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Department of Family Medicine

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

Robert Motley MD Lehigh Valley Health Network, Robert_J.Motley@lvhn.org

Nyann Biery MS Lehigh Valley Health Network, nyann.biery@lvhn.org

Hannah D. Paxton RN, MPH Lehigh Valley Health Network, Hannah_D.Paxton@lvhn.org

Cathy A. Coyne PhD, MPH Lehigh Valley Health Network, Cathy_A.Coyne@lvhn.org

Sherrine Eid MPH Lehigh Valley Health Network, Sherrine.Eid@lvhn.org

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Published In/Presented At

Motley, R., Biery, N., Paxton, H., Coyne, C. & Eid, S. (2014, October, 30). *Promotora-led Diabetes Self-Care Education Lowers Depression Scores and Increases Patient Self-Efficacy*. Poster session presented at the LVHN Nursing Research Day, Allentown, PA.

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

Introduction:

- Vulnerable populations with diabetes face special challenges, including a higher disease prevalence and worse clinical outcomes.¹⁻³ 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.²
- There is a higher prevalence of depression among patients with type II diabetes as compared with patients without diabetes.^{4,5}
- 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

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Robert Motley MD, Nyann Biery MS, Hannah Paxton RN, MPH, Cathy Coyne PhD and Sherrine Eid MPH, Lehigh Valley Health Network, Allentown, Pennsylvania

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
 - Vida 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)

Acknowledgements:

Grant funded by Anne and Carl Anderson Trust The authors would like to acknowledge the work of Latinos for Healthy Communities, Carol Foltz PhD, Abby Letcher MD, Edgardo Maldonado MD, Alicia Rivera, and Francigna Rodriguez.

Results:

Changes in DES Score by Depression Medication Use Category					Changes in DES Score by Depression Medication Use Category					
Category of Depression Medication Use	n Pre- intervention				Category of Depression	Depression Level	Depression Level - Post within group % (n)			p-Value
No medication (n=45) Therapeutic Level (n=20)	4.14 4.12	4.35 4.01	0.072		Medication Use	Pre	None to Minimal Depression	Mild	Moderate or Worse	
Sub-therapeutic Level (n=27) Total (n=92)	3.73 4.01	4.34 4.27	0.016 0.028			None to minimal (n=25)	96% (24)	4% (1)	0	
Higher score indicates higher level of self-efficacy.					No Medication (n=53)	Mild (n=19)	57.9% (11)	26.3% (5)	15.8% (3)	0.001
Results						Moderate or worse (n=9)	22.2% (2)	44.4% (4)	33.3% (3)	
Self-Efficacy	Depression						69.8% (37)	18.9% (10)	11.3% (6)	
Statistically significant increase Intervention showed statistically significant improvement among patients that recently in depression levels across all categories of Depression Medication use					None to minimal (n=11)	100% (11)	0	0		
began taking medications for depression	Medication use				Therapeutic Level (n=22)	Mild (n=3)	66.7% (2)	0	33.3% (1)	0.028
Trend toward increase in DES score among patients on no medication, but this did not reach	Medication groups demonstrating most significant change were "No Medication" (p=0.001) and "Sub-Therapeutic" Levels (p<0.001) Level of depressive symptoms NOT associated with drop-out rate (data not shown)					Moderate or worse (n=8)	37.5% (3)	37.5% (3)	25% (2)	
statistical significance							72.7% (16)	13.6% (3)	13.6% (3)	
						None to minimal (n=16)	93.8% (15)	6.3% (1)	0	
					Sub-Therapeutic Level (n=31)	Mild (n=8)	37.5% (3)	50% (4)	12.5% (1)	<0.001
imitations:						Moderate or worse (n=7)	14.3% (1)	28.6% (2)	57.1% (4)	
							61.3% (19)	22.6% (7)	16.1% (5)	

- 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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