinsically Religious individuals were classified if intrinsic scale scores were equal or above the intrinsic scale's neutral score (24) and were below the extrinsic scale's neutral score (18) (Merrill, Steffen, & Hunter, 2012).

Extrinsically Religious individuals were classified if extrinsic scale scores were equal or more than the scale's neutral score (18), and if intrinsic scale scores were below the neutral value (24). Pro-religious individuals were classified as those who's extrinsic (18) and intrinsic scores (24) were both equal to, or greater than, the neutral score (Merrill, Steffen, & Hunter, 2012).

Nonreligious individuals were those whose intrinsic and extrinsic scores fell beneath the neutral score on both scales (Merrill, Steffen, & Hunter, 2012).

This scale has been normed with a Hispanic population in the southwest US, and differences emerged by education level, religious affiliation, and race/ethnicity (Merrill, Steffen, & Hunter, 2012). This means that level of acculturation, as well as religious affiliation will likely impact scores on this scale and should be interpreted conservatively (Merrill, Steffen, & Hunter,

2012). However, internal consistency for all 4 subscales were adequate in the original sample ($.53 < \alpha < .76$) and were good in a recent replicability study with a Chinese sample ($.73 < \alpha < .88$) (Gorsuch & McPherson, 1989; Lew et al., 2018).

Abbreviated Multidimensional Acculturation Scale (AMAS).

This measure of acculturation is a 42-item inventory assessing identification with either USA or country of origin acculturation (Zea et al., 2010). Each question is asked on a 4-point scale from 1 (*strongly disagree*) to 4 (*strongly agree*) for cultural identification, or from 1 (*not at all*) to 4 (*extremely well*) for language and competency scales. The USA scale and Country of Origin scale are the average of the respective cultural, language, and competence scales (Zea et al., 2010). Low acculturation scores (1-2) indicate marginal participation, moderate scores (2-3) must be further investigated, and high scores (3-4) indicate biculturalism if both are high, or identification for only one scale (Zea et al., 2010). Internal consistency using Cronbach's alpha for each scale ranged from .83 to .97 (Zea et al., 2003). Concurrent validity was established with length-of-stay in the US (Zea et al., 2010)

Analytical Approach

Data were analyzed using version 26 of the Statistical Package for Social Sciences (SPSS) and version 4.3.1 of R studio (Version 4.2.2; R Core Team, 2021). Confirmatory Factor Analysis (CFA) was conducted to verify the factor structure of the VIA-IS-M using the *laavan* function; the default estimation method is maximum likelihood (Osborne, Costello, & Kellow, 2008). The function *semPlots* was utilized to generate factor tables of both the 3 and 5 factor

models (R Core Team, 2021). A Vuong test was performed to test the difference in fit between non-nested models (Merkle, You, & Preacher, 2016). This analysis will use goodness of fit indices for confirmatory factor analysis (CFA) delineated iteratively by Tanaka (1993) and Sun (2005). Most commonly, fit indices fall into 3 categories (Sun, 2005). Those 3 categories are construct validity evaluation, response pattern comparison, and competing model comparison (Sun, 2005). For the purpose of this study, a CFA was chosen to test construct validity and response-pattern comparison primarily. We seek to validate the 5- and 3-factor models of the VIA-IS-M in a new population: Latinx/Hispanics living in the US. We want to evaluate whether these proposed factors are consistently replicated, and whether overall scores change in this sample. Any model comparison beyond testing the 5 and 3 factor models would not be possible given the sample size, type I error rate, and the dearth of theoretical alternatives in the current literature base (Sun, 2005).

Based on the following recommended cut off-criteria, goodness of fit will be evaluated (Sun, 2005). For “approximately normed fit indices” like goodness of fit index (GFI), comparative fit index (CFI), and Tucker-Lewis Index (TLI) a value greater than 0.9 is acceptable fit and 0.95 or greater indicates good fit (Goretzko, Siemund, & Sterner, 2023; Sun, 2005, pg. 249). Both standardized root-mean square residual (SRMR) and root mean error of approximation (RMSEA) should be 0.08 or less for acceptable fit, and 0.05 or less for good fit (Goretzko, Siemund, & Sterner, 2023). Given that our sample size is sufficient but smaller, minimizing the bias effect would be of primary importance (Sun, 2005). CFI has been shown to

be robust to sample size effects compared to TFI and RMSEA, and as such, more weight of fit should be given to CFI in our analyses (Sun, 2005). Performance of SRMR, TLI, and CFI were most consistent across model specification measures in simulation analyses (Sun, 2005). For maximum likelihood, RMSEA is also consistent (Sun, 2005).

Divergent validity.

“With a given estimated model there is evidence of discriminant validity if different factors are not excessively correlated with each other (e.g. > 0.85)...” (Goretzko, Siemund, & Sterner, 2023; Sun, 2005, pg 241). For the test of means, if the absolute difference of correlations is significant, then that is also evidence of divergent validity and the directionality of the relationship between factors (Goretzko, Siemund, & Sterner, 2023).

Convergent validity.

It is possible to demonstrate convergent validity “if a set of indicators all have relatively high structure coefficients with the factor that they are specified to measure” (Sun, 2005, pg 241). Guadagnoli and Velicer (1988) suggest considering a factor as reliable if it exhibits four or more loadings of at least 0.6, regardless of the size of the sample. However, taking into account different frequency distributions among items, Tabachnick and Fidell (2007) suggest more stringent cutoffs: 0.32 (poor), 0.45 (fair), 0.55 (good), 0.65 (very good), or 0.71 (excellent). Lastly, convergent validity can be supported by the average variance extracted (AVE) of each latent variable being above 0.50 (Hair et al., 2010).

RESULTS

Acculturation & Signature Strengths

The majority of participants also completed our acculturation scale, with 441 completing Latinx acculturation and 443 completing US acculturation. The mean level of Latinx/Hispanic Acculturation was a 3.28 of 4 with a standard deviation of 0.42. The mean level of US Acculturation was 3.24 with a standard deviation of 0.43. A paired samples t-test was run to determine if the differences between acculturation means were significant.

The results revealed a significant difference between the two groups [$t(410) = -2.59, p = 0.005, \text{Cohen's } d = 0.33$]. Levels of Latinx/Hispanic Acculturation had a significantly higher mean score compared to levels of US Acculturation in our sample. The mean difference between the two groups was -0.43. The 95% confidence interval for the mean difference ranged from -0.75 to -0.10, indicating that the true population mean difference is likely to fall within this range. The effect size, as measured by Cohen's d , was 0.33, indicating a small effect size. This suggests that the difference between the mean acculturation scores, although slightly favoring Latinx/Hispanic identification, is relatively small in practical terms and likely did not impact the study findings.

The predominant strengths endorsed by the men in this sample were Teamwork, Love of Learning, and Honesty. The virtues endorsed in order of most to least for men in the sample was Justice, Wisdom, Transcendence, Humanity, Courage, and Temperance. The predominant

strengths endorsed by women in the sample include Love of Learning, Spirituality, and Honesty. The virtues in order of most endorsed to least for the women in the sample was Wisdom, transcendence, Humanity, Courage, Justice, and Temperance.

Hypothesis 1: 5-factor CFA

The first hypothesis of the study predicted the 5-factor model of the VIA-IS-M would be an acceptable fit to this Latinx/Hispanic sample, but not as good as the 3-factor model. The 5-factor model met criteria for acceptable fit based on indices [$\chi^2(142) = 507.38, p < .000, CFI = .91, RMSEA = .07, SRMR = .05$]. The correlation matrix revealed significant inter-factor correlations among the latent factors. All factors correlated above 0.90, and the CFA test produced the warning that Strengths of Restraint and Theological Strengths correlated above 1 with Interpersonal strengths. This is known as a Heywood case: a scenario that can occur during statistical modeling, specifically in structural equation modeling (SEM), where estimated parameters exceed a range that is theoretically or practically feasible, such as a correlation coefficient exceeding 1 or a negative variance estimate (Kyriazos, 2018).

Heywood cases typically arise when the model being estimated is too complex for the available data or when the data are insufficient to accurately estimate the parameters. These cases can indicate problems such as model misfit or sampling error. Kyriazos (2018) suggests that samples over 400 participants can typically detect 2-3 latent variables predicting each factor, so the likelihood of the error being caused by an under-sampling is lessened. Approaches such

as modifying the model, refining the underlying theory, or reassessing the measurement model may be employed to address Heywood cases and improve the model's fit and interpretability (Kyriazos, 2018). In the present study, the correlations over 1 suggest that these 3 factors may load onto 1 factor rather than individual factors.

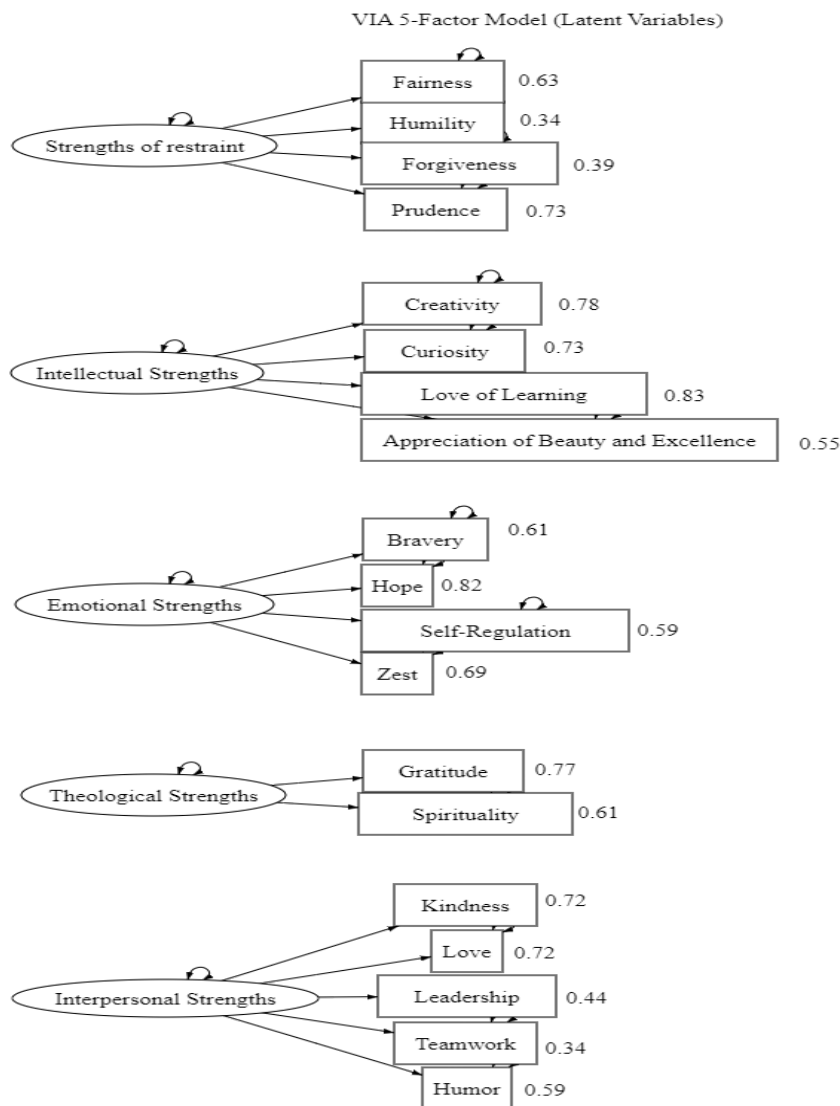


Figure 1. 5-factor Manifest and Latent Variables

Two of the five observed indicators demonstrated poor factor loadings (<0.45) on their respective latent factors, casting doubt on the construct validity of the five-factor model. The factor loadings ranged from 0.33 to 0.73 for Strengths of Restraint, 0.55 to 0.78 for Intellectual Strengths, 0.59 to 0.82 for Emotional Strengths, 0.61 to 0.77 for Theological Strengths, and 0.34 to 0.72 for Interpersonal strengths. The internal consistency of each latent factor was assessed using Cronbach's alpha coefficients. Cronbach's alpha for Strengths of Restraint was 0.63, which is questionable, and shared a low average variance of 0.35 with the other 4 constructs. Cronbach's alpha for Intellectual Strengths was 0.81, which is good, and shared an acceptable average variance of 0.55 with the other 4 constructs. Cronbach's alpha for Emotional Strengths was 0.77, which is acceptable, and shared a low average variance of 0.48 with the other 4 constructs. Cronbach's alpha for Theological Strengths was 0.63, which is questionable, and shared a low average variance of 0.46 with the other 4 constructs. Lastly, Cronbach's alpha for Interpersonal Strengths was 0.68, which is questionable, and shared a low average variance of 0.35 with the other 4 constructs. These findings indicate that the observed indicators within each factor exhibited overall questionable internal consistency.

The results of the five-factor CFA were not supported. The observed indicators demonstrated poor factor loadings on 2 of 5 factors, and 2 inter-factor correlations were above 1, inconsistent with the theoretical expectations. The variable internal consistency of each latent factor argues against the reliability and validity of the measurement model for this Latinx/Hispanic sample. This confirms hypothesis 1.

Table 1.*5-Factor Latent Variables, Loadings, and Average Variance*

Factors	Latent Variables	Standard Loading	<i>p</i>	Average Variance Extracted
1. Strengths of Restraint	Fairness	0.63	.00	0.35
	Humility	0.34	.00	
	Forgiveness	0.39	.00	
	Prudence	0.73	.00	
2. Intellectual Strengths	Creativity	0.78	.00	0.56
	Curiosity	0.72	.00	
	Love of Learning	0.83	.00	
	Appreciation of Beauty	0.55	.00	
3. Emotional Strengths	Bravery	0.61	.00	0.48
	Hope	0.82	.00	
	Self-Regulation	0.60	.00	
	Zest	0.69	.00	
4. Theological Strengths	Gratitude	0.61	.00	0.46
	Spirituality	0.77	.00	
5. Interpersonal Strengths	Kindness	0.72	.00	0.35
	Love	0.72	.00	
	Leadership	0.45	.00	
	Teamwork	0.34	.00	
	Humor	0.60	.00	

Hypothesis 2: 3-Factor Model

The second hypothesis of the study predicted the 3-factor model of the VIA-IS-M would be a “good fit” to this Latinx/Hispanic sample. The 3-factor model met criteria for acceptable fit based on indices [$\chi^2(41) = 200.18, p < .000, CFI = .926, RMSEA = .09, SRMR = .047$].

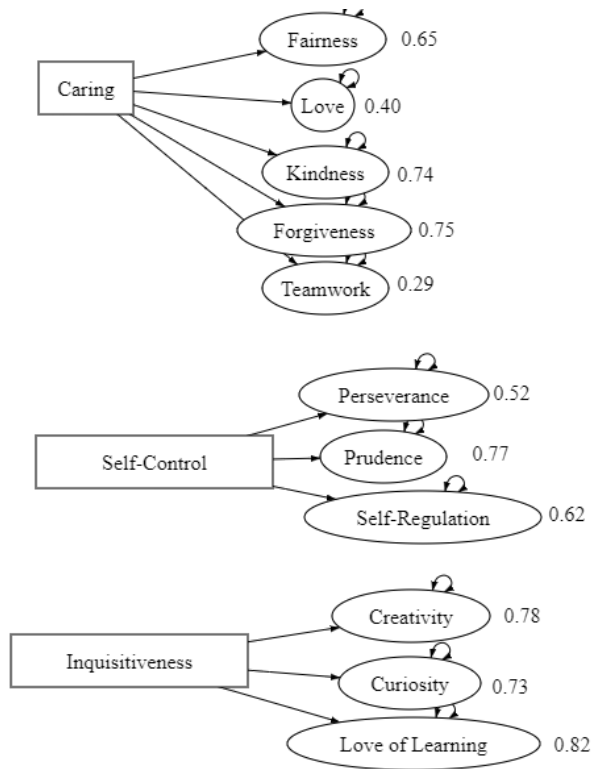


Figure 2. 3-Factor Manifest and Latent Variables

Two of the three observed indicators demonstrated questionable factor loadings on their respective latent factors, casting doubt on the construct validity of the three-factor model. The factor loadings ranged from 0.29 to 0.75 for Caring, 0.73 to 0.82 for Inquisitiveness, and 0.52 to 0.77 for Self-Control. The correlation matrix revealed significant inter-factor correlations among the latent factors. All factors correlated above $r = 0.90$. These correlations suggest that all factors share too much variance to be discriminant (Goretzko, Siemund, & Sterner, 2023). The internal consistency of each latent factor was assessed using Cronbach's alpha coefficients.

Table 2.*3-Factor Latent Variables, Loadings, and Average Variance*

Factors	Latent Variables	Standard Loading	<i>p</i>	Average Variance Extracted
1. Caring	Fairness	0.65	.00	0.37
	Love	0.40	.00	
	Kindness	0.74	.00	
	Forgiveness	0.75	.00	
	Teamwork	0.29		
2. Inquisitiveness	Creativity	0.78	.00	0.62
	Curiosity	0.73	.00	
	Love of Learning	0.82	.00	
3. Self-Control	Perseverance	0.52	.00	0.43
	Prudence	0.77	.00	
	Self-Regulation	0.62	.00	

The reliability analysis showed acceptable internal consistency for Caring ($\alpha = 0.70$), good internal consistency for Inquisitiveness ($\alpha = 0.82$), and borderline questionable internal consistency for Self-Control ($\alpha = 0.68$). These findings indicate that the observed indicators within each factor exhibited overall acceptable internal consistency.

Vuong test Comparing Non-Nested Model

The 5-factor and 3-factor model fit to the data was tested. A Vuong test was run to determine model distinguishability, and the significance of the difference in model variance (Vuong, 1989). The distinguishability test was $w^2 = 16.43$, $p < 2e-16$; this implies that the null hypothesis of both models predicting the data equally well was not supported. Next, a non-nested

likelihood ratio test was run to determine the directionality of the difference in fit between models. The 5-factor model being a better predictor of the data was $z = -79.02$, $p = 1$, which was rejected. The 3-factor model being a better predictor was $z = -79.02$, $p < 2e-16$. This partially confirms hypothesis 2, that the 3-factor model is a better fit to the data than the 5-factor model, replicating international sample data in the literature (Azañedo, Fernández-Abascal, & Barraca, 2014).

Although the 3-factor model is a significantly better fit to the data than the 5-factor model, it does not meet all a-priori goodness of fit criteria. The observed indicators demonstrated poor factor loadings on 2 of 3 factors, and the inter-factor correlations were inconsistent with the theoretical expectations. The variable internal consistency of each latent factor argues against the reliability of the measurement model for this Latinx/Hispanic sample. Alpha level for this study was calculated to account for 2 iterations of the CFA at $p < .025$. Type II error rate and study sample size would not support a third iteration model re-specification. Further analyses are exploratory in nature, in order to better propose future research directions.

Exploratory Analyses

2-Factor CFA

Utilizing the previous factor loadings and R^2 values, a re-specification with only two factors may be more parsimonious. Interpersonal Strengths previously hung together well when composed of Kindness and Love. Additionally, if Strengths of Restraint and Theological Strengths covaried highly, then virtues of Fairness, Modesty, Forgiveness, Prudence, Humility

and Gratitude should also hang well together. For the second factor, it appears that Intellectual Strengths hung well together, like Creativity, Curiosity, and Love of Learning. In the original 6 factor model of the VIA, virtues of Judgement and Perspective were included under the factor Wisdom, so is conceptually supported as an addition.

Table 3.

2-Factor Latent Variables & Factor Loadings: Exploratory

Factors	Latent Variables	Standard Loading	<i>p</i>
1. Interpersonal	Fairness	0.65	.00
	Forgiveness	0.40	.00
	Gratitude	0.74	.00
	Humility	0.36	.00
	Kindness	0.73	
	Love	0.74	
	Prudence	0.74	
2. Intellectual	Creativity	0.78	.00
	Curiosity	0.73	.00
	Judgement	0.63	.00
	Love of Learning	0.82	.00
	Prudence	0.72	.00

The 2-factor model met criteria for acceptable fit based on indices [$\chi^2(53) = 200.18, p < .000, RMSEA = .076, CFI = .945, SRMR = .042$]. Covariance between the Interpersonal and Intellectual factors were above the recommended 0.85 limit. Factor loadings ranged between 0.40 and 0.82. The factor of Interpersonal Strength had three problematic loadings; Fairness, Forgiveness, Modesty were below acceptable limits $< .045$. The other virtues composing this factor (Gratitude, Love, Kindness, and Prudence) were within the questionable range

(.55 > x < .65). The factor of Intellectual Strengths had two problematic loadings: Judgement and Perspective (< .45). Other virtues composing the factor (Creativity, Curiosity, and Love of Learning) were within the questionable range (.52 > x < .61).

Taken together, this 2-factor model is not well supported when fit to this data sample. However, as this is exploratory in nature, and we do not have sufficient power to detect a difference without risking type I error rate, we cannot run a Vuong test comparing the 3-factor and 2-factor models meaningfully (Tabachnick & Fidell, 2007). However, some consistent conclusions across models can be noted. Given that similar constructs like Fairness were loading poorly regardless of the factor structure, this may evidence some concern of construct validity for these items. It is also possible that this constellation of virtues is generally understood differently by this US-Based Latinx/Hispanic sample. Further conclusions would require replication to ascertain, as gender, age, time in history, acculturation, and level of education could also be impacting these results.

CFA by gender

The average demographic data of online surveys is typically cisgender women, between the ages of 30 and 45, and did not account for country of origin or time in history (Standing, Sproule, & Khouzam, 1991). Based on the demographic distribution of gender in our sample, and the demographic distribution of the original VIA, it is possible that gender is playing a role in model fit. The majority of the VIA data was collected between 2006-2016. The current sample

is 75% cisgender, Latin/Hispanic men, and the median age was 38. The sample was split by gender and the 3-factor model was run for men and women.

3 Factor CFA in Men

The goodness-of-fit indices indicated that the three-factor model provided a questionable fit to the data. Two of the three factors shared a correlation greater than 1: Caring and Inquisitiveness. This Heywood case from the 5-factor model replicated here, as many of the latent variables that were problematic were also included in both of these factors (Kyriazos, 2018). The fit indices were as follows: $\chi^2(41) = 147.07$ ($p < 0.000$), Comparative Fit Index (CFI) = 0.89, Tucker-Lewis Index (TLI) = 0.85, Root Mean Square Error of Approximation (RMSEA) = 0.09, and Standardized Root Mean Square Residual (SRMR) = 0.06.

These results suggest that the three-factor model inadequately represented the observed data for men. Two of the three observed indicators demonstrated poor factor loadings on their respective latent factors, casting doubt on the construct validity of the three-factor model. All factors correlated above $r = 0.90$, once more replicating construct validity concerns. These correlations suggest shared variance and potential interrelationships among the latent factors. The reliability analysis showed poor internal consistency for Caring ($\alpha = 0.48$), acceptable internal consistency for Inquisitiveness ($\alpha = 0.75$), and questionable internal consistency for

Self-Control ($\alpha = 0.63$). These findings do not meet the a-priori criteria of four or more loadings per factor above the 0.6 cutoff (Tabachnick & Fidell, 2007). Overall, the results of the three-factor CFA for men is not supported. The observed indicators demonstrated questionable factor loadings on 2 of 3 factors, and the inter-factor correlations above 1 were inconsistent with the theoretical expectations. The variable internal consistency of each latent factor argues against the reliability and validity of the measurement model.

Factor CFA in Women

The goodness-of-fit indices indicated that the three-factor model provided a acceptable fit to the data in women. The fit indices were as follows: $\chi^2(41) = 86.81$ ($p < 0.000$), Comparative Fit Index (CFI) = 0.93, Tucker-Lewis Index (TLI) = 0.91, Root Mean Square Error of Approximation (RMSEA) = 0.09 , and Standardized Root Mean Square Residual (SRMR) = 0.05.

One of the three observed manifest variables demonstrated poor factor loading on its respective latent factors. If the latent variables of Teamwork and Forgiveness were dropped from the factor Caring, then overall construct validity of the three-factor model in women would be supported. However, all factors correlated above $r = 0.87$, once more replicating construct validity concerns. These correlations suggest shared variance and potential interrelationships among the latent factors. The reliability analysis showed adequate internal consistency for Caring ($\alpha = 0.75$), good internal consistency for Inquisitiveness ($\alpha = 0.83$), and questionable internal consistency for Self-Control ($\alpha = 0.65$). These findings indicate that the observed

indicators within each factor exhibited largely acceptable internal consistency for this sample of Latinx/Hispanic women.

Overall, the results of the three-factor CFA for women is marginally supported. The observed indicators demonstrated poor factor loadings on 1 of 3 factors, and the inter-factor correlations were inconsistent with the theoretical expectations. The largely acceptable internal consistency of each latent factor argues for the reliability of the measurement model for women, but still challenges the validity of the measurement model.

Convergent & Divergent Validity of Latinx Strength Measures

Hypotheses for Convergent Validity:

Familismo was expected to have a moderate, positive correlation with Humanity because these are both composed of conceptually similar strengths. Against expectations, there was a small to moderate, negative correlation between Familismo and Humanity ($r = -.27, p < .028$). Personalismo was theoretically expected to positively correlate with Humanity for similar reasons as Familismo; the direction of correlation was supported, but it was only a small correlation and was not significant ($r = .17, p > .05$). This was also true of the correlation between Personalismo and Temperance ($r = .17, p > .05$). In line with expectations, there was a moderate, significant correlation between Familismo and Personalismo ($r = .51, p < .005$) and Humanity and Temperance ($r = .67, p < .05$).

Table 4.

Correlation Matrix of VIA-IS-M Virtues & Latinx Strengths

Variable	Humanity	Temperance	Familismo	Personalismo
1. Humanity	---			
2. Temperance	0.67	---		
3. *Familismo	-0.27	-0.17	---	
4. *Personalismo	0.17	0.17	0.51	---

Note. *Correlation is significant at the .05 level.

Hypotheses for Divergent Validity

As a demonstration of discriminant validity, Familismo should have a significantly stronger association with Humanity than with Temperance. Personalismo and Familismo will be discriminant from one another. Humanity and Temperance should be discriminant from one another as well. For this analysis each correlation was standardized first, and then their absolute differences were tested using a t-test (Warner, 2012). There was a significant difference between *Familismo* and *Personalismo* in the magnitude of difference between their correlations with Humanity (difference in correlations = .10, $t(444) = 4.47$, $p < .028$), with *Familismo* having the larger correlation. This supports the divergent validity of the scales.

There was a significant difference between Humanity and Temperance in the magnitude of difference between their correlations with Familismo (difference in correlations = .10, $t(444) = 2.69$, $p < .007$), with Humanity having the larger correlation. This supports the divergent validity of the scales. There was no significant difference in the standardized beta weights or difference in correlation between Temperance, Familismo, and Personalismo.

DISCUSSION

The purpose of this study was to validate the Values-in-Action Inventory of Strengths (VIA-IS-M) in a US-Latinx sample and explore the convergence or divergence of Latinx cultural values with the conceptually comparable virtues within the VIA-IS-M. By focusing on Latinx cultural strengths and their alignment with the VIA model, the study aimed to celebrate and acknowledge the thriving aspects of Latinx and Hispanic individuals. The study recognized the heterogeneity within the US-based Latinx population, with some individuals being immigrants and others being born in the US and acculturated to Western ideas. This contextual variability posed a challenge in generalizing the findings beyond this initial sample. However, a US-Latinx sample provides valuable insights into the cultural variability within the US and establish a link between US samples that have validated both the VIA's 6- and 5-factor structure and international samples that have inconsistently replicated it.

Results in Context

Hypothesis 1

The reliability analysis of the VIA-IS-M 5-factor model showed questionable to good internal consistency across the constructs. Strengths of Restraint and Theological Strengths had questionable internal consistency, while Intellectual Strengths, Emotional Strengths, and Interpersonal Strengths had acceptable internal consistency. The 5-factor model of the VIA-IS-M did not fit well with the Latinx/Hispanic sample. Some observed indicators had poor factor

loadings and inter-factor correlations were not consistent with theoretical expectations (Seligman, Park, & Peterson, 2004). The internal consistency of the factors varied, with some factors showing questionable internal consistency, suggesting a better fit of a 3-factor model (Warner, 2012). This better fit was confirmed with a rejected Vuong test in favor of the 3-factor model (Vuong, 1989).

This finding was expected based on the theoretical issues and inconsistent factor replication of the VIA (McGrath, 2016; 2017; 2019). In the only replication of the VIA with a Spanish sample, Azañedo and colleagues (2014) replicated the 5-factor structure, but noted changes to the character strengths that composed virtues. This may be one reason that our findings noted 3 of 5 factors correlating above 1. Additionally, theoretical concerns were proposed surrounding the appropriateness of taking pre-constructed virtues into a disparate cultural group and asking about fit, without testing of a comparison model or qualitative support for the 6-factor model (Snow, 2019). We addressed this gap of alternate model testing using the updated data by McGrath (2017). The 3-factor model was a more appropriate fit to this sample; however, it would be necessary to replicate the original study by Azañedo and colleagues (2014) in order to determine if a 3 factor model is also a better fit to a Spanish sample.

Nevertheless, mis-fit of the original factor structures across multiple Latin samples argues against the meaningful use of the VIA to categorize signature Latinx strengths

(Azañedo, Fernández-Abascal, & Barraca, 2014). Secondly, the persistent construct validity and internal consistency concerns highlight either of two future research directions: re-specification of these constructs, or the creation and testing of new measures for these same constructs (Snow, 2019).

Hypothesis 2

The 3-factor model provided an acceptable fit to the Latinx/Hispanic sample, but with some issues. Some observed indicators had questionable factor loadings, and inter-factor correlations suggested shared variance among factors. The internal consistency of the factors varied, with some factors showing acceptable internal consistency and others showing questionable internal consistency. This hypothesis was partially unsupported, leading to exploratory analyses in order to suggest future research directions.

This result was slightly unexpected. However, as we view the 3-factor model, the main grounds for rejection are internal consistency and construct validity of some strengths. As summarized in our theoretical critiques, the classifications used to derive these virtues, and their respective strengths, were theoretically-driven, not empirically based (Kinghorn, 2017). This is a critical rationale for the proposed study, because we hypothesized that the definitions of these constructs likely contribute to the inconsistent factor-structure seen in replication studies with diverse groups (Kinghorn, 2017). This was indeed what our results seem to support.

Secondarily, it is possible our data points to a more parsimonious model; other international samples have replicated overall strengths factorizations between 2 and 3 previously

(Kinghorn et al., 2019). The research base currently does not support a unidimensional conceptualization of strengths (Banicki, 2014; Gorsuch & McPherson, 1989). When a more parsimonious model emerges, it usually falls under the dichotomy of self-mastery and self-other competence (De Raad & Van Oudenhoven, 2011). However, we do not have measures for the latent variables that would compose these factors, so further construct development and then invariance testing is required in future research (De Raad & Van Oudenhoven, 2011).

If research adopts a universality perspective, first identification, then establishing invariance of the constructs will be the predominant goal (Ruch & Proyer, 2015). Adopting a culture-specific approach means that qualitative analyses and scale development informed by cross-cultural research bases will be the next research goal (Ponterotto, 2005). As of the writing of this dissertation, there exist limited measures classifying singular strengths (Rashid, 2015).

Exploratory Analyses

A 2-factor model was explored but did not provide a good fit to the data sample. Gender differences were examined, and the 3-factor model was not an ideal fit for either men or women, but the model fit indices were better fitting to the female sample overall, and the internal consistency values of the 3-factor VIA increased only for the female sample. This result was expected, since the VIA was predominantly normed on cis-gender females within a similar age range (McGrath, 2017; 2019). However, endorsement of signature strengths differed, and was similar to the males in our sample. Moreover, it appears that the factor of Caring is not endorsed as highly, or is understood differently, by this sample of Latinx/Hispanic women. However, it is

not possible to draw any conclusions since the sample was limited and the 2-factor model was exploratory in nature (Coenen, 2020).

Convergent & Divergent Validity of Latinx Strength Measures

The expected convergent and divergent validity of the Familismo, Personalismo, Humanity, and Temperance constructs were not consistently supported. Correlations between Personalismo, Humanity, and Temperance were in the expected direction, but were small or not significant. Familismo and Humanity were significantly, but negatively correlated, not supporting our initial hypothesis about convergent validity.

This was unexpected, as conceptually these strengths appear to be similar (Seligman, Parks, & Peterson, 2004). However, that was the purpose of this analysis, to determine if it is possible to draw statistically significant conclusions from conceptual overlap alone (Snow, 2019). The answer being “no” in this case could be for several reasons: the selected Latinx constructs are not composed of overlapping latent variables, the questionable validity and reliability of the VIA serves as an unideal comparison, or our current conceptualization of these strengths is being mediated by cultural or operational context (Cuéllar, Arnold, González, 1995).

Our findings highlight the theoretical criticisms of the VIA, particularly those by Snow (2019), noting the comparative fallacy of equating statistical results to theoretical alignment. It is well known in statistical research that a replicable theory must inform model conceptualizations and re-specifications, and results should primarily be interpreted through this lens (Titova, Wagstaff, & Parks, 2017). While the original VIA was synthesized from a wide base of

philosophical texts, its broad application, in addition to its reliance on independent clusters modelling, greatly limited its chances of replicability (Standing, Sproule, & Khouzam, 1991).

Overall, the study findings indicate issues with the fit, reliability, and validity of the 5-factor and 3-factor VIA-IS-M model for the Latinx/Hispanic sample. Further research is needed to better understand these constructs in this population and to propose future research directions. However, further use of the VIA as a measure of strengths for the US-based Latinx/Hispanic population is not recommended, regardless of factor structure used, based on our results. It was also supported that the face validity of strength measures is questionable unless researched. In line with cross-cultural research bases, it is recommended to utilize cultural-strength measures that were created and normed on the population of interest, where those measures exist (Rashid, 2015).

Limitations & Future Directions

Based on the insightful findings from this study, several promising directions for future research in the field of cultural strengths measurement and Latinx/Hispanic populations emerge. Some limitations are also acknowledged in order to improve the quality of research in this area of strengths-measurement.

Theory

Theoretical Lens. The study used positive psychology as the theoretical basis, as it focuses on human flourishing and understanding well-being. However, a tension exists within positive psychology regarding cultural transcendence versus cultural integration

(Peterson & Seligman, 2004). Traditional positive psychological measures like the VIA-IS were developed based on the assumption of cultural transcendence, assuming universal aspects of humanity that are culture-free. This bias has limited the understanding of culturally integrated perspectives. Yet, our study is interpreted from a culture-specific lens, aiming to contribute to this discussion by exploring the impact of contextual factors on a supposedly universal model like the VIA (Peterson & Seligman, 2004).

Possible Cultural Influence. The study focused on a US-based Latinx/Hispanic sample, and the results may be influenced by cultural factors specific to this context (Noronha, Dellazzana-Zanon, & Zanon, 2015). Specifically, 86% of our sample was born in the US and at the time of participation in this study, are also residents of the US as well. The other 14% of our sample was composed of Latinx/Hispanic individuals born in other North American countries (2%), South American Countries (8%), countries in the Caribbean (2%), and European countries (2%). The interpretation and understanding of virtues and strengths may vary across cultures, and therefore, the findings may not fully capture the strengths and values of Latinx/Hispanic individuals from other cultural backgrounds or countries (Noronha, Dellazzana-Zanon, & Zanon, 2015). Future studies should consider cross-cultural comparisons and invariance testing to examine the generalizability of the findings across populations.

Time-Dependent Factors. The study did not account for potential temporal changes in strengths, acculturation, or other relevant factors. The bulk of results collected from the VIA were from 2006 to 2017. Many societal and cultural changes have occurred between 2017 and

2023 alone; these changes likely have influenced the measurement and interpretation of the constructs under investigation. Future longitudinal studies could provide insights into the dynamics and stability of strengths in the VIA through supplemental data analyses, and within cultural strength measures for the Latinx/Hispanic population. We have replicated the between-scales reliability and divergent validity of the Personalismo scale and Sabogal's Familismo Scale, which was last replicated in 2019, and before that in 2014 (Campos et al., 2019). This increases confidence in the temporal stability of these measures of Latinx/Hispanic cultural strengths. However, this recommendation also applies to the general literature base.

Future Directions. The temporal invariance of constructs is unfortunately an assumption that has not been consistently attended to, not just in positive psychology, but in many areas of theoretical psychology (Bolier et al., 2013). Longitudinal studies or secondary data analyses across time would allow for the examination of cultural strengths and their relationship with various outcomes over time. This approach would shed light on the developmental trajectories of cultural strengths within the Latinx/Hispanic population, capturing any changes or stability in strength endorsement across different life stages and experiences (Banicki, 2014). Longitudinal research would provide valuable insights into the factors that contribute to the development and maintenance of cultural strengths, as well as their implications for individual and community well-being.

Practice

While existing measures, such as the VIA-IS-M, provide a foundation for assessing strengths, our results and others in the literature argue for the changing and specific nature of strengths. This lends itself more to the creation of new measures of cultural strengths, rather than another adaptation of the VIA itself (McGrath & Wallace, 2021). This process may involve engaging with community members, cultural experts, and stakeholders to identify and incorporate culturally specific strengths that may not be adequately represented in current measures (Khumalo, Wissing, & Temane, 2008). Many positive psychological and strength-based practitioners utilize the VIA as a comprehensive measure of strength endorsement (Rashid, 2015). Given the questionable reliability and validity of the VIA in this Latinx/Hispanic sample, it is our recommendation to utilize individual strength scales that have been well-normed in this population, like the Happiness Scale, Gratitude Scale, or cultural-based measures like the Familismo, Personalismo, and Acculturation Scales (Chakhssi et al., 2018; Cohn et al., 2009; Jeglic, Miranda, & Polanco-Roman, 2016).

Specifically, when using Strength-Based Assessment singularly or in combination with positive psychological intervention (PPI), the main goal is the identification and nurturing of assets (Rashid, 2015). For instance, the signature strengths endorsed by men in this sample included Teamwork, Love of Learning, and Honesty. In a clinical sense, meaningful and frequent engagement in team-based activities, stimulating learning or self-development, and highlighting transparency in the counseling relationship would be wonderful intervention avenues for this sample. The multicultural practice guidelines from APA give further suggestions

about ways that a salient racial identity can be acknowledged, celebrated, and integrated into research, practice, and assessment (Hays, 2008; Jeglic, Miranda, & Polanco-Roman, 2016). Given that our sample was bicultural, but significantly identified as more Latinx/Hispanic than US-American, it might be appropriate to incorporate strengths like familismo and religiosity (Campos et al., 2019). It is noted that in line with racial identity development and acculturation/assimilation models, people's stage of racial/cultural identity may shift across the lifespan, and periodic re-assessment of strength measures can be a valuable insight for both clinician and client throughout therapy (Cawley, Martin, & Johnson, 2000; Williams et al., 2020). It is possible to replicate this strengths-based process to address other salient aspects of culture, including gender, language, cultural practices, age, sexual orientation, and ability level (Hays, 2008; Williams et al., 2020).

Research

Limited Sample Diversity. The study's findings are based on a specific sample of Latinx/Hispanic participants, which may limit the generalizability of the results to other populations. The sample predominantly consisted of cisgender Latinx/Hispanic men (67%), and the inclusion of a more diverse population in terms of age, socioeconomic status, and country of origin could provide additional insights and enhance the external validity of the study. It is noted that this sample is contributing toward a better understanding of Latinx and Hispanic, millennial men; a currently understudied sample, given that the average demographic of online samples is

White, cisgender women, between the ages of 30 and 45 (Lambert, Passmore, & Joshanloo, 2019).

Self-Report Measures. The study relied on self-report measures to assess variables such as acculturation, demographic information, and strength factors. Although the VIA-IS-M was selected to minimize the effects of social desirability, yay-and-nay saying, and middle of the road responding, it is still possible it impacted the results. Especially given the variable support for construct validity of the VIA in this Latinx sample, future research could consider using alternative methods, such as qualitative interviews or informant reports, to complement self-report measures and provide a more comprehensive understanding of the constructs under investigation.

Measurement Issues. The reliability and validity of the measurement model for the VIA-IS-M 5-factor model were questionable in this Latinx/Hispanic sample. Some factor loadings were poor, and there were significant inter-factor correlations that were inconsistent with theoretical expectations. These measurement issues raise concerns about the construct validity of the scales used. Further research should explore alternative measurement models, utilize existing measures of cultural strengths like Familismo, Personalismo, and Religiosity, or develop culturally sensitive measures that better capture the unique strengths and characteristics of the US-based, Latinx/Hispanic population. When selecting measures, keep in mind that although similar labels around strengths are used (e.g. love, kindness, gratitude), convergent validity between scales may not be supported, despite seeming face validity.

Future Directions. Qualitative research methods are a great starting point to support good initial construct reliability and validity (Castellanos & Gloria, 2016). Qualitative research provides in-depth insights into the lived experiences, beliefs, and values that underpin cultural-specific strengths. This qualitative exploration can provide a more nuanced understanding of specific cultural strength and its manifestations within different cultural contexts, shedding light on the specific conceptualizations, practices, and beliefs that contribute to the expression of strengths. Moreover, the development of culturally tailored strength measures represents an important avenue for future research across populations, not just in the Latinx/Hispanic population.

Sample Size and Power. The sample size of the study, consisting of 481 participants, may limit the statistical power to detect small effects. With a relatively small sample size and multiple statistical tests conducted, there is a risk of Type II errors and false-negative results with conclusions from exploratory analyses.

Future Directions. Replication studies with larger sample sizes would provide more robust evidence and increase confidence in the suggested future research directions. Of those, further investigation is warranted to explore the underlying factors contributing to the observed gender-based differences in strength endorsement. Understanding the socio-cultural, psychological, and environmental factors that shape these differences can provide a more nuanced understanding of how gender intersects with cultural strengths within the Latinx/Hispanic context.

Possible Confounding Variables. The study did not explore the potential influence of confounding variables, such as education level, socioeconomic status, or geographic location. These factors could impact the results and introduce additional variability. Future research should consider controlling for or examining the influence of these variables to better understand their contribution to the observed findings.

Causal Inference. The study design was correlational in nature, limiting the ability to establish causal relationships between variables. While the study provided insights into the associations and differences among the constructs, it cannot determine the direction of causality or rule out the influence of unmeasured variables. Experimental or longitudinal designs would be necessary to establish causal relationships and better understand the underlying mechanisms.

Conclusion

This study serves as evidence for the need to create and norm measures of cultural strengths (Castellanos & Gloria, 2016; Delle Fave, Massimini, & Bassi, 2011). The findings appear to support a theoretical move away from universality assumptions unless the measure has shown evidence of invariance across samples and consistent internal reliability (Campos et al., 2019; Azañedo, Fernández-Abascal, & Barraca, 2014). Moreover, although the 3-factor structure of the VIA-IS-M had acceptable fit to our US-based Latinx/Hispanic sample, issues with construct validity and unsupported discriminant validity do not give confidence that the survey of strengths is accurately measuring strengths like Caring or Self-Control (McGrath, 2016; 2017; 2019). However, this study has replicated the reliability and validity of cultural-specific strengths

like *Familismo*, *Personalismo*, and acculturation. Given that these scales were created and normed across Latin and Hispanic samples, and is also supported by our bicultural sample, there is more evidence to recommend their use (Campos et al., 2019; Castellanos & Gloria, 2016). Ultimately, further research and development in the area of strengths is needed (Delgado-Romero, Singh, & De Los Santos, 2018).

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APPENDIX A
HUMAN SUBJECT INFORMED CONSENT SHEET

UNIVERSITY OF NORTH DAKOTA
Institutional Review Board
Study Information Sheet

Title of Project: Study/Validation & CFA of the VIA-IS-M in a US-based Latin/Hispanic population

Principal Investigator: Caroline Perez, caroline.perez@und.edu

Advisor: Rachel L. Navarro, 701-777-2635, Rachel.navarro@und.edu

Purpose of the Study:

The purpose of this research is to determine if strengths in a US-based Latin/Hispanic population are trans-cultural or not. Our understanding of virtues and strengths have not been validated using Latin or Hispanic measures of cultural strengths.

Procedures to be followed:

Answer questions in the survey about your strengths and some aspects of Latinx culture. It should take no more than 15-20 minutes to complete.

Risks:

There are no risks in participating in this research beyond those experienced in everyday life. The most important risks or discomforts that you may expect from taking part in this research include feeling emotional discomfort answering personal questions. This risk is minimal and not very likely, given the positive topic of the research. Another potential risk is a breach of privacy, however all precautions against this risk have been taken.

Benefits:

The most important benefits that you may expect from taking part in this research include:

- Positive feelings from identifying your own strengths and cultural experiences.
- Contributing to the understanding of Latinx strengths, compared to general human strengths.

Duration:

The timeline depends upon how quickly and accurately questions can be answered, but on average, 15-20 minutes are needed to complete the survey.

Statement of Confidentiality:

The survey does ask for your email address, in order to distribute incentives. After incentives are disbursed, any information that would identify who the responses belong to will be removed. Therefore, your responses are recorded anonymously after incentives are distributed. If this research is published, no information that would identify you will be included, since your name is in no way linked to your responses.

Additionally, please use these precautions when taking online surveys, to maximize confidentiality while online:

1. There is a possibility that your responses can be viewed by an outside party if you do not EXIT/CLOSE your Internet browser (e.g., Netscape Navigator, Internet Explorer, etc.) as soon as you finish responding to the questionnaire because your responses might be visible if you (or someone else) click the BACK button on the browser. In order to ELIMINATE this possibility, you should EXIT/CLOSE the browser as soon as you finish responding to the survey and have submitted your responses.
2. There is a possibility that your responses can be viewed by an outside party if you leave your browser on and leave the computer terminal before finishing the questionnaire (e.g., answer the phone, leave the computer unattended, etc.). In order to avoid inadvertent access to your responses by a third party, do not leave the terminal or stop engaging in the exercise or responding to the questionnaires until you have completely finished and closed the browser.

Right to Ask Questions:

The researchers conducting this study are *Caroline Perez and Dr. Rachel Navarro*. You may ask any questions you have now. If you later have questions, concerns, or complaints about the research please contact Caroline Perez at caroline.perez@und.edu or Rachel Navarro at 701-777-2635 during the day.

If you have questions regarding your rights as a research subject, you may contact The University of North Dakota Institutional Review Board at (701) 777-4279 or UND.irb@UND.edu. You may contact the UND IRB with problems, complaints, or concerns about the research. Please contact the UND IRB if you cannot reach research staff, or you wish to talk with someone who is an informed individual who is independent of the research team.

General information about being a research subject can be found on the Institutional Review Board website “Information for Research Participants” <http://und.edu/research/resources/human-subjects/research-participants.html>

Compensation:

Each participant who completes the full survey without evidence of random responding will be entered into a raffles for \$100 Amazon gift card. A raffle will occur every two weeks until we

reach our goal, and your chances of winning depend on how many participants respond within the same two week period. Raffles will continue until we reach our participant goal.

In some instances, a course instructor may have directed you to this survey, and offered extra credit points for participation. You may withdraw from the study at any time without losing the course points assigned by your instructor. If you choose not to participate, please consult your course instructor on other methods to earn course points.

Voluntary Participation:

You do not have to participate in this research. You can stop your participation at any time. You may refuse to participate or choose to discontinue participation at any time without losing any benefits to which you are otherwise entitled. You do not have to answer any questions you do not want to answer.

You must be 18 years of age older to participate in this research study.

Completion and return of the *survey* implies that you have read the information in this form and consent to participate in the research. Please keep this form for your records or future.

APPENDIX B
DEMOGRAPHICS QUESTIONNAIRE

Q2.1 How do you currently describe your gender identity? **(i)**

Please specify: (1) _____

I prefer not to answer (2)

Q2.2 What is your age? (in years)

Please specify: (1) _____

I prefer not to answer (2)



Q2.3 Which of these describe you? Select all that apply. **(i)**

Black or African American--for example Haitian, Jamaican, Nigerian, Ethiopian, Somali, etc. (1)

Middle eastern or North African--for example Lebanese, Iranian, Egyptian, Syrian, Moroccan, Algerian, etc. (2)

Native Hawaiian or Other Pacific Islander--Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese etc. (3)

Hispanic, Latinx, or Spanish origin--for example Cuban, Salvadoran, Dominican, Colombian, Puerto Rican, Mexican or Mexican American, etc. (4)

Asian--for example Vietnamese, Chinese, Filipino, Japanese, Thai, etc. (5)

American Indian or Alaskan Native-- for example Navajo Nation, Blackfoot tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc. (6)

White--German, Irish, English, Italian, Polish, French, Russian, etc. (8)

Other race, ethnicity, or origin---please specify: (9)

Prefer not to answer (10)

Skip To: End of Survey If Q2.3 != Hispanic, Latinx, or Spanish origin--for example Cuban, Salvadoran, Dominican, Colombian, Puerto Rican, Mexican or Mexican American, etc.

Q2.4 Please let us know your country of origin (the country you were born in).

The country I was born in: (1)

APPENDIX C
SABOGAL'S FAMILISMO SCALE

The Familism Scale
(Sabogal et al., 1987)

Instructions: I am going to read some statements about how some people might feel about families. Tell me for each statement whether you STRONGLY DISAGREE, DISAGREE, NEITHER DISAGREE NOR AGREE, AGREE, or STRONGLY AGREE.

1	2	3	4	5			
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
			Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1.	One should make great sacrifices in order to guarantee a good education for his/her children.	1	2	3	4	5	
2.	One should help economically with the support of younger brothers and sisters.	1	2	3	4	5	
3.	I would help within my means if a relative told me that he/she is in financial difficulty.	1	2	3	4	5	
4.	One should have the hope of living long enough to see his/her grandchildren grow up.	1	2	3	4	5	
5.	Aging parents should live with their relatives.	1	2	3	4	5	
6.	A person should share his/her home with uncles, aunts or first cousins if they are in need	1	2	3	4	5	
7.	When someone has problems he/she can count on help from his/her relatives.	1	2	3	4	5	
8.	When one has problems, one can count on the help of relatives	1	2	3	4	5	
9.	One can count on help from his/her relatives to solve most problems.	1	2	3	4	5	
10.	When a person hires an assistant, it is better to select a relative than a stranger.	1	2	3	4	5	
11.	Much of what a son or daughter does should be done to please the parents.	1	2	3	4	5	
12.	The family should consult close relatives (uncles, aunts) concerning its important decisions.	1	2	3	4	5	

- | | | | | | |
|--|---|---|---|---|---|
| 13. One should be embarrassed about the bad things done by his/her brothers or sisters | 1 | 2 | 3 | 4 | 5 |
| 14. Children should live in their parents' house until they get married. | 1 | 2 | 3 | 4 | 5 |
| 15. One of the most important goals in life is to have children. | 1 | 2 | 3 | 4 | 5 |

APPENDIX D
PERSONALISMO SCALE

Personalismo Scale
(Davis et al., 2019)

Instructions: Tell me for each statement whether you STRONGLY DISAGREE, DISAGREE, NEITHER DISAGREE NOR AGREE, AGREE, or STRONGLY AGREE.

	1		2		3		4		5		
	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		
							Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1. How important is it to you that an employee in a clothing store helps you to find what you need?							1	2	3	4	5
2. How important is it to you to have long-lasting friendships?							1	2	3	4	5
3. How important is it to you to tell a friend or family member when you think highly of them?							1	2	3	4	5
4. How important is it to you to do favors for your friends?							1	2	3	4	5
5. How important is it to you to have friends and family who will help you in times of need?							1	2	3	4	5
6. How important is it to you to give your family hugs and kisses?							1	2	3	4	5
7. How likely are you to ask a friend if their family is doing well?							1	2	3	4	5
8. How likely are you to ask a friend if their family is doing well?							1	2	3	4	5
9. How likely are you to greet a female friend with a kiss on the cheek?							1	2	3	4	5
10. How likely are you to greet close friends with a hug?							1	2	3	4	5
11. How likely are you to touch a friend on the arm or shoulder when greeting her? How likely are you to place your hand on a friend's back or shoulder while talking with him?							1	2	3	4	5

APPENDIX E

Religious Orientation Scale-Revised

Religious Orientation Scale-Revised
(Gorsuch & McPherson, 1989)

Instructions: Tell me for each statement whether you STRONGLY DISAGREE, DISAGREE, NEITHER DISAGREE NOR AGREE, AGREE, or STRONGLY AGREE.

	1	2	3	4	5			
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
				Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1. I enjoy reading about my religion.				1	2	3	4	5
2. I go to church because it helps me to make friends.				1	2	3	4	5
3. It doesn't much matter what I believe so long as I am good.				1	2	3	4	5
4. It is important to me to spend time in private thought and prayer.				1	2	3	4	5
5. I have often had a strong sense of God's presence.				1	2	3	4	5
6. I pray mainly to gain relief and protection.				1	2	3	4	5
7. I try hard to live all of my life according to religious beliefs.				1	2	3	4	5
8. What religion offers me most is comfort in times of trouble and sorrow.				1	2	3	4	5
9. Prayer is for peace and happiness.				1	2	3	4	5
10. Although I am religious, I don't let it affect my daily life.				1	2	3	4	5
11. I go to church mostly to spend time with my friends.				1	2	3	4	5
12. My whole approach to life is based on my religion.				1	2	3	4	5
13. I go to church mainly because I enjoy seeing people I know there.				1	2	3	4	5
14. Although I believe in my religion, many other things are more important in life.				1	2	3	4	5

APPENDIX F

Abbreviated Multidimensional Acculturation Scale

Abbreviated Multidimensional Acculturation Scale
(Gorsuch & McPherson, 1989)

The following section contains questions about your *culture of origin* and your *native language*. By *culture of origin* we are referring to the culture of the country either you or your parents came from (e.g., Puerto Rico, Cuba, China). By *native language* we refer to the language of that country, spoken by you or your parents in that country (e.g., Spanish, Quechua, Mandarin). If you come from a multicultural family, please choose the culture you relate to the most.

Instructions: Please mark the number from the scale that best corresponds to your answer.

1	2	3	4
Strongly disagree	Disagree somewhat	Agree somewhat	Strongly agree

1. I think of myself as being U.S. American.
2. I feel good about being U.S. American.
3. Being U.S. American plays an important part in my life.
4. I feel that I am part of U.S. American culture.
5. I have a strong sense of being U.S. American.
6. I am proud of being U.S. American.
7. I think of myself as being _____(a member of my culture of origin).
8. I feel good about being _____(a member of my culture of origin).
9. Being _____(a member of my culture of origin) plays an important part in my life.
10. I feel that I am part of _____culture (culture of origin).
11. I have a strong sense of being _____(culture of origin).
12. I am proud of being _____(culture of origin).

Please answer the questions below using the following responses:

1	2	3	4
Not at all	A little	Pretty well	Extremely well

How well do you speak English:

13. at school or work
14. with American friends
15. on the phone
16. with strangers
17. in general

How well do you understand English:

- 18. on television or in movies
- 19. in newspapers and magazines
- 20. words in songs
- 21. in general

Please answer the questions below using the following responses:

1	2	3	4
Not at all	A little	Pretty well	Extremely well

How well do you speak your native language:

- 22. with family
- 23. with friends from the same country as you
- 24. on the phone
- 25. with strangers
- 26. on the phone

How well do you understand your native language:

- 27. on television or in movies
- 28. in newspapers and magazines
- 29. words in songs
- 30. in general

How well do you know:

- 31. American national heroes
- 32. popular American television shows
- 33. popular American newspapers and magazines
- 34. popular American actors and actresses
- 35. American history
- 36. American political leaders

How well do you know:

- 37. national heroes from your native culture
- 38. popular television shows in your native language
- 39. popular newspapers and magazines in your native language
- 40. popular actors and actresses from your native culture
- 41. history of your native culture
- 42. political leaders from your native culture

APPENDIX G

VIA-IS-M

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