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Diet Quality and Physical Activity in Low-Income Pregnant Women
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Abstract
Physical activity (PA) and a healthy diet are essential during pregnancy. Low income females are at greater risk due to diminished options of nutritious foods. Research examining both PA and dietary habits is limited in low-income pregnant women. Hypothesis: It was hypothesized that most women will not meet PA and F&V recommendations and will not smoke or drink alcohol. Methods: Pregnant and postpartum low-income women (N=113) were recruited nationwide and completed an online survey on demographics, fruits and vegetable (F&V) intake, alcohol consumption, smoking and physical activity using the International Physical Activity Questionnaire. Variables were categorized as meeting PA recommendations (≥ 150 MET hr/wk) and meeting F&V recommendations (≥ 4.5 cups/day). Descriptive statistics were performed for all variables. Results: Mean age was 29.4 ± 5.8. Most women were enrolled in WIC (55.4%), were college graduates (50.4%), White (75.6%), and met PA recommendations (56.5%). Only 14.2% met F&V recommendations while 5.3% reported consuming alcohol and 9.7% reported smoking. Only 13.3% of women met both PA and F&V recommendations while 11.5% additionally refrained from smoking and drinking. Conclusion: PA and diet quality are necessary in healthy pregnancies but very low percent of low-income women meet both recommendations. Further studies should be conducted to understand diet patterns, PA and other health behaviors in low-income pregnant women. (Key Words: Physical Activity, Low-Income, Diet, Pregnancy)

Methods
Design: cross-sectional study
Participants: 113 low-income pregnant and postpartum women (<1 yr)
Recruited nationwide using the ResearchMatch platform

Protocols:
Online survey including demographics, pregnancy health behaviors, F&V Screener, International Physical Activity Questionnaire
PA was scored based on established protocol. Meeting PA recommendation was categorized as ≥ 150 MET hr/wk
FV screener was scored based on established protocol. Meeting FV recommendation was categorized as ≥ 4.5 cups/day.

Analysis:
Descriptive statistics were performed for all variables.

Results

Table 1: Characteristics of the Participants

<table>
<thead>
<tr>
<th>n=113</th>
<th>Age</th>
<th>29.4 ± 5.8 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIC Enrolled</td>
<td>56.3%</td>
<td></td>
</tr>
<tr>
<td>Education (≥some college)</td>
<td>87.4%</td>
<td></td>
</tr>
<tr>
<td>Pre-pregnancy BMI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight</td>
<td>3.4%</td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>45.4%</td>
<td></td>
</tr>
<tr>
<td>Overweight</td>
<td>20.2%</td>
<td></td>
</tr>
<tr>
<td>Obese</td>
<td>28.6%</td>
<td></td>
</tr>
<tr>
<td>Race (multiracial included)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>75.6%</td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>17.6%</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>8.4%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>9.2%</td>
<td></td>
</tr>
<tr>
<td>Alcohol Consumption</td>
<td>5%</td>
<td></td>
</tr>
</tbody>
</table>

Discussion
• Our findings indicate that only a small amount of the low-income women reached both the recommended levels of PA and F&V intake. However, this partly supports our hypothesis since some women smoked and drank during pregnancy. The data supports our hypothesis; the lack of nutritious diets combined with regular PA in low-income pregnant women.
• One study determined the amount of PA and diet quality are lower in low-income populations of pregnant women than in mid to high income populations. This was not the case here, as approximately 30% of mid/high income women meet recommendations. This may be due to the type of jobs the women have or the level of their education.
• Other studies also reveal the lack of proper nutrition in low-income pregnant women. A ‘low-income’ study of white and Native American women, revealed 9.6% of women ate the recommended vegetable intake and 16% met the recommended fruit intake. Our results were similar in that only 14.2% of the women met F&V intake.
• Our results show small percentage of drinkers (5%) and smokers (9.2%). A longitudinal study of ‘low income’ pregnant women revealed that 10% of women who have never smoked, initiated smoking during their pregnancy. This may be a result of stress and low socioeconomic status. In a cross-sectional study of ‘low income’ pregnant women in Alabama, 5.1% reported consuming alcohol. Both studies are extremely close to our own results.

Conclusion
PA and reaching the recommended intake of F&V are necessary in healthy pregnancies and are not common among low-income pregnant women. Further studies should be conducted to understand the patterns of diet and physical activity in low-income pregnant women and what other factors contribute to this.

References