

# Abstract #99573

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# CONVENTION



# Peruvians living with diabetes mellitus: Social support and spirituality strategies to improve nursing care

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## ■ Conflict of Interest

- Each author for this research presentation reported there are **no real and/or perceived conflicts of interest** to disclose

## ■ Ethical Statement

- This research study was approved by the institutional ethics committee

# Spirituality, Social Support, and Diabetes: A Cross-Sectional Study of People Enrolled in a Nurse-Led Diabetes Management Program in Peru

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## Abstract

**Introduction:** In Peru, people living with diabetes mellitus (PLDM) represent 7% of the adult population, each with a \$54,000 lifetime cost. For Latinos, spirituality provides meaning and purpose of life while social support affects behavioral choices and adherence decisions. The purpose of this study was to determine the relationship between spirituality and social support for PLDM participating in a nurse-led diabetes management program in a public hospital in Lima, Peru. **Method:** This cross-sectional study included adult PLDM (N = 54). The instrument included demographic items and the Spanish versions of the social/vocational concern dimension of the Diabetes Quality of Life Questionnaire and the Reed's scale of spiritual perspective. **Results:** There was an inverse relation between social support and spiritually practices ( $p = .020$ ) and spiritual beliefs ( $p = .005$ ). PLDM with 5 years or more in the program had significantly higher scores in social support ( $p = .020$ ) and spiritual practices ( $p = .010$ ). **Conclusion:** Spirituality and social support are important factors for managing PLDM. Nurse-led diabetes management programs with Latino participants should consider targeted spiritual and social support strategies to expand the holistic management. Future studies should explore the impact and effectiveness of spiritual and social support interventions on clinical outcomes.

## Keywords

Latin cultures, chronic disease, diabetes, nursing, social support, spirituality

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- People living with diabetes mellitus (PLDM) represent about 7% of the adult population in Peru<sup>1</sup>
  - Higher demand for outpatient services, prolonged hospitalization, absenteeism and disability, and mortality<sup>2</sup>
  - Estimated per person lifetime cost for health services is \$54,000<sup>3</sup>
- Nurse-led diabetes management programs support medication adherence, improve dietary habits, and increase physical activity<sup>4,5,6</sup>
  - Programs offered in the community are more effective than other settings
  - Social networks and spirituality are important for Latinos



- For nurses and their patients, spiritual care is an essential ingredient for providing holistic person-centered care<sup>1,2</sup>
- According to the International Council of Nurses<sup>3</sup>, nurses are ethically accountable for providing the care environment in which “the human rights, values, customs and spiritual beliefs of the individual, family and community are respected”
- Although there is not an authoritative definition for nurses<sup>4</sup>, spirituality can be conceptualized as “a quality that goes beyond religious affiliation, that strives for inspirations, reverence, awe, meaning and purpose, even in those who do not believe in any god”<sup>5</sup>

# Spirituality – Latinos living with diabetes

- For Latinos, spirituality is part of daily living, including dealing with stress and decreasing anxiety related to illness<sup>1,2,3,4</sup>
- Spirituality is personal and contextual; mediates and/or moderates relationships in the process of self-transcendence<sup>5</sup>
  - Transcendent in two dimensions, including vertically with God or another supreme value that guides the life of people; and horizontally in the relationship that people have with themselves and with others, and with their environment<sup>6,7</sup>
- Spirituality provides meaning and purpose for life; guides actions, influences interpersonal relationships<sup>8</sup>



# Social Support – Latinos living with diabetes

- Social support has been directly correlated to PLDM achieving adherence with their diabetes management plan in Latin America<sup>1</sup>
  - Social support strategies such as brief counseling and collaborative goal setting are associated with greater perceived self-management<sup>2,3</sup>
- PLDM engaged in diabetes self-management education achieve statistically significant decreases in their hemoglobin A1c levels<sup>4</sup>
- Latinos associate spirituality with praying for healing and social support with asking others to pray for their healing as integral parts of their health and wellness<sup>5</sup>

- The purpose of this study was to determine the relationship between social support, spiritual beliefs, spiritual actions, and length of program engagement for PLDM enrolled in a nurse-led diabetes management program\* in Lima, Peru.

\*The program provides holistic education and social support services to PLDM to promote lifestyle and behavior modifications to achieve metabolic control and to improve quality of life.

- This cross-sectional pilot study included adult PLDM (N=56) enrolled in a nurse-led diabetes management program in Peru
  - A nonprobability convenience sample included 54 PLDM attending educational appointments (37.5% of total appointments) as part of the program during the months of August/September (Tuesdays/Thursdays, 10:00-13:00).
  - From the population (437 PLDM), 59 participants is adequate (10% confidence interval and 90% confidence) for a nonprobability sample
- Nearly all (99.5%) the PLDM enrolled in the program were diagnosed with type 2 diabetes mellitus



- The 21-item study instrument included two sections: Demographic (4-items) and measurement (17-items)
  - Demographic items included age, sex, time from diagnosis of diabetes, and time of participation in the program
  - Measurement section included two variables, social support and spirituality.
    - The Social/Vocational Concern dimension of the Diabetes Quality of Life Questionnaire (10-items) and the Reed's Scale of Spirituality Perspective (7-items) were applied to PLDM participating in the program over one month
- The data from the instruments was organized into a database with Excel for analysis in the statistical program STATA 12.0

# Results – Sample characteristics

- Sample (N=56); mean age 63 years; 75%female; all insulin dependent type II diabetes; 75% in program > 5 years

Characteristics	Results
Age	
All participants (X, p25; p75)	62.8 (57.5; 69.0)
Sex, n (%)	
Male	14 (25.0)
Female	42 (75.0)
Time of diabetes diagnosis, n (%)	
10 years or less	32 (57.1)
More than 10 years	24 (42.9)
Time in the program, n (%)	
5 years or less	14 (25.0)
More than 5 years	42 (75.0)

Characteristics	Results
Social support, n (%)	
Low (1-2 points)	17 (30.4)
Medium-low (0.71-1 points)	13 (23.2)
Medium-high (0.29-0.71 points)	15 (26.8)
High (0-0.29 points)	11 (19.6)
Spirituality practices, n (%)	
Low (0-4.4 points)	14 (25.0)
Medium-low (4.4-5 points)	15 (26.8)
Medium-high (5-5.8 points)	17 (30.4)
High (5.8-6 points)	10 (17.8)
Spirituality beliefs, n (%)	
Low (0-4.8 points)	15 (26.8)
Medium-low (4.8-5 points)	16 (28.6)
Medium-high (5-5.9 points)	11 (19.6)
High (5.9-6 points)	14 (25.0)

# Results – Bivariate analysis

- Bivariate analysis – An inverse relation between high social support and low spiritual practices ( $p = 0.020$ ) and low spiritual beliefs ( $p = 0.005$ )

**Table 2.** Relation Between Social Support and Spirituality Practices and Beliefs ( $N = 56$ ).

	Spirituality practices				$p$ value
	Low	Medium-low	Medium-high	High	
Social support, $n$ (%)					
Low	4 (7.1)	1 (1.8)	6 (10.7)	0 (0.0)	.020
Medium-low	3 (5.4)	4 (7.1)	1 (1.8)	7 (12.5)	
Medium-high	2 (3.6)	3 (5.4)	6 (10.7)	2 (3.6)	
High	5 (8.9)	7 (12.5)	4 (7.1)	1 (1.8)	
	Spirituality beliefs				$p$ value
	Low	Medium-low	Medium-high	High	
Social support, $n$ (%)					
Low	2 (3.6)	6 (10.7)	3 (5.4)	0 (0.0)	.005
Medium-low	5 (8.9)	1 (1.8)	0 (0.0)	9 (16.1)	
Medium-high	2 (3.6)	4 (7.1)	4 (7.1)	3 (5.4)	
High	6 (10.7)	5 (8.9)	4 (7.1)	2 (3.6)	



# Results – Differential analysis

- When performing differential analysis for the number of years since admission into the program, loss of significance between social support and spiritual practices

**Table 3.** Relationship Between Social Support and Spirituality Practices by Time in Program.

	Five years or less in the program (N = 39)				p value
	Low	Medium-low	Medium-High	High	
Social support, n (%)					
Low	4 (10.3)	1 (2.6)	6 (15.4)	0 (0.0)	.090
Medium-low	0 (0.0)	4 (10.3)	1 (2.6)	2 (5.1)	
Medium-high	2 (5.1)	2 (5.1)	5 (12.8)	1 (2.6)	
High	3 (7.7)	5 (12.8)	3 (7.7)	0 (0.0)	
	More than 5 years in the program (N = 17)				
	Low	Medium-low	Medium-High	High	
Social support, n (%)					
Low	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	.167
Medium-low	3 (17.7)	0 (0.0)	0 (0.0)	5 (29.4)	
Medium-high	0 (0.0)	1 (5.9)	1 (5.9)	1 (5.8)	
High	2 (11.8)	2 (11.8)	1 (5.9)	1 (5.8)	

# Results – Relationships with time

- Only relationship that maintained significance was social support and spiritual beliefs for participants with more than 5 years in the program ( $p=0.003$ )

**Table 4.** Relationship Between Social Support and Spirituality Beliefs by Time in Program.

	Five years or less in the program ( $N = 39$ )				$p$ value
	Low	Medium-low	Medium-High	High	
Social support, $n$ (%)					
Low	2 (5.1)	6 (15.4)	3 (7.7)	0 (0.0)	.158
Medium-low	3 (7.7)	1 (2.6)	0 (0.0)	3 (7.7)	
Medium-high	2 (5.1)	2 (5.1)	4 (10.3)	2 (5.1)	
High	5 (12.8)	3 (7.7)	1 (2.6)	2 (5.1)	
	More than 5 years in the program ( $N = 17$ )				
	Low	Medium-low	Medium-High	High	
Social support, $n$ (%)					
Low	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	.003
Medium-low	2 (11.8)	0 (0.0)	0 (0.0)	6 (35.3)	
Medium-high	0 (0.0)	2 (11.8)	0 (0.0)	1 (5.9)	
High	1 (5.9)	2 (11.8)	3 (17.7)	0 (0.0)	

- Spirituality and social support are important factors for managing PLDM
  - The high spirituality scores in this study were consistent with the current knowledge about Latinos living in North America
- No studies were found that analyzed the relationship between social support and spirituality (including beliefs or practices)
  - Spirituality/religiosity have been considered a proxy for social support<sup>1,2</sup>
- This study indicates this proxy relationship may not be correct as the two variables, spirituality and social support, can move in different directions depending on the variable of time



- Nurses work with PLDM to understand their disease process; using education to achieve adherence with clinical management strategies
- This study indicates spirituality and social support may be important variables that can be strengthened by the nurse-person relationship
  - Spirituality and social support are important factors for managing PLDM in Peru.
- Nurse-led diabetes management programs with Latino participants can positively impact spiritual and social support strategies to emphasize holistic care

- Larger studies need to explore the effectiveness of spirituality and social support interventions on psychosocial and clinical outcomes
- Qualitative research needs to be conducted to understand the impact of diabetes management programs in improving social support and encouraging spirituality
- Diabetes management programs in Latin America need to complete evaluations, such as this one, to determine the relationships between the clinical management strategies and their effectiveness in achieving the targeted clinical and quality of life outcomes

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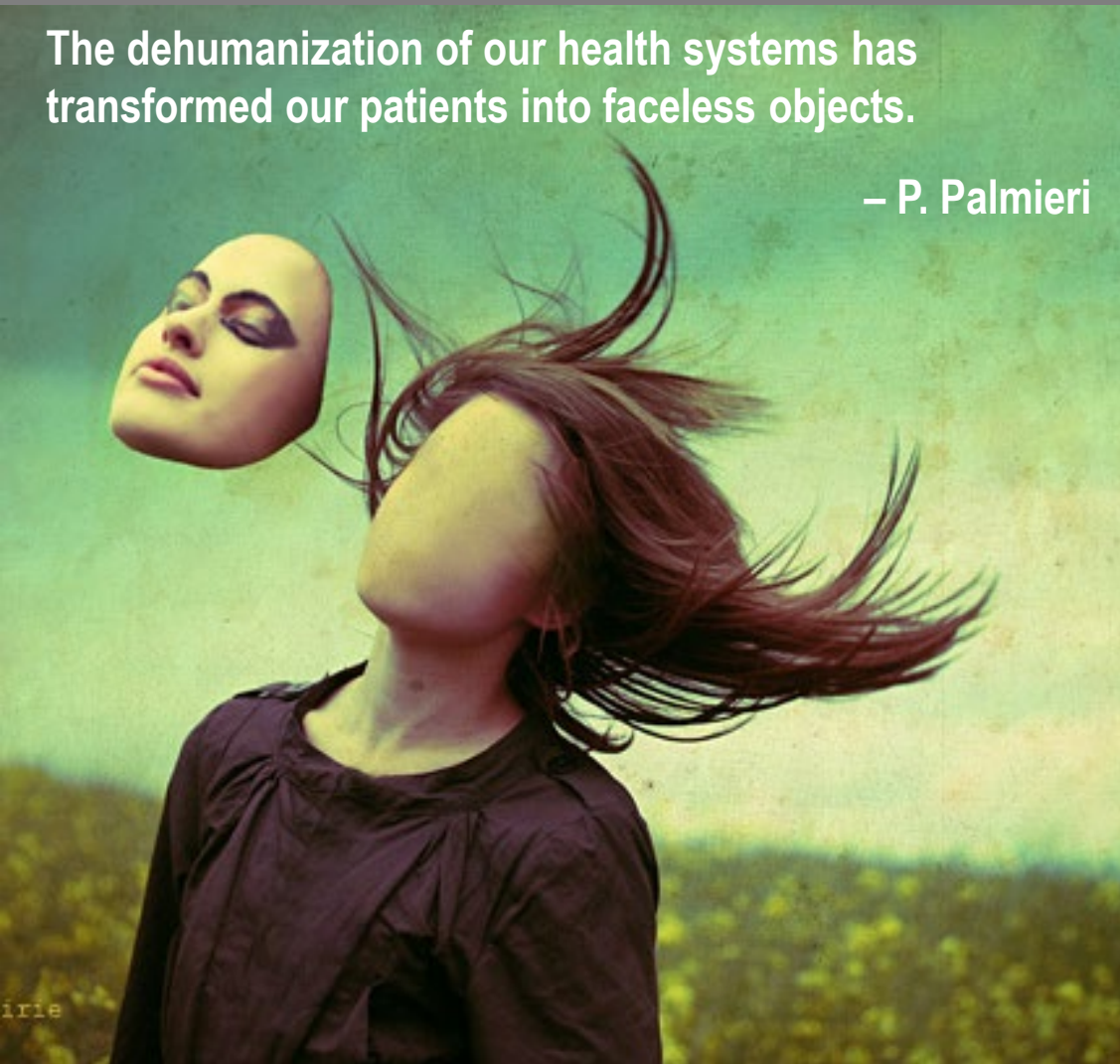
# Questions?



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The dehumanization of our health systems has transformed our patients into faceless objects.

– P. Palmieri



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