A Pilot Study Testing Intrinsic Strength Factors as Predictors of Depression in the Houston Hispanic Population with Cardiovascular Disease

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Introduction

Purpose

- To determine if there is a relationship between self-reported levels of resilience, mastery and depression in Hispanic patients with cardiovascular disease.
- To study depression screening tools specific to the Hispanic population with cardiovascular disease.

Conceptual Framework

Leininger's Theory of Culture Care Diversity and Universality

Methods

Design

Non-experimental survey design; pilot study; convenience sample (n = 63)

Instruments

1. The Resilience Scale (Wagnild, 2009)
2. Mastery Scale (Pearlin & Schooler, 1978)
3. Patient Health Questionnaire-9 (Spitzer, Williams, Kroenke, 1999)

Resilience Scale [1]	26-items, Likert scale	Score >145 mod high to high Score 125-145 mod low to moderate Score < 120 low resilience	alpha coefficient .91 English .90 Spanish
Mastery Scale [2]	7-item, Likert scale	19= highest mastery 37= lowest	alpha coefficient .82 English .77 Spanish
Patient Health Questionnaire-9 [3]	9-item, Likert scale	Score from 10-14 minor depression Score 15-19 major depression, mod severe Score > 20 major depression, severe	Sensitivity .88 Specificity .88

Results

- Odds ratios suggest that the incidence of major depression was almost 8 times greater with a Spanish-language Mastery Scale score < 34, compared to a score > 34 (p=0.009).
- Similar analysis suggests that the incidence of major depression was 12 times greater with an English-language Resilience Scale score of < 142, compared to a score > 142 (p=0.027).
- The Spanish-language Mastery Scale and English-language Resilience Scale were inversely correlated to levels of reported major depression in the Hispanic population of various backgrounds.

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Odds of major depression using Spanish MS Tool with cut
point (Exposure) lte 34**********  cc PHQ9_Tot2 MSCAT22

                                                    Proportion
                    | Exposed   Unexposed |   Total    Exposed
----------------+---------------------+---------------------
          Cases |      5          3 |       8      0.6250
       Controls |      6         28 |      34      0.1765
----------------+---------------------+---------------------
          Total |     11         31 |      42      0.2619
                |                     |
                | Point estimate      | [95% Conf. Interval]
                |---------------------+---------------------
     Odds ratio |      7.777778       |   1.087599    60.79722
(exact)
 Attr. frac. ex.|      .8714286       |   .0805438    .9835519
(exact)
 Attr. frac. pop|      .5446429       |
                +-----------------------------------------
           chi2(1) =      6.74  Pr>chi2 = 0.0094
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Odds of major depression using English RS Tool with cut
point (Exposure) lte 142**********  cc PHQ9_Tot2 RSCAT21

                                                    Proportion
                    | Exposed   Unexposed |   Total    Exposed
----------------+---------------------+---------------------
          Cases |      4          1 |       5      0.8000
       Controls |      4         12 |      16      0.2500
----------------+---------------------+---------------------
          Total |      8         13 |      21      0.3810
                |                     |
                | Point estimate      | [95% Conf. Interval]
                |---------------------+---------------------
     Odds ratio |        12          |   .7545605    638.5168
(exact)
 Attr. frac. ex.|      .9166667       |   -.3252747   .9984339
(exact)
 Attr. frac. pop|      .7333333       |
                +-----------------------------------------
           chi2(1) =      4.89  Pr>chi2 = 0.0271
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Conclusion

- The Spanish-language Mastery Scale was a good predictor of depression in Spanish-speaking Hispanics, but the English-language Mastery Scale did not predict levels of depression in English-speaking Hispanics.
- Conversely, the Spanish-language Resilience Scale was not a good predictor of depression in Spanish-speaking Hispanics, but the English-language Resilience Scale was effective in the English-speaking group.
- Results continue to validate use of the English Resilience Scale but there may be difficulty translating it into another language due to varying dialects, nuances and word connotations within the multiple Hispanic cultures from different countries.

Research Implications

- Use a larger sample size of Mexican-Americans to determine if the Spanish Resilience Scale and English Mastery Scale predicts depression in the population in participants who have lived most of their life in the United States vs. those who have lived most of their life in Mexico.
- Replicate the study using a different instrument to measure depression, since the PHQ-9 was actually designed to measure depression severity to determine treatment effectiveness in a primary care population.

Acknowledgements