

# Relationship Among Spirituality and Prenatal Health Factors in a Healthy Start Population

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ROLLINS  
SCHOOL OF  
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# Purpose of the Study

To determine the role of holistic factors during pregnancy among Palmetto Healthy Start participants.



# Holistic View

- **Biophysical (BODY)**
  - Health Conditions
  - Behaviors
- **Psychosocial (MIND)**
  - Perceptions, Thoughts
- **Spiritual (SPIRIT)**
  - Beliefs, Interconnections



# Spirituality Construct

- The spiritual domain is intended to measure the individual's perception of the transcendent (God, the divine, higher power) in daily life and the perception of interaction with, or involvement of, the transcendent in life.
- Examines experiences with the transcendent rather than particular beliefs or behaviors.
- Distinct from religiosity



# Study Population

## Palmetto Healthy Start (PHS):

- through Palmetto Health
- community based program
- funded by U. S. Department of Health & Human Services (DHHS)
- serves at-risk pregnant women and babies
- Richland and Fairfield counties in South Carolina
- Goal: to reduce infant mortality, low birth weight, and preterm infants
- focuses on medical & psychosocial aspects (e.g. Housing, Food, Prenatal Care)



# Palmetto Healthy Start

2002 – 2005

- 3,448 participants
- ~ 77% are Medicaid recipients
- Age: average 23 years (13 - 50)
- Income: \$2,790 (\$0 to \$32,000)
- African American: 85%,
- White: 12%,
- Other: 3%



# Methodology

- **DESIGN: Cross-sectional**
- **WHO:**
  - **Pregnant Palmetto Healthy Start participants**
  - **Convenience sample**
- **WHEN:**
  - **Accrual: September 2005 through March 2006**





# Methodology

- **HOW: 5 questionnaires:**
- **Mind**
  - **Perceived Stress Survey (PSS)**
  - **Center for Epidemiological Studies (CES-D)**
  - **Medical Outcome Social Support Survey (MOS)**
  - **Everyday Discrimination (EDD)**
- **Spirit**
  - **Daily Spiritual Experiences Survey (DSES)**

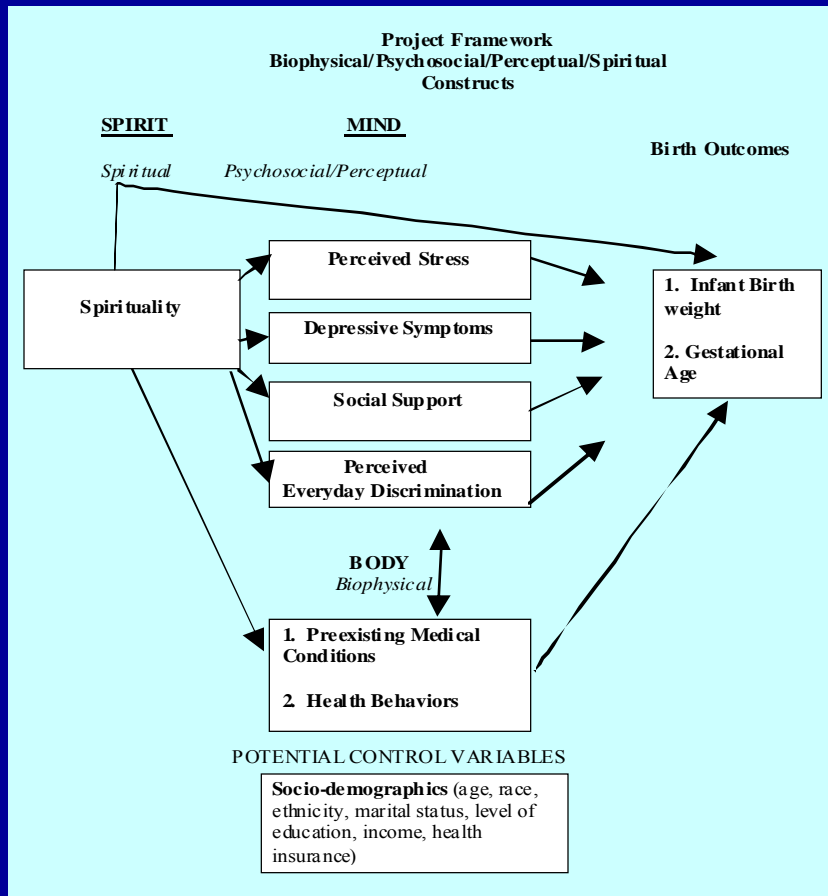


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- **Spirit**
  - **Daily Spiritual Experiences Survey (DSES)**
- **Body**
  - **PHS Participant Identification form**
  - **Participant Risk Assessment**
  - **Participant update forms**



# Research Questions



1. What is the relationship among the SPIRIT and the MIND factors during pregnancy?
2. What is the relationship among the SPIRIT and the BODY factors during pregnancy?

# Demographic Results

Sample Size N=163

**Age** - Average. 22.8 (16-42)

**Race** - 89.6% African American

**Marital Status** - 86% Single

**Education** - 51.2% completed less than 12<sup>th</sup> grade

**Medicaid Recipients** - 62.5%

**Income** - Avg. \$2,679.76 Annual (\$0 – 31,000)



# Descriptive Statistics

## N=163

Variable sample (range score)	Mean (actual range)	SD	
<b>Depressive Symptoms</b> n=136 (0-60)	16.4 (0-44)	10.9	Lower scores=lower depressive symptoms
<b>Perceived Stress</b> n=138 (0-40)	14.7 (0-35)	7.5	Lower scores=lower perceptions of stress
<b>Social Support</b> n=118 (19-95)	81.1 (28-95)	15.1	Higher scores=higher social support
<b>Everyday Discrimination</b> n=121 (9-54)	47.1 (21-54)	7.4	Higher scores=lower perceptions of everyday discrimination
<b>Daily Spiritual Experiences</b> n=142 (15-90)	<b>34.3</b> <b>(15-90)</b>	<b>14.0</b>	Lower scores=higher daily spiritual experiences

# Correlations

Rho $\rho$ p-value n	Daily Spiritual Experiences (DSES)	Social Support (MOS)	Everyday Discrimination (EDD)	Perceived Stress (PSS)
<b>Depressive Symptoms (CESD)</b>	0.07701 0.3895 127	<b>-0.42007</b> <b>&lt;.0001</b> 102	<b>-0.42692</b> <b>&lt;.0001</b> 105	<b>0.76690</b> <b>&lt;.0001</b> 136
<b>Perceived Stress (PSS)</b>	0.06695 0.4527 128	<b>-0.44171</b> <b>&lt;.0001</b> 103	<b>-0.44452</b> <b>&lt;.0001</b> 106	
<b>Everyday Discrimination (EDD)</b>	-0.13220 0.1746 107	<b>0.24945</b> <b>0.0064</b> 118		
<b>Social Support (MOS)</b>	<b>-0.21391</b> <b>0.0292</b> <b>104</b>			



# Biophysical Dimension

Preexisting Health Conditions	N	%
<b>High Risk*</b>	55	35.2
Sickle Cell*	1	.64
<b>High Blood Pressure*</b>	10	6.4
<b>Diabetes*</b>	8	5.1
Heart Disease*	3	1.9
Sexually Transmitted Disease*	7	4.4
HIV Positive*	1	.64
Vaginitis*	5	3.2
Preeclampsia*	4	2.5
Incompetent Cervix*	2	1.2
<b>Previous Premature Labor*</b>	10	6.4
Age factor (<18 or >34)*	4	2.5

\*denotes 7 missing



# Research Findings

## **What was the relationship among the SPIRIT & MIND factors?**

Spirituality was negatively associated with social support. Higher social support scores were weakly associated with lower spirituality scores.

$\rho$  (rho)= -0.2139,  $p=0.0292$

***Women who had higher Social Support also had Higher Spirituality***





# Research Findings

## Did the SPIRIT factors vary by sociodemographics?

Age, Income, & Medicaid status were more likely to be predictive of spirituality

Spirituality (p=.0012)

Age  $\beta = -.4688$ , (p=0.039)

Income  $\beta = -0.000442$ , (p=0.0150)

Medicaid  $\beta = 5.542$ , (p=0.0242)

**Women who were of older age, higher income and/or non Medicaid status had higher spirituality.**



# Limitations

- Sample size
- Administration of surveys
- Self-reported survey data
- Non-reported health risk behaviors
- Use of a higher level statistical analyses

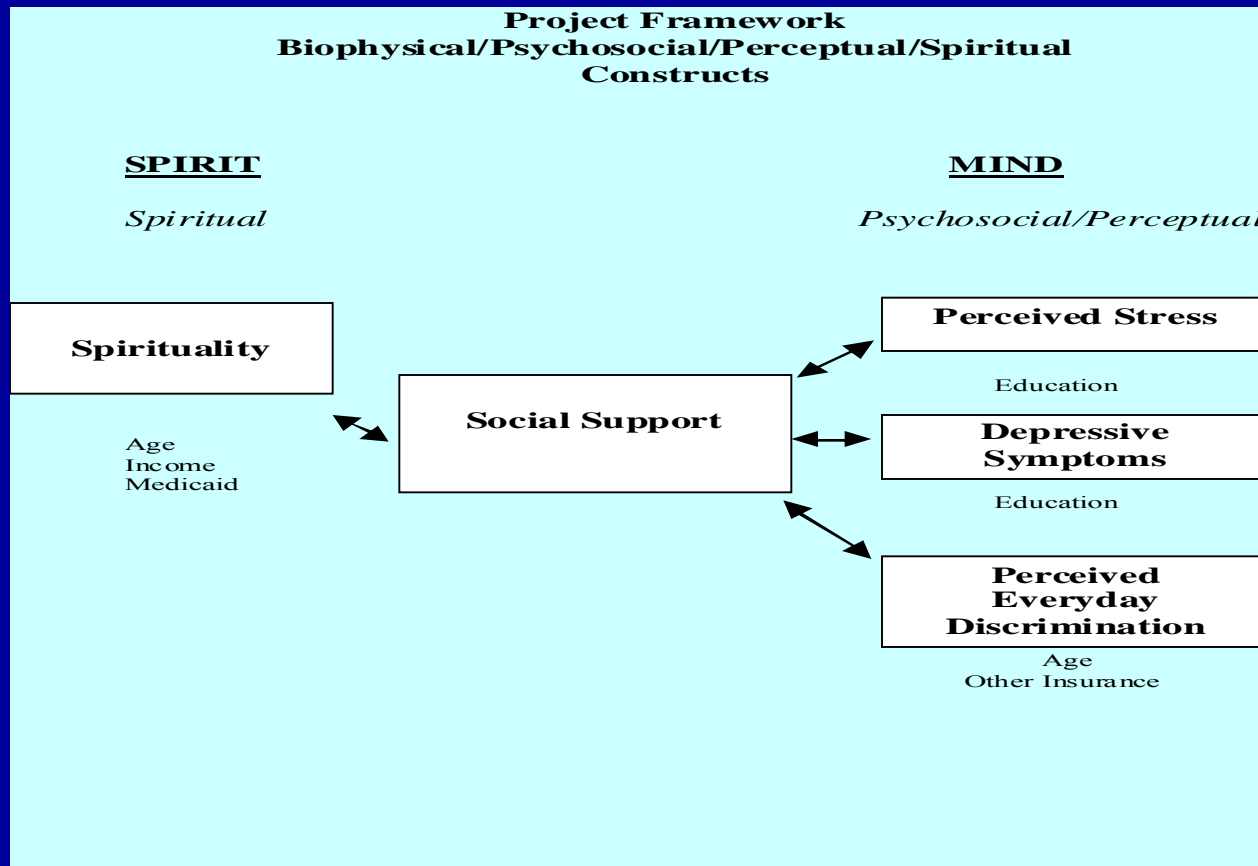


# Strengths

- Add to the current literature in understanding the factors both individually and collectively that affect women during pregnancy
- Lead to other methods of research
- Enhance Palmetto Healthy Start program services



# Final Study Model Pregnancy



# Research Implications

- Additional research is needed with a larger sample size to include a mixed method research design
- Additional research is needed in investigating spirituality and its effects on health
- Additional research is needed in investigating the health status and use of holistic health among a diverse group of African American women



# Practical Implications

- Focus prenatal health on assessing and addressing holistic factors (MIND, BODY, & SPIRIT)
- Potential partnering with community (e.g., pregnancy and parenting supportive services, faith based organizations)



# Lessons Learned

- Focus on prenatal health and health throughout the lifetime
- Spirituality is an important dimension to research and to potentially incorporate aspects into program planning
- Enlist a multifaceted community model approach



# Conclusion

Increasing spiritual resources and social support services prior to and during pregnancy can potentially improve health promotion efforts for pregnant women.







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