Examining the Relationship Between Social Cohesion and Health in Kensington
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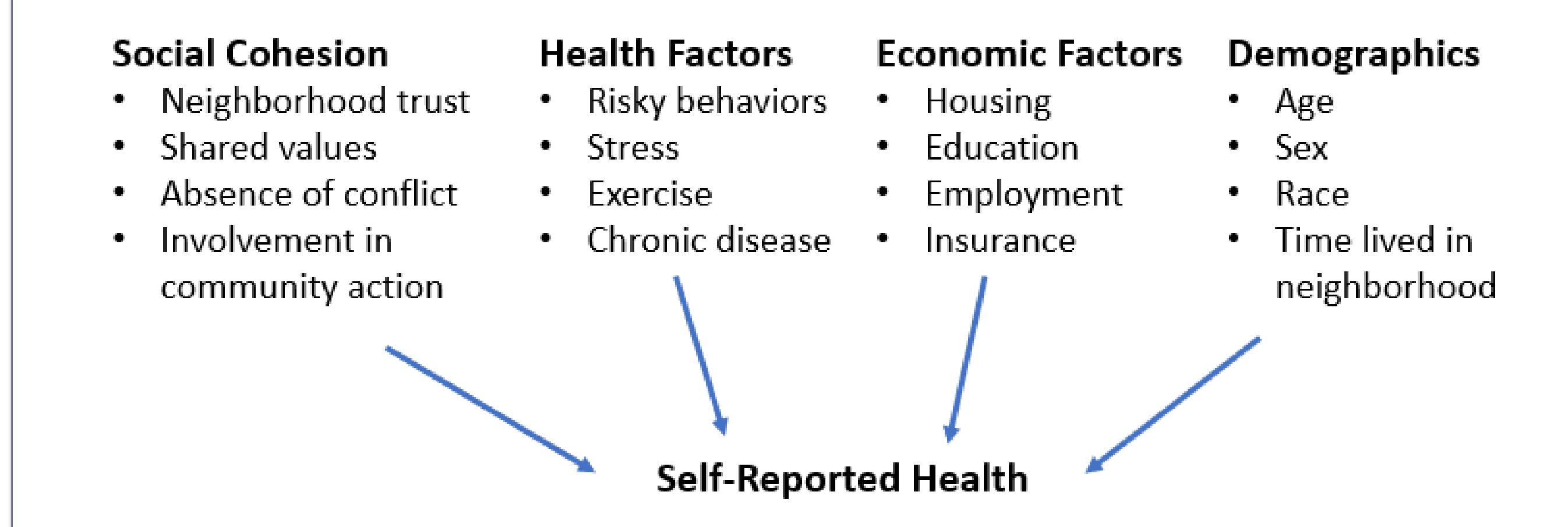
Introduction & Background

- This is a study of the association between social cohesion and self-reported overall health in the Somerset neighborhood of Kensington, in Philadelphia, PA
- Supported by the New Kensington Community Development Corporation (NKCDC), who are interested in whether the effects of cohesion-oriented programming might extend to health benefits for their constituents
- Past studies have found a broad association between social cohesion and a reduction in certain chronic diseases
- **Research question:** Do individuals who report higher levels of social cohesion also report better self-reported health?
- **Study hypothesis**: Individuals who report higher levels of social cohesion will report better self-reported health, even after controlling for variables such as health behaviors and demographic factors
- **Study approach:** This study used a cross-sectional convenience sample of adult neighborhood residents
- **Study aim:** To examine whether social cohesion is linked to self-reported health in this community
- **Study goal:** To provide NKCDC and similar organizations with analysis that can help them evaluate the impact of various programs
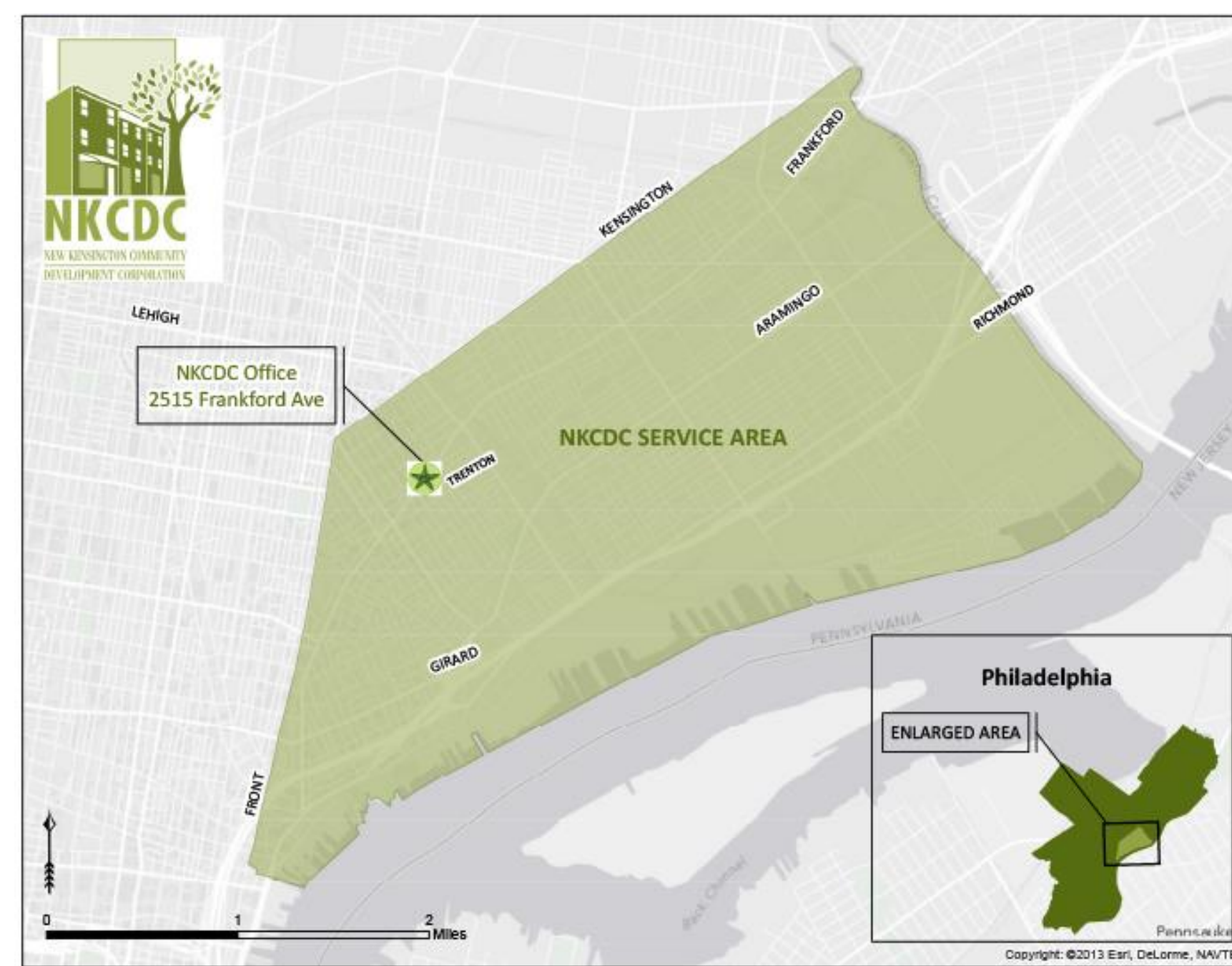
Methods

- **Study sample**:
  - Convenience sample of 328 adult Somerset residents
  - Survey administered by residents trained as data collectors
  - Data collected on electronic tablets between July and December of 2017
- **Survey instrument**:
  - 73 questions, 25 minutes to complete
  - Validated scales used for social cohesion & stress (PSS-4)
- **Analysis plan**:
  - Variables that showed significant bivariate correlations with self-reported health at an α-level of 0.1 were included in the initial linear regression model
  - Akaike's Information Criterion (AIC) was used to compare several iterations of the model, and the version with the lowest AIC score was selected

Conceptual Model

| Social Cohesion	Health Factors	Economic Factors	Demographics
• Neighborhood trust	• Risky behaviors	• Housing	• Age
• Shared values	• Stress	• Education	• Sex
• Absence of conflict	• Exercise	• Employment	• Race
• Involvement in community action	• Chronic disease	• Insurance	• Time lived in neighborhood

Self-Reported Health

Social Cohesion:
Score the following on a scale of 1-5:
- This is a close-knit neighborhood
- People around here are willing to help their neighbors
- People in this neighborhood generally don't get along with each other
- People in this neighborhood do not share the same values
- People in this neighborhood can be trusted

Self-reported health:
How would you rate your overall health:
Poor, Fair, Good, Very good, Excellent

Descriptive Statistics
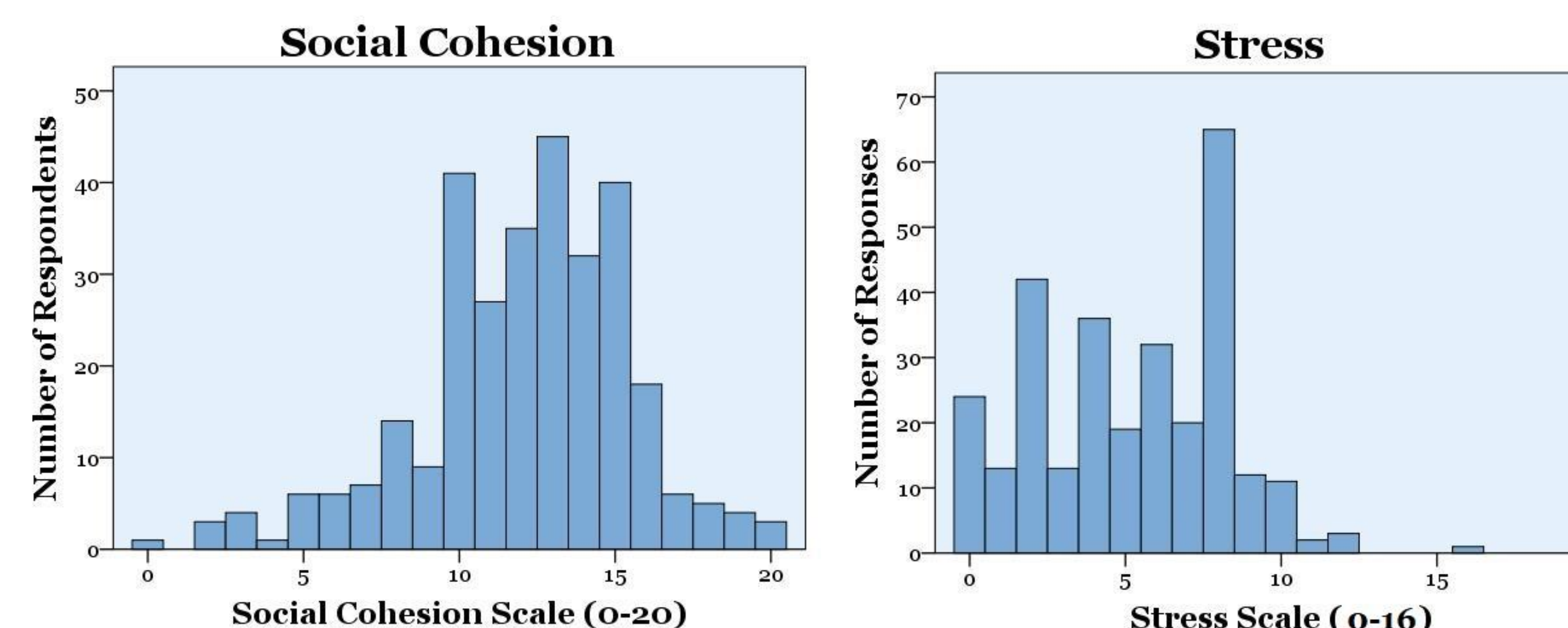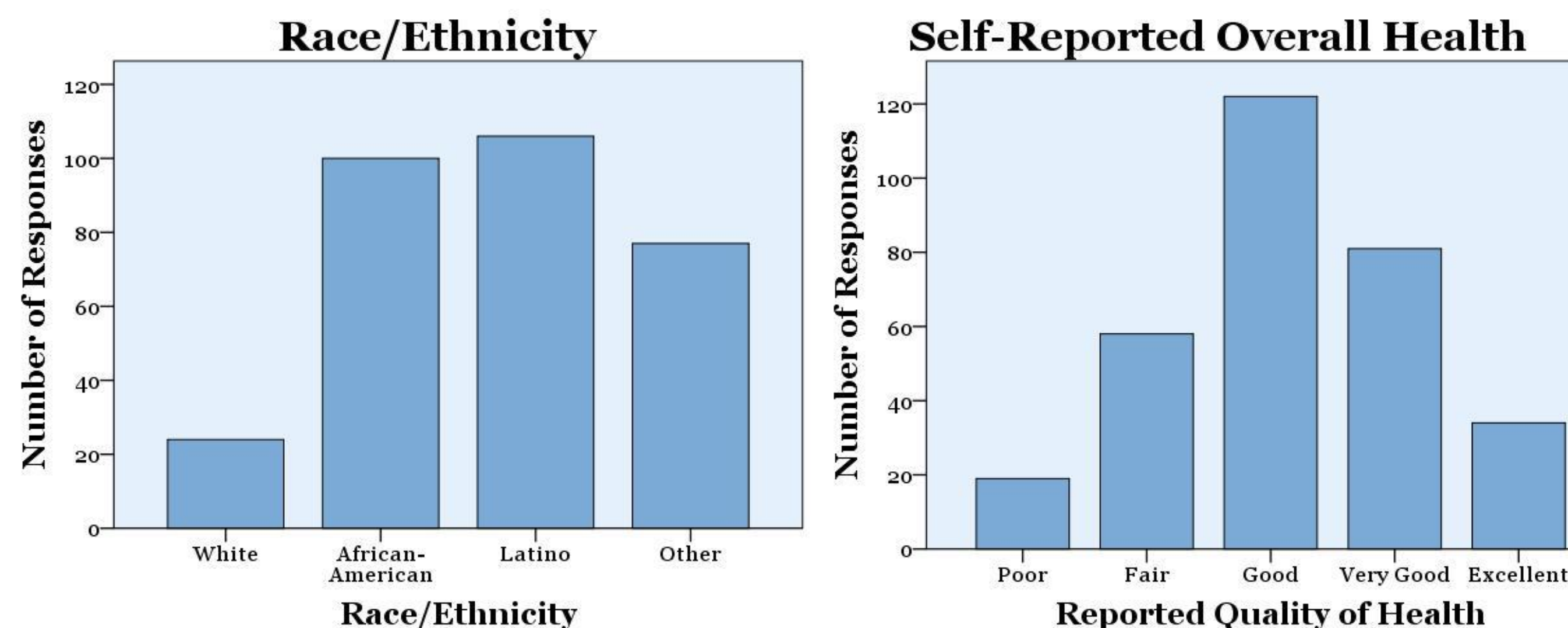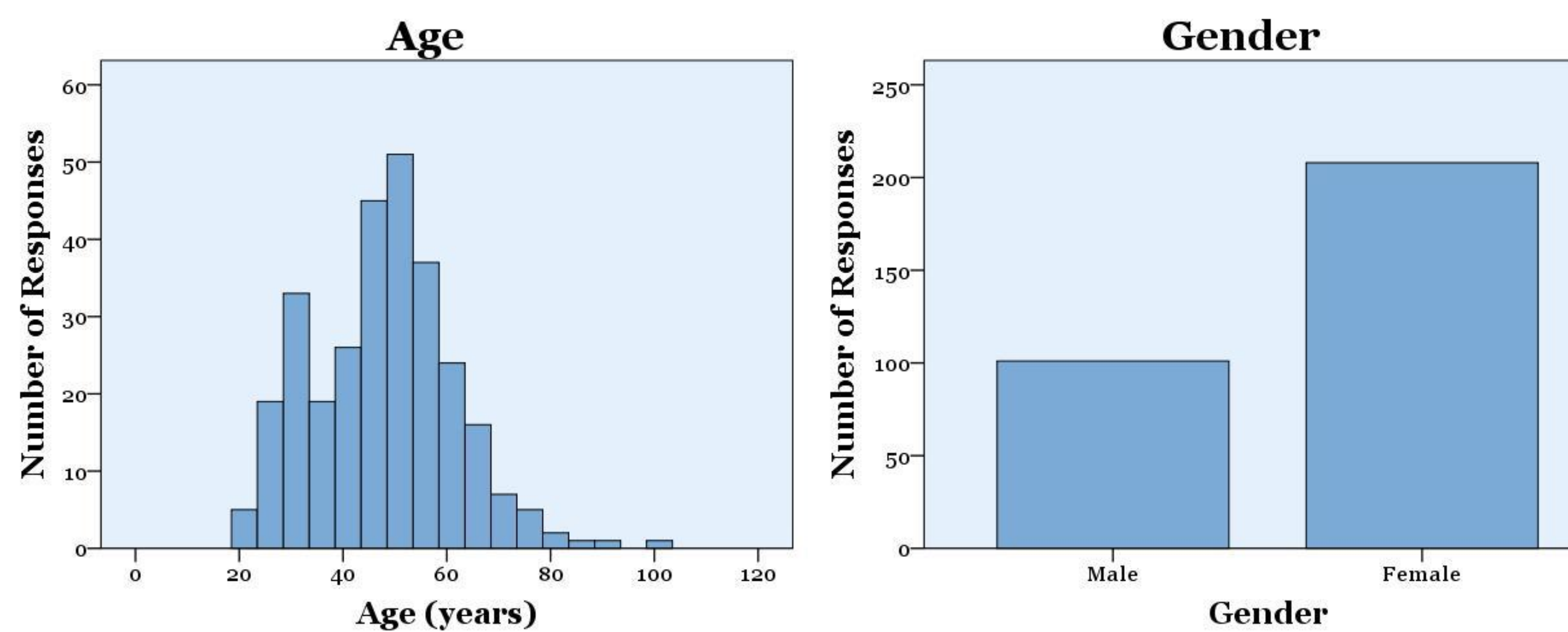
Results

Final model: Linear regression, self-reported health (1-5) outcome

Variable	β	S.E.	95% CI	p-value
Social Cohesion (0-20)	.060	.019	.023, .097	.001
Stress (0-16)	-.086	.020	-.126, -.047	<.001
Age	-.013	.005	-.023, -.004	.006
Chronic Disease (none)	*	*	*	*
Chronic Disease (one)	-.170	.160	-.484, .143	.286
Chronic Disease (two)	-.339	.180	-.692, .013	.059
Chronic Disease (3 or more)	-.832	.169	-1.162, -.502	<.001
Race (White)	*	*	*	*
Race (Black)	.456	.160	.142, .770	.004
Race (Latino)	.290	.154	-.011, .592	.059
Race (Other)	.147	.284	-.409, .703	.605

Discussion

- Participants who reported higher levels of social cohesion also reported better overall health
- Participants who reported higher stress levels, were older, or had multiple chronic diseases reported worse overall health
- Participants who identified themselves as African-American reported better overall health than participants of other races
- Social cohesion and stress were negatively correlated with each other, but the inclusion of a statistical interaction was not found to improve the model
- Findings were consistent with relationships found in existing studies
- Results can help inform programming decisions by organizations such as NKCDC

Limitations

- Participants were not randomly selected, and distribution of some variables suggest that they may not be a representative sample
- Participants were permitted to refuse questions, and questions about sensitive issues (e.g. risky drinking) were commonly avoided
- Cross-sectional data prevents an analysis of the causal nature of the relationship between social cohesion and health

Core Competencies

- This project included a number of public health core competencies. Those included: describing public health applications of quantitative data, contributing to assessments of community health and factors influencing health in a community, conveying data to professionals and the public, and using information technology in accessing, collecting, analyzing, using, maintaining, and disseminating data and information, as well as other competencies not listed here.

Acknowledgements

- The NKCDC contributed greatly throughout this study, from study design to data collection to evaluation of results
- Dr. Marianna LaNoue contributed to the statistical design
- Dr. Rickie Brawer contributed to the background and discussion