Promotora-led Diabetes Self-Care Education Lowers Depression Scores and Increases Patient Self-Efficacy

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Promotora-led Diabetes Self-Care Education Lowers Depression Scores and Increases Patient-Efficacy

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Introduction:
- Vulnerable populations with diabetes face special challenges, including a higher disease prevalence and worse clinical outcomes.¹ ² Latinos with diabetes are 1.6 times more likely to develop end-stage renal disease than non-Hispanic whites and 1.4 times more likely to die from the disease.³
- There is a higher prevalence of depression among patients with type II diabetes as compared with patients without diabetes.À ³
- Diabetes self-management programs have demonstrated effectiveness in various patient populations for the control of diabetes. Few studies have examined the impact of these programs on depression comorbidities.

Objectives:
Assess the impact of a promotora-led, Spanish language diabetes self-care education program on depression scores among adult, low-income urban Latino patients.

The Intervention:
- 6 weekly or 12 monthly group sessions
- Sessions led by Spanish-speaking promotora
- Education focused on self-care of diabetes
- Social support provided by group

References:

The Participants:
- Latino patients with diabetes
- 18 years of age and older
- Recruited from 4 primary care practices:
  - Centro de Salud
  - Lehigh Valley Physician Practice
  - Family Health Center
  - Vista Nueva (now Neighborhood Health Centers of the Lehigh Valley)
- 193 participants enrolled in the program; 77 dropped out
- Analysis is based on the 106 participants who completed the program

Measures:
Depression: PHQ-9
- Stratified by total score into three categories:
  - None/Minimal Depression (scores 0-4)
  - Mild Depression (scores 5-9)
  - Moderate or worse Depression (scores 10+)

Self-Efficacy: Diabetes Empowerment Scale – Short form (DES-SF)
- Medical chart review of depression medications; categorized by duration on medication:
  - No Medication
  - Therapeutic Level (started >6 weeks prior to class)
  - Sub-Therapeutic Level (started <6 weeks prior or during program)

Limitations:
- High dropout rate and loss to follow-up
- Small sample size when analyzed by program site; therefore all sites were combined
- Study design: No control group, pre-post measurements

Conclusion:
- Participation in a promotora-led diabetes group self-care program can improve patients’ confidence in their ability to meet diabetic goals (self-efficacy).
- Program participation can improve level of depressive symptoms among Latino patients with diabetes, particularly those with mild depressive symptoms.
- Combination of self-care education and medication can help to improve level of depressive symptoms among patients with diabetes.

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Results:
Changes in DES Score by Depression Medication Use Category

<table>
<thead>
<tr>
<th>Depression Level</th>
<th>None/Minimal Depression</th>
<th>Mild Depression</th>
<th>Moderate or worse Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Medication</td>
<td>61.3% (19)</td>
<td>44.4% (11)</td>
<td>96% (24)</td>
</tr>
<tr>
<td>Sub-Therapeutic</td>
<td>66.7% (11)</td>
<td>25% (5)</td>
<td>26.3% (4)</td>
</tr>
<tr>
<td>Therapeutic Level</td>
<td>72.7% (16)</td>
<td>28.6% (6)</td>
<td>15.8% (2)</td>
</tr>
</tbody>
</table>

Changes in PHQ-9 Score by Depression Medication Use Category

<table>
<thead>
<tr>
<th>Depression Level</th>
<th>No Medication</th>
<th>Sub-Therapeutic</th>
<th>Therapeutic</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Medication</td>
<td>66% (16)</td>
<td>6% (1)</td>
<td>34% (5)</td>
</tr>
<tr>
<td>Sub-Therapeutic</td>
<td>41.7% (9)</td>
<td>12.5% (3)</td>
<td>44.4% (6)</td>
</tr>
<tr>
<td>Therapeutic Level</td>
<td>100% (20)</td>
<td>7.5% (2)</td>
<td>82.5% (12)</td>
</tr>
</tbody>
</table>

Statistically significant change seen in depression levels across all categories of Depression Medication Use (p<0.001) and "Therapeutic" Level (p<0.001) compared to "Sub-Therapeutic" level (p<0.001).