Depression and chronic health conditions among Latinos: the moderating and mediating role of social networks

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Background

- Approximately 26% of Latinos have mild, moderate, or severe depression[1]
- Research has found an inverse relationship between depression and chronic conditions among Latinos[2]
- Characteristics of the social network are positively related to physical and mental health outcomes[3-4]
- Most research linking social networks and health is among non-Latino white samples[4]

Objectives

Examine the:
1. **Association between social networks and depression**
2. **Mediating (indirect) role of social networks on the relationship between chronic conditions and depression**
3. **Moderating (buffering) role of social network in the relationship between chronic conditions and depression**

Methods

Participants
- Data from the 2009 San Diego Prevention Research Center's community survey
- Census blocks were randomly chosen from 4 communities near the US-Mexico border
- Houses and then household members (≥ 18 years of age) were randomly recruited

Measures
- *Depression*
  - Patient Health Questionnaire (PHQ-9)[5]
  - Cutoff of ≥ 10 indicates moderate-to-severe depressive symptoms
- *Chronic conditions*
  - Participants self-reported having chronic conditions from a list
- *Social network characteristics*[6]
  - Participants listed up to 5 people that they "have relied on to talk with about personal issues or problems" during the past year and each person's:
    - Gender (female versus male)
    - Relation (e.g., friend, family)
   - Length of association (in years)

Methods

Data analyses
- Logistic regression models used chronic conditions and social network characteristics to predict having moderate-to-severe depressive symptoms
- Interactions between health conditions and social network characteristics were conducted to test for moderation
- To assess for mediation, maximum likelihood estimation was used to test direct and indirect paths between each chronic condition, social network characteristic, and depression

Results

1. The greater the percentage of the total network is comprised of women, the more likely Latinos report moderate-to-severe depressive symptoms (OR: 7.7, CI: 2.2-26.7)
2. Social network characteristics did not mediate the relationship between chronic conditions and depression
3. Significant social network moderators are presented below:
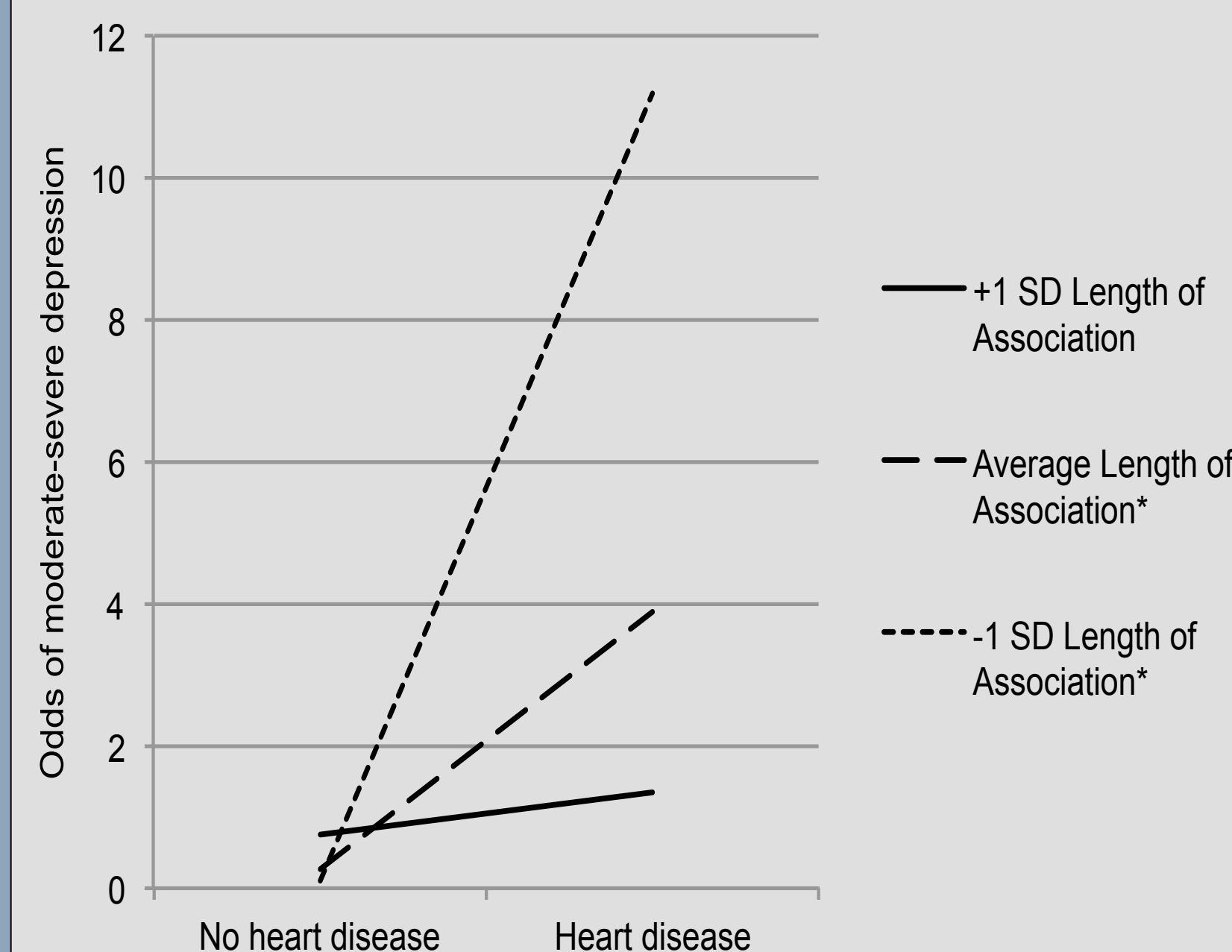
* 95% Confidence Interval does not cross zero

Results

Participant Characteristics (N=393)	
	% (n) or Mean ± SD
Demographic characteristic	
Female	73 (288)
Age	44 ± 17
Unemployed	54 (212)
< High school/GED	55 (214)
Born outside of the US	77 (304)
Mean years living in the US	21 ± 13
Health conditions	
Depressive symptoms	4.33 ± 4.72
No-to-mild	88 (347)
Moderate-to-severe	12 (46)
Presence of ≥1 of the below diseases	46 (182)
Diabetes	13 (52)
Heart disease, stroke	9 (35)
Hypertension	26 (101)
High cholesterol	27 (104)
Arthritis	14 (55)
Social network characteristics	
Social network size	4 ± 1
% of women in network	64 (393)
% family in network	55 (393)
% friends in network	29 (393)
% partner/spouse in network	12 (393)
% other in network	3 (393)
Length of association in years	22 ± 12
Married or cohabitating	60 (234)
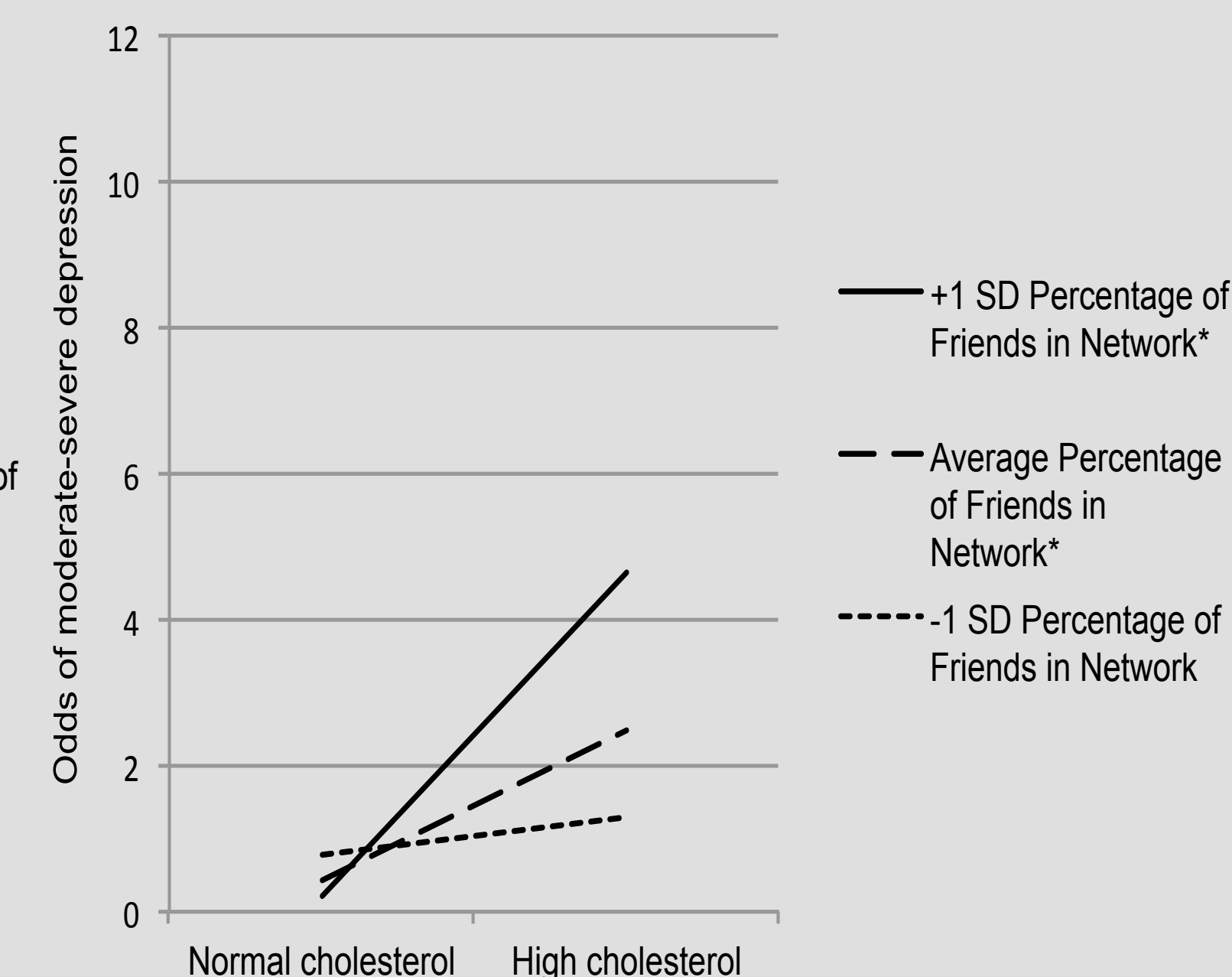
Discussion

- Latinos with moderate-to-severe depressive symptoms may seek support from women more than men. Hence, studies should investigate how women deliver support, how Latinos perceive support from women, and test strategies that use female-delivered support to promote emotional well-being.
- Moderate-to-severe depressive symptoms were more likely among those with heart disease *if they had shorter than average-length relationships*. Long-term relationships should be harnessed in interventions that aim to promote mental health among Latinos with heart disease.
- Latinos with high cholesterol reported more moderate-to-severe depressive symptoms *when their social network comprised of more than average percentage of friends*. Perhaps friends do not help with adherence to cholesterol medication, which may offer anti-depressant benefits.

Limitations
- The cross-sectional design limits the ability to conclude the direction of influence
- The prevalence rates of most diseases were low in this sample

References

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