Racial-Ethnic Differences in Social Networks and Perceived Support: Measurement Considerations, and Implications for Disparities Research
Melissa Flores1, John Ruiz2, Christian Goans3, Emily Butler4, Michiyoshi Hiraï4, & Tim Smith5

Abstract

Social relationships and the quality of these relationships are associated with health and well-being. However, emerging evidence suggests that racial-ethnic and cultural differences in social support may be important moderators of these effects.

Aims: The aims of this study were twofold: 1) we tested whether Hispanics, non-Hispanic Whites, and non-Hispanic Blacks responded similarly to classic measures of social networks and support, and 2) we examined whether there were significant between group differences on these measures.

Results: We established invariance of both the factor covariance and mean structures of the latent variables across the three groups suggesting that Hispanics could be compared with NHWs and NBHS on these measures. Subsequently, we found that overall, there were no differences between Hispanics and non-Hispanic groups with a few exceptions. Non-Hispanic Whites presented a support advantage on a majority of measures when compared to non-Hispanic Blacks.

Conclusions: Results are limited to the specific measures employed here and other measurements emphasizing particular source of support (e.g., family, or church supports) may yield different findings. This study represents an important first step to understanding how size and quality of social networks and social support vary across ethnicity with implications for studying racial/ethnic health disparities.

Background & Method

Background

• Social influences on health may be measured in many ways, however, can be understood through two broad categories: structural support, and functional support (Barrera, 2000; Cohen & Wills, 1985; House, Kahn, McEld, & Williams, 1985; Kim, & McKenney, 1998; Lieberman, 1986, Ucino, 2006; Wills, 1985).
• Structural support refers to the frequency of encounters with others, size, and structure of social networks, while functional support encompasses specific functions served by others including both perceived and received support.
• While social relationships are good for health, racial-ethnic and cultural differences in valuing social relationships are increasingly hypothesized as important moderators of these effects. Both structural and functional support having comparable, if not more of an effect on mortality risk as well-established risk factors such as smoking (Holt-Lunstad, Smith, & Layton, 2010), it is important to understand whether these social factors may be a form of resilience in racial-ethnic minorities.

Method

• We first utilized invariance testing to ascertain common measures of social support (the SN, ISEL, and the SPS) are answered similarly across three racial/ethnic groups: Hispanics, NHWs, and NBHS. We then compared racial/ethnic differences in social network size and perceived support.

Hypotheses

• Given the current literature, we predicted that Hispanic/Latinos will report larger social networks and greater perceived support when compared to both non-Hispanic groups.

Table 1. Demographic Information by Racial-Ethnic Group

<table>
<thead>
<tr>
<th>Age</th>
<th>NHBs</th>
<th>NHWs</th>
<th>Hispanic Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>304(27.4%)</td>
<td>110(29.2%)</td>
<td>350(27.5%)</td>
</tr>
<tr>
<td>Female</td>
<td>800(72.6%)</td>
<td>268(70.5%)</td>
<td>972(72.5%)</td>
</tr>
<tr>
<td>Household Income*</td>
<td>N(%): &lt;$20,000</td>
<td>93(33.0%)</td>
<td>275(36.4%)</td>
</tr>
<tr>
<td>Widowed</td>
<td>151(51.9%)</td>
<td>41(20.5%)</td>
<td>192(30.6%)</td>
</tr>
</tbody>
</table>

Statistical Analyses & Results

Analytical Approaches

• To examine the factorial structure of each scale we used a confirmatory factor analysis (CFA) with each scored subscale as parcel-item indicators of their respective latent construct: social network, social provisions, and interpersonal support.
• To determine overall model fit, we assessed the following: the chi-square statistic, the Comparative Fit Index (CFI) greater than .95 (.90), and the root mean square error approximation (RMSEA) less than .05 (.08) indicating good (or acceptable) model fit (Little, 2013).
• To assess whether Hispanics, NHWs, and NBHS responded similarly to the measures of social support and quality, a confirmatory factor analytic model was used to test for the invariance of factor covariance and mean structures in a three latent construct model: social network, social provisions, and interpersonal support.
• Gender, income, and religious affiliation were included as control variables.
• Following tests of invariance, mean comparisons were calculated using fifteen multi-level models with each social variable subscale and omnibus totals as outcome variables.
• Multi-level models were utilized to control for the random effect of geographic region/community.

Results Continued

Table 2. Measurement Models and Multi-group Factorial Invariance Comparisons Between Hispanics, NHWs, and NBHS

<table>
<thead>
<tr>
<th>Measure Model</th>
<th>df</th>
<th>p</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>SRMR</th>
<th>CFI</th>
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<tbody>
<tr>
<td>Constraints</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-group Factorial Invariance Comparisons: Hispanics vs. NHBs &amp; NHWs</td>
<td>1052.49</td>
<td>120</td>
<td>&gt;0.01</td>
<td>0.079</td>
<td>0.075</td>
<td>0.96</td>
</tr>
<tr>
<td>Multi-group Factorial Invariance Comparisons: Hispanics vs. NHWs</td>
<td>960.38</td>
<td>102</td>
<td>&gt;0.01</td>
<td>0.079</td>
<td>0.075</td>
<td>0.96</td>
</tr>
<tr>
<td>Multi-group Factorial Invariance Comparisons: Hispanics vs. NHBs</td>
<td>1171.42</td>
<td>120</td>
<td>&gt;0.01</td>
<td>0.076</td>
<td>0.075</td>
<td>0.95</td>
</tr>
</tbody>
</table>

Structural Support

Social Network Index (SNI)

• Number of people in one’s network: NHWs reported significantly less people in their networks than NHWs: b = −1.69, (t2690) = −2.89, p < .004.
• Embedded Networks: NHWs reported more embedded networks when compared to both Hispanics, b = 0.18, (t2690) = 3.3, p < .001, and NHWs, b = −0.20, (t2690) = 2.85, p < .004.

Functional Support

Social Provisions Scale (SPS)

• SPS Attachment: Compared to Hispanics and NHWs, NHWs reported more attachment support: b = 0.32, (t2633) = 2.93, p < .001; b = 0.80, (t2633) = 4.88, p < .001 (respectively). Hispanics reported more attachment support than NHWs, b = −0.47, (t2633) = 3.08, p < .003.
• SPS Social Integration: NHWs reported being more socially integrated than NHWs, b = −0.52, (t2624) = −3.25, p < .001.
• SPS Reliable Alliance: NHWs reported more reliable alliances than NHWs: b = −0.74, (t2633) = 2.29, p < .03.
• SPS Guidance: Compared to Hispanics and NHWs, NHWs reported receiving more support guidance, b = 0.45, (t2629) = 2.48, p < .01; b = −0.90, (t2629) = −5.75, p < .001 (respectively). Hispanics reported receiving more support guidance than NHWs, b = −0.45, (t2629) = −2.94, p = .003.
• SPS Opportunity for Nurturance: NHWs reported receiving more opportunities for nurturance than NHWs, b = −0.55, (t2623) = −3.45, p < .001.

Interpersonal Support Evaluation List (ISEL)

• Appraisal Support: NHWs reported more appraisal support than NHWs, b = −0.50, (t2670) = −2.91, p < .003.
• Tangible Support: NHWs reported more tangible support than NHWs: b = −0.67, (t2688) = −4.25, p < .001.

Conclusions

• We found that generally NHWs and Hispanics have similar levels of social support with a few exceptions. NHWs generally present a support advantage when compared to NHWs with the exception of a few measures. Notably, the exceptions including less embedded networks may be explained by cultural factors, with the value placed on family. Hispanics may have less activity in domains such as school and work, and more in family. Similarly, NHWs may value more church-related supports.

Note.

• Significant difference for academic poster created by Melissa Flores, John Ruiz, Christian Goans, Emily Butler, Michiyoshi Hiraï, & Tim Smith. All project participants have contributed to the research. Additional information can be found at departments.}

References

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