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Alcohol Use, Psychological Stress, and Mental Health in U.S. Spanish- and English-Speaking Pregnant Women

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BACKGROUND

• Cultural and social support mitigative factors between English-speaking and Spanish-speaking pregnant women have been extensively described; however, a complex interplay between substance use, psychosocial stress, mental health, and socio-economic factors warrant further investigation.

• The term “Latina paradox” refers to favorable perinatal outcomes despite social disadvantages in Latina women.

• Operationalization of prenatal maternal stress in previous studies includes:
  - Perceived stress
  - Adverse experiences as a child or adult
  - Anxiety
  - Lack of social support
  - Unplanned pregnancy
  - Socioeconomic status
  - History of mental health disorders
  - Socioeconomic factors and social support are important effect modifiers associated with prenatal distress.

RESEARCH OBJECTIVES

Differences between English-speaking and Spanish-speaking pregnant women in a prospective cohort study characterize:

1. Prevalence of maternal distress, psychopathology, and social support
2. Association of these factors with alcohol use in pregnancy
3. Association with effect modifiers

METHODS

Data source:
• Prospective cohort “ENRICH-2: Stress-Reactivity and Self-Regulation in Infants with PAME”
• Data from eligibility screening questionnaire and the t tests
• N=311 screened to date: 275 English-speaking, 36 Spanish-speaking, and 98 enrolled
• Pre-pregnancy and perinatal periods (Screening questionnaire)
• Second trimester visit (V1; V2)
• Third trimester (V2)

Measures of maternal psychosocial distress –
• Perceived Stress Scale (PSS)
• Adverse Childhood Experiences (ACE)
• Generalized Anxiety Disorder-7 (GAD-7)
• Edinburgh Postnatal Depression Scale (EPDS)

The Alcohol Use Disorders Identification Test-Concise (AUDIT-C) questionnaire, and questions about binge-outcomes (>4 drinks/occasion)

The Alcohol Use Disorders Identification Test-Concise (AUDIT-C) questionnaire, and questions about binge-outcomes (>4 drinks/occasion)

Repeated Timeline Follow-back (TLFB) interviews

ANALYSIS

used to estimate daily alcohol intake over a given time period.
• TLFB - 1 month around Last Menstrual Period (LMP)
• TLFB - 30 days prior to V1 (2nd trim.)
• TLFB - 30 days prior to V2 (early 3rd trim.)

RESULTS

Table 1: ENRICH 2 Alcohol Use Reported in Eligibility screener between Spanish and English-speaking groups (N=311)

<table>
<thead>
<tr>
<th>Variable</th>
<th>English-speaking</th>
<th>Spanish-speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Mean 27.5</td>
<td>Mean 26.9</td>
</tr>
<tr>
<td>Sex</td>
<td>Male 51.3%</td>
<td>Male 50.0%</td>
</tr>
<tr>
<td>Maternal education</td>
<td>High school or less 12.7%</td>
<td>High school or less 15.6%</td>
</tr>
<tr>
<td>Marital status</td>
<td>Single 52.2%</td>
<td>Single 58.3%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Hispanic/Latina/o of Spanish descent 43.5%</td>
<td>Hispanic/Latina/o of Spanish descent 52.4%</td>
</tr>
<tr>
<td>Employment</td>
<td>Full-time 60.7%</td>
<td>Full-time 60.0%</td>
</tr>
<tr>
<td>Income</td>
<td>Under $30K 32.4%</td>
<td>Under $30K 40.0%</td>
</tr>
</tbody>
</table>

Table 2: ENRICH-2 Demographic information between Spanish and English-speaking groups (N=311)

<table>
<thead>
<tr>
<th>Variable</th>
<th>English-speaking</th>
<th>Spanish-speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal age at enrollment (yr)</td>
<td>23.2 ± 5.4</td>
<td>25.1 ± 5.0</td>
</tr>
<tr>
<td>Education</td>
<td>14.7 ± 5.0</td>
<td>11.9 ± 3.3</td>
</tr>
<tr>
<td>Maternal Education**</td>
<td>ferrum 10.9%</td>
<td>ferrum 10.7%</td>
</tr>
<tr>
<td>Income</td>
<td>Under $30K 32.4%</td>
<td>Under $30K 40.0%</td>
</tr>
</tbody>
</table>

Table 3: ENRICH2 Maternal Stress by Language

<table>
<thead>
<tr>
<th>Variable</th>
<th>English-speaking</th>
<th>Spanish-speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1 Perceived stress (PSS)</td>
<td>15.7 ± 6.5</td>
<td>13.7 ± 5.1</td>
</tr>
<tr>
<td>V2 Perceived stress (PSS)</td>
<td>14.5 ± 6.5</td>
<td>13.6 ± 5.5</td>
</tr>
<tr>
<td>V3 Anxiety (GAD-7)</td>
<td>7.9 ± 3.2</td>
<td>7.2 ± 3.2</td>
</tr>
<tr>
<td>V2 Depression (PDSI) *</td>
<td>10.5 ± 3.4</td>
<td>9.9 ± 3.2</td>
</tr>
<tr>
<td>V2 Post-traumatic stress (PTSI) **</td>
<td>25.5 ± 17.7</td>
<td>25.6 ± 18.2</td>
</tr>
</tbody>
</table>

Table 4: ENRICH2 Maternal Stress by patient status and Language

<table>
<thead>
<tr>
<th>Variable</th>
<th>English-speaking</th>
<th>Spanish-speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>V2 Perceived stress (PSS)</td>
<td>12.5 ± 1.0</td>
<td>13.3 ± 1.4</td>
</tr>
<tr>
<td>V2 Perceived stress (PSS)</td>
<td>12.5 ± 1.0</td>
<td>13.3 ± 1.4</td>
</tr>
</tbody>
</table>

CONCLUSIONS & DISCUSSION

In ANOVA models, Spanish-speaking was associated with lower PSS scores (p=0.001), while alcohol-use and interactions between the two were not significant.

Spanish-speaking pregnant women exhibited reduced psychological distress, symptoms of depression and anxiety, and lower prevalence of hazardous alcohol use compared to English-speaking counterparts despite disadvantaged socioeconomic factors, such as reduced family income and education. Limitations: limited sample size to date (recruitment is ongoing).

Strengths:
• Alcohol use ascertained using multiple TLFB interviews
• Comprehensive assessment of maternal distress, psychopathology, and potential effect modifiers
• Next steps include examination of alcohol use, psychological stress, and mental health in the prenatal and postpartum period of Spanish- and English-speaking pregnant women.

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