Does Marital Relationship Quality Affect SE Asian Adults' Blood Pressure?

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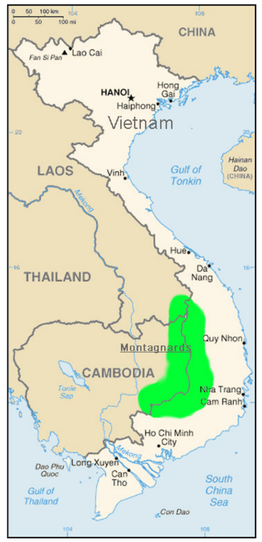
MONTAGNARD HYPERTENSION PROJECT

Purpose of the Study

Our study examines whether marital relationship quality is related to high blood pressure, and whether perceived stress moderates the association among Montagnard adults in NC.



Background

Montagnard refugees are a multilingual tribal group who were resettled to the U.S. from the highlands of Vietnam. NC has the largest Montagnard population outside Vietnam (about 10,000 persons).

They face transnational dislocation challenges including disruption of family dynamics, chronic stress and poor health outcomes. Hypertension is prevalent in the community.

Marital Quality & Blood Pressure

Marital strain has deleterious effects on cardiovascular, endocrine, and immune functions (Robles & Kiecolt-Glasser 2003).

Bergmann, Gyntelberg & Faber's (2014) review found that marital stress and perceived stress may influence blood pressure status. The link between marital quality and cardiovascular risk may be stronger among older women than men (Liu & Waite, 2014).

However, little is known about the above associations among minority population.

Data & Methods

Data include 99 currently-married adults from the pilot CBPR Montagnard Hypertension Study 2015-2016, which surveyed 125 Montagnard adults in Greensboro, NC.

Key variables included blood pressure (BP), positive marital quality (PMQ), negative marital quality (NMQ), and perceived stress (PS).

BP was measured as the average of 2 readings. High BP is considered (systolic BP >=130 mmHg) or (diastolic >=80) mmHg) according to the new APHA standard. MQ was measured with questions indicating positive and negative aspects of relationships. PS was measured by answers to 4 questions from the MacArthur Stress Scale.

Logistic regression methods were used to assess risk of high blood pressure. Effects of interaction terms, PMQ/NMQ* PS and Gender *PMQ/NMQ were investigated.

Community-Based Participatory Research

Students educate on healthy food options at a Montagnard Health Fair.

Behavioral data collection begins with in-home interviews.

Biological data collection begins with saliva and hair sample collections to measure cortisol.

Biological data collection continues with blood pressure measurements.

Results

55.6% are female.
77.9% are aged 40 and above.
77.8% do not speak English.
38.4% have no formal schooling.
37.4% are not currently working.

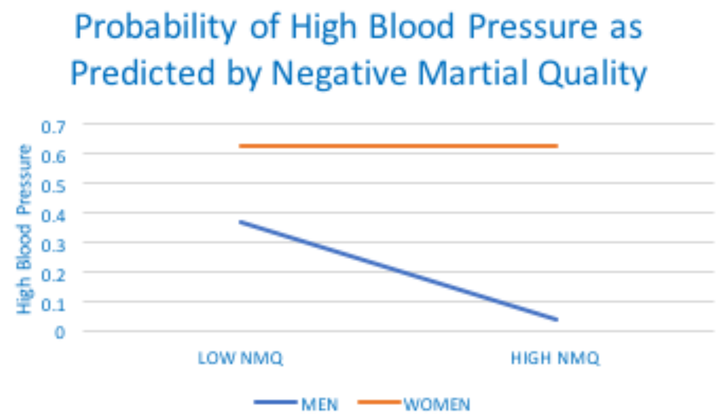
Men: 65.1% have high BP; Mean PMQ: 2.67, Mean NMQ: 1.50; Mean PS: 1.72*
Women: 55.6% have high BP; Mean PMQ: 2.57, Mean NMQ: 1.52; Mean PS: 2.00.

Gender, Higher English level, and the interaction between NMQ and Gender were significantly associated with higher BP risk among Montagnards controlling for various covariates. PS did not moderate the association between MQ and BP.

Logistic Regression Table

Predictors	High Blood Pressure Risk		
	B	SE B	OR (95%CI))
Age (40 and above=1; below 40=0)	-0.34	0.87	0.72 [0.13-3.90]
Gender (male=1, female=0)	-2.40*	0.88	0.10 [0.02-0.51]
Education Level (some formal education=1, no formal education= 0)	0.08	0.62	1.09 [0.32-3.68]
Speak English (Yes=1, No=0)	1.61*	0.79	5.02 [1.06-23.69]
Employment Status (Yes=1, No=0)	0.14	0.61	1.15 [0.35-3.79]
Household Financial Insecurity (secure=1, insecure=0)	0.21	0.80	0.81 [0.17-3.87]
Body Mass Index (overweight=1, normal=0)	-0.99†	0.60	0.37 [0.11-1.21]
Self-Rated Health (good/very good/excellent=1, poor/fair=0)	0.31	0.61	1.37 [0.41-4.55]
Perceived Stress	-0.07	0.53	0.93 [0.33-2.64]
Negative Marital Quality	0.01	0.80	1.01 [0.21-4.87]
Gender * Negative Marital Quality	-2.91*	1.38	0.06 [0.00-0.81]
Constant	0.53	0.99	1.70
χ^2		27.88**	
Nagelkerke R^2		.37	

Note. N=99; *df*=11; OR=odds ratio; CI=confidence interval. †p < .10. *p < .05. **p < .01.



Discussion

Our emerging results indicate Montagnard women are more likely to have high BP. Higher NMQ may act as a protective factor of hypertension risk for men, but not for women, as Birditt et al (2014) also found.

Future research should investigate potential behavioral mediators of the negative association between negative marital quality and high blood pressure among men. The positive association between English proficiency and high BP status could indicate increased difficulties as refugees acculturate, which needs to be further examined. Practitioners working with this group may need to consider interventions that can target MQ in this population.