Spiritual, Religious, and Psychosocial Factors, & Birth Outcomes Among Latina Mothers

Safiya George Dalmida, PhD APRN-BC
Assistant Professor

Chair, STTI International Service Taskforce
Introduction

- Prevalence of low birth weight (LBW) infants is highest among Black women (11.8%) compared to the white (7.1%), Hispanic (5.3%), & Asian/Pacific Islander (8.4%) women. (CDC, 2009)

- Healthy People 2010 goals & initiatives:
  - Eliminate health disparities among different segments of the population
  - Reduction of low birth weight (LBW) and preterm births
Latina Paradox

- In spite of their general social disadvantage, Mexican-born immigrants (and other Latinas) have:
  - better birth outcomes than African Americans who have comparable social and economic status and
  - birth outcomes that are comparable to non-Hispanic whites.
- “Latin paradox” or “epidemiologic paradox”
Background

- Low socioeconomic status has been associated with low birth weight (LBW) and higher infant mortality rate.
- Prenatal care has been associated with better birth outcomes.
- However, Mexican Americans are less likely to seek prenatal care and may wait until the last trimester, but still have birth weights comparable to non-Hispanic whites.
Latina Paradox: Explanations

- Several theories exist to help explain this phenomenon, subsumed under the term, “social capital“

- Protective factors include:
  - Selective migration, strong familism & supportive community network
  - Strong cultural support for maternity, healthy traditional dietary practices, and the norm of selfless devotion to the maternal role (marianismo).
  - Religious/spiritual beliefs and practices
Role of Spirituality/Religion

- Religion plays a central role in influencing maternal health behaviors and attitudes.

- Prayer was noted as a useful tool to:
  - maintain emotional balance in times of stress
  - help create an empowered view of self within the context of a spiritual life.
Mujerista Theology

"Mujerista Theology" and Hispanic/ Latino Theology (Diaz, 1996; Diaz & Segovia, 1996) guided this research.

- Deep spirituality of Latina women who have a special understanding of "la palabra de Dios" (the word of God), and use the Bible to enable/enhance their moral agency and to help build community.

- Hebrews 4:12: "La palabra de Dios tiene fuerzas y da vida" (God’s word has strength and gives life), indicating that God is with them in their daily struggle.

- According to Diaz (1996), this spirituality out of which Latina women act and live is anchored in notions of love, and "being with others."
Figure 1. Combined Conceptual Framework

Religiosity/Spirituality
Religious faith, Religious behavior/practice (i.e. Bible reading, prayer), Religious/spiritual beliefs and spiritual experiences

Psychosocial Factors
Sociodemographics (nationality, race, ethnicity, time in US, SES, etc.), smoking, substance use, social support, mental health (stress, depression)

HEALTH OUTCOMES
Birth Outcomes   Quality of Life
Aims

To examine:

- the direct and indirect relationships among spiritual/religious and psychosocial factors and various emotional and birth outcomes.

- the amount of variance in selected maternal & infant outcomes explained by spiritual factors and social support, beyond that explained by education, income, & prenatal care.
Design and Methods

• **Design:** Descriptive, correlational, community-based longitudinal study among Pregnant Latinas

• **Methods:** Mixed (qualitative and quantitative)
  – Open-ended qualitative questions & reliable Spanish-version questionnaires

• **Recruitment:**
  – From 6 prenatal care clinics in metro-Atlanta
  – brochures & referral, voluntary
Screening & Eligibility

Women interested in the study are screened in person or via telephone by the project staff, using a brief screening questionnaire. To be eligible women must:

1) self-identify as Latina
2) be at least 28 weeks pregnant;
3) be 18 years or older
4) be willing to participate in the study and complete baseline questionnaires and follow-up questions.

Informed consent obtained from each woman
Data Collection

- Qualitative questions & Spanish-version questionnaires
- Questionnaire Development System (QDS) and administered by project staff using Computerized Personal Interviews (CAPI) on laptop computers.
- Interviews lasted 45-75 minutes and data is collected at 2 time points: 1) baseline & 2) 1-12 weeks after delivery
- Women were asked about pregnancy history, gestational age at first prenatal visit, pregnancy-relevant health behaviors, mental health and depressive symptoms, quality of life, and about their spiritual and non-spiritual views regarding motherhood.
Study Instruments/Measures

**Baseline Interview:**

- Demographic questionnaire: age, race, education, income level, marital status, living arrangements, country of origin, and length of time in the United States, etc.
- Pregnancy History Questionnaire
- Pregnancy-Relevant Health Behaviors
- The Daily Spiritual Experiences Scale (15-item)
- The Santa Clara Strength of Religious Faith (SCSRF) questionnaire (10-item scale)
- The 3-item Religious Coping Index
- Modified Brief Multidimensional Measure of Religiousness/ Spirituality (BMMRS) (14 items)
- Center for Epidemiological Studies Depression Scale
- Perceived Stress Scale (PSS) (10-item scale)
- Global self-esteem scale (10-item)
- The Interpersonal Support Evaluation List (ISEL) scale (40 items)
- RAND-36-Item Health Survey 1.0 (36 items)
Follow-Up Interview

- Follow-up (Delivery) Questionnaire
  - Gestational weeks at delivery
  - Sex of baby
  - Infant birth weight (lbs)
  - Method of delivery (vaginal vs Cesarean)
  - Use of epidural anesthesia
  - Information also confirmed with clinic record
Data Analysis

- Data analyzed using the SPSS 17.0
- Two-sided Alphas used and set at a p < .05
- Descriptive statistics
- Pearson correlations
- Multiple linear regression
- Hierarchical regression
Study Hypotheses

• We hypothesized that there would be inverse relationships between:
  – H1) religious variables & depression
  – H2) religious variables & perceived stress
  – H3) depression & social support
  – H4) depression & IBW
  – H5) perceived stress & IBW
Study Hypotheses

- We hypothesized that there would be **positive** relationships between:
  - H6) religious variables & social support
  - H7) perceived stress & depression
  - H8) religious variables & IBW
  - H9) social support & IBW
RESULTS & FINDINGS
Sample Demographics

- **Sample size:** 69
- **Average age:** 27.3 years
- **Country of Origin:**
  - Majority from Mexico (71.4%)
  - Others from Brazil, Columbia, El Salvador, Guatemala, Peru, US, other
- **Average length of time in US:** 7.76 (4.4) years
- **Marital Status:**
  - Married 42.9%
  - Single/Living w/Partner 45.7%
Socioeconomic Factors

- **Education**
  - Less than High school 45.7% (32)
  - High school = 28.6% (20)

- **Employment**
  - Unemployed 78.6% (55)

- **Income**
  - Annual incomes < $20,000 (70.1%, n=49)
Spiritual/Religious Characteristics

• Religious Denomination
  – Majority Catholic (68.6%)

• Religious Attendance
  – Weekly (39.1 %)
  – Monthly (35.7%)

• More than half of the sample said they were very or moderately
  – “spiritual” (72.5%, n=50)
  – “religious” (65.2%, n=45)
ASSOCIATIONS AND HEALTH OUTCOMES
Birth Outcomes

- No preterm (< 37 weeks gestation) or LBW (<2500 grams) infants

- **Average birth weight**
  - 3370.4 (348.1) grams
  - 7.0 (.87) pounds

- **Deliveries/Birthing Method**
  - Vaginal: 77.0% (47)
  - Cesarean: 20.0% (14)
<table>
<thead>
<tr>
<th>Variables</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Church Attendance (0= Never)</td>
<td>---</td>
<td>---</td>
<td>.34**</td>
<td>.31**</td>
<td>.28*</td>
<td>.29*</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>2. Prayer (0= Never)</td>
<td>---</td>
<td>---</td>
<td>.30*</td>
<td>.24*</td>
<td>.34**</td>
<td>.26*</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>3. Mediation (0= Never)</td>
<td>---</td>
<td>-.25*</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>.24*</td>
<td>---</td>
</tr>
<tr>
<td>4. Bible Reading (0= Never)</td>
<td>---</td>
<td>---</td>
<td>.32**</td>
<td>---</td>
<td>.24*</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5. Religious TV/radio (0= Never)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-.32**</td>
</tr>
<tr>
<td>6. Religious Self-Rating (0=Not at all)</td>
<td>---</td>
<td>-.31**</td>
<td>---</td>
<td>.24*</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>7. Spiritual Self-Rating (0=Not at all)</td>
<td>---</td>
<td>-.26*</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>.31*</td>
</tr>
<tr>
<td>8. Daily Spiritual Experiences Scale</td>
<td>-.33**</td>
<td>-.30*</td>
<td>.37**</td>
<td>.35**</td>
<td>.24*</td>
<td>.29*</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>9. Religious Faith</td>
<td>---</td>
<td>-.24*</td>
<td>.32**</td>
<td>.27*</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>10. Perceived Stress</td>
<td>-.78**</td>
<td>-.39**</td>
<td>-.40**</td>
<td>-.34**</td>
<td>-.33**</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>11. Depressive Symptoms</td>
<td>---</td>
<td>-.27*</td>
<td>-.44**</td>
<td>-.32**</td>
<td>-.28*</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>12. Self-Esteem Social Support</td>
<td>---</td>
<td>.82**</td>
<td>.75**</td>
<td>.78**</td>
<td>-.25*</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>13. Belonging Social Support</td>
<td>---</td>
<td>.88**</td>
<td>.89**</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>14. Tangible Social Support</td>
<td>---</td>
<td>.88**</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>15. Appraisal social support</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>16. IBW</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>17. GWD</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
Spirituality/Religiousness & Depression

• H1 was supported by significant inverse associations between depressive symptoms &:

  – frequency of meditation (r= −.25; p=.042),
  – self-rated religiousness (r= −.31; p=.009)
  – spirituality (r= −26; p=.030),
  – daily spiritual experiences (r= −.30; p=.013)
  – religious faith (r= −.24; p=.046).
Spirituality & Stress

• H2 supported by a significant inverse association between:
  – perceived stress and daily spiritual experiences ($r = -0.33; p = .006$)
Depression & Social Support

- H3 supported by significant inverse correlations between depressive symptoms and all four social support subscales
  - Self-Esteem Social Support (r= \(-.27^*\)  
  - Belonging Social Support (r= \(-.44^{**}\)  
  - Tangible Social Support (r= \(-.32^{**}\)  
  - Appraisal social support (r= \(-.28^*\)
IBW and Psychological Factors

• There was no significant association between depressive symptoms or perceived stress and IBW

• H4 and H5 not supported
Spirituality/Religiousness & Social Support

- H6 supported. *≤.05; ** ≤ .01

- Positive associations between church attendance & all dimensions of social support (church Attendance 0= Never)
  - Self-Esteem Social Support r=.34**
  - Belonging Social Support r=.31**
  - Tangible Social Support r=.28*
  - Appraisal social support r=.29*

- Positive association between prayer & all social support dimensions
  - Self-Esteem Social Support r= .30*
  - Belonging Social Support r= .24*
  - Tangible Social Support r=.34**
  - Appraisal social support r= .26*
Spirituality/Religiousness & Social Support

- H6 also supported by significant positive associations between:
  - meditation & appraisal support subscale scores (r= .24*)
  - frequency of Bible reading & self-esteem social support (r= .32; p= .008) and tangible social support (r= .24*)
  - self-rated religiousness & belonging social support (r= .24*)
  - DSES and all social support subscale scores
  - religious faith & self-esteem social support (r= .32**) and belonging social support (r= .27*)
**Spirituality/Religiousness & Birth Outcomes**

- Self-rated spirituality and GWD ($r = .31; p = .014$)

- This significant positive association with GWD ($\beta = .29, p = .024$) existed even after controlling for age and prenatal care ($F = 3.08, p = .034$).

- Higher self-ratings of spirituality were associated with higher GWD (or deliveries that were closer to full term).
Spirituality/Religiousness & Birth Outcomes

• Frequency of watching or listening to religious TV or radio was a significant predictor of IBW, beyond sociodemographics, PNC, smoking etc. $F(12, 62) = 2.173, p = .028^*$

  – Watching/Listening religious TV/radio
    $\beta = -.39; p = .003$
Quality of Life Outcomes

- Significant associations between stress, depression and mental and physical QOL
  - *Physical HRQOL* and:
    - Depression \((r=-.56)\) \(p=.0001\)
    - Stress \((r=-.39)\) \(p=.001\)
  - *Mental HRQOL* and:
    - Depression \((r=-.71)\) \(p=.0001\)
    - Stress \((r=-.61)\) \(p= .0001\)
Summary & Conclusions

- Spirituality/religiosity is important among Latina mothers and associated with psychosocial factors and birth outcomes.
- Spiritual/religious variables were significantly positively associated with social support, IBW and GWD and inversely associated with perceived stress and depressive symptoms.
- IBW was significantly positively correlated with social functioning QOL and inversely associated with self-esteem and social support.
- Spirituality significantly explained unique variance in IBW than covariates.
Implications

• This study identified spiritual, religious, and psychosocial factors associated with infant birth outcomes that could be used to help explain the Latina Paradox.

• Findings have implications for research, practice and community engagement
Implications

- Findings can be used to:
  - conduct larger longitudinal studies
  - inform intervention development and testing
  - influence nursing, healthcare and obstetrical care
  - Promote interdisciplinary care and partnerships with healthcare providers, social workers, and chaplains, clergy and religious communities
Implications

• Overall, spiritual and psychosocial factors should be routinely assessed and included in obstetrical and prenatal care as well as in pregnancy-related outcomes research.
QUESTIONS?

Contact Information

Safiya George Dalmida
404-712-8449 (Office)
sageorg@emory.edu
Sigma Theta Tau International
Honor Society of Nursing®

Indianapolis

42nd Biennial Convention