The Evaluation of a Community Based Program on Health Indicators in a Food Insecure Population

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Problem

- Poverty is a risk factor for food insecurity.
- Food insecure individuals are at risk for diabetes, obesity, or hypertension.
- Food banks and pantries that were intended to be a temporary resource have become the primary food source for many in poverty.

Background & Significance

- One in six Americans is food insecure.
- Hispanic and African American poverty stricken adults are at a greater risk for food insecurity related health problems than non-Hispanic Whites.
- Community centers and churches located in underserved areas have an advantage in building sustainable programs with lasting impact.

Research Question

- Did the health interventions (health screening, education, walking club) have an effect on the health indicators (weight, blood pressure, heart rate and blood glucose) over one year?

Pender’s Health Promotion Model

- was used to empower the population to make healthy lifestyle changes.

Participants & Methods

- 100 people are seen each week.
- 45 individuals were included in the study.
- Age range from 24-76 with a mean average of 60.

- Retrospective chart review of the Action Family Program (AFP).
- Data collected on health screenings, health education, and walking club.
- Paired t-tests were used to compare pre- and post- intervention results.

Results

- A statistically significant difference between mean pre-intervention and post-intervention scores support improvement in overall weight loss, and systolic and diastolic blood pressures.
- Cohen’s d was calculated: The intervention had a medium to large effect.
- The heart rate changes were not found to be statistically significant.
- The sample size for the glucose readings was determined to be too small to determine accurate results.

<table>
<thead>
<tr>
<th>Paired Samples Test</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Std. Error</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>6.364</td>
<td>10.08</td>
<td>1.503</td>
<td>3.336</td>
<td>9.3928</td>
<td>4.236</td>
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<tr>
<td>Systolic Bp</td>
<td>6.444</td>
<td>15.84</td>
<td>2.362</td>
<td>1.885</td>
<td>11.404</td>
<td>4.51</td>
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<tr>
<td>Diastolic Bp</td>
<td>3.044</td>
<td>9.613</td>
<td>1.433</td>
<td>0.156</td>
<td>5.9324</td>
<td>2.125</td>
<td>0.039</td>
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<tr>
<td>BMI</td>
<td>0.982</td>
<td>1.767</td>
<td>0.263</td>
<td>0.451</td>
<td>1.5129</td>
<td>3.730</td>
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<tr>
<td>Heart Rate</td>
<td>-1.38</td>
<td>11.81</td>
<td>1.76</td>
<td>-4.926</td>
<td>2.17</td>
<td>-0.783</td>
<td>0.438</td>
</tr>
</tbody>
</table>

Discussion

- Programs take time to build.
- Strengths: AFP supported the program.
- AFP trusted in the community.
- Limitations: Small sample size for walking club and education results. Participants with known high glucose readings opted out of monitoring.
- Additional research is needed to develop culturally appropriate programs leading to healthy behaviors.

Conclusions

- Food insecure populations have compounded health needs.
- Often self care is complicated with the perception of too few options.
- A community based health intervention can, over time, give this population an opportunity to make healthier lifestyle choices.
- Weight loss and lowering of blood pressure can be achieved in the community setting through programs like the Action Family Program.

Primary References


Complete list of references available upon request.