

Social Determinants of Health in Rural Madagascar: Wealth, Social Networks, and Access to Health Care

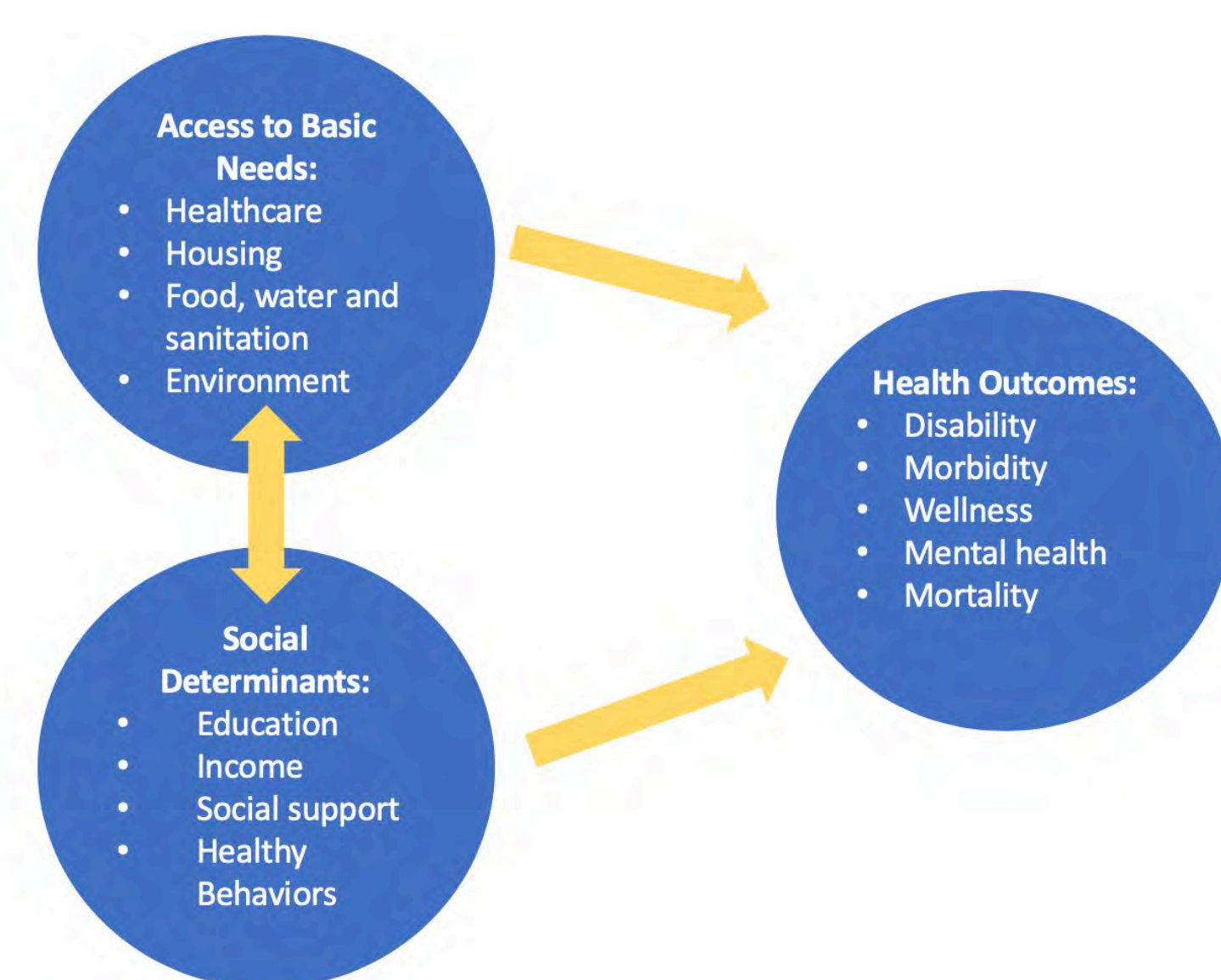
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BACKGROUND

Environmental degradation and economic and political instability have had negative consequences on public health. We investigated the factors that influence health at the village, household, and individual level in Manantenina, a rural village in Northeast Madagascar where 93% of the population reported their main source of income was through agriculture.

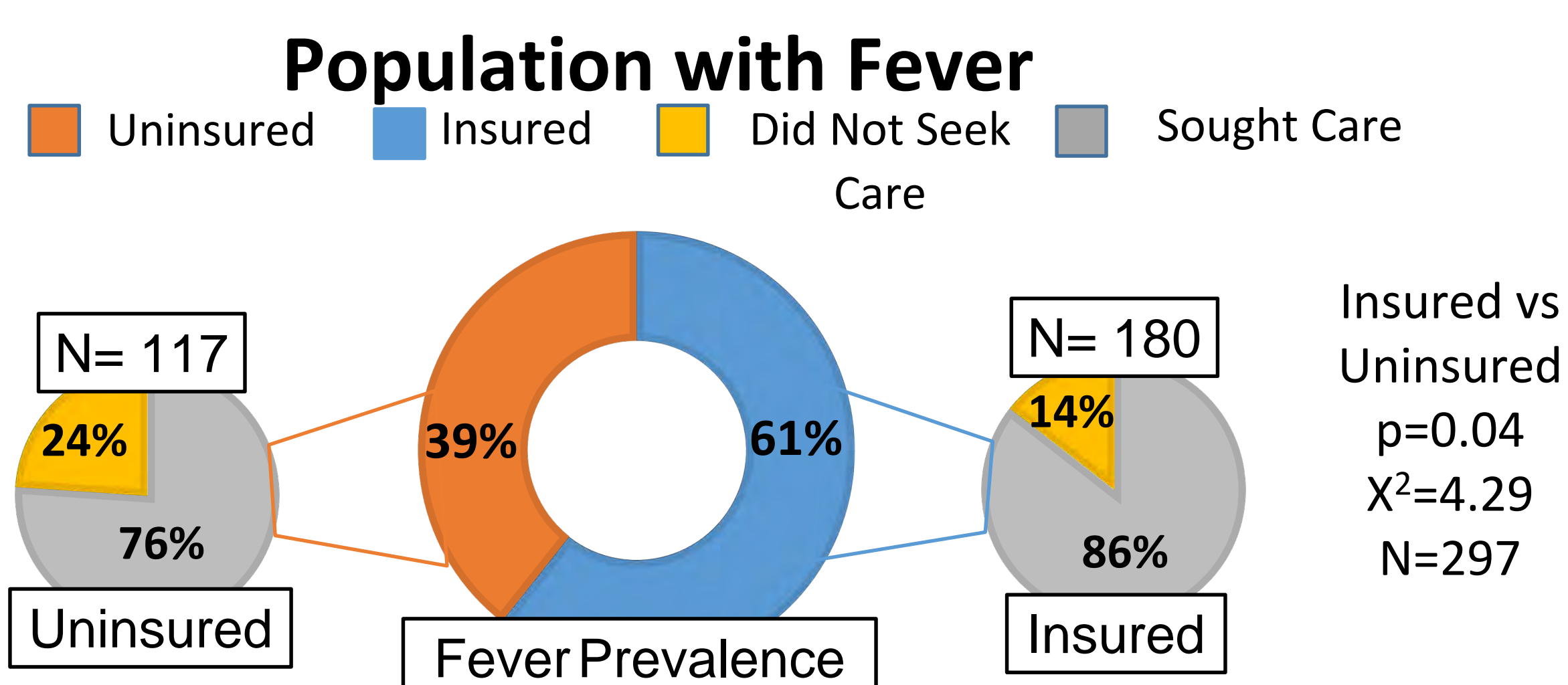
HYPOTHESES

- I. Individuals with health insurance are more likely to seek care than those without.
- II. Increased household wealth is associated with increased access to healthcare and improved health outcomes.
- III. Individuals who are more closely connected have more similar health phenotypes. And individuals who have a higher in-degree of connectivity are healthier.



RESULTS

I. Health Seeking Behavior Among Population with Fever

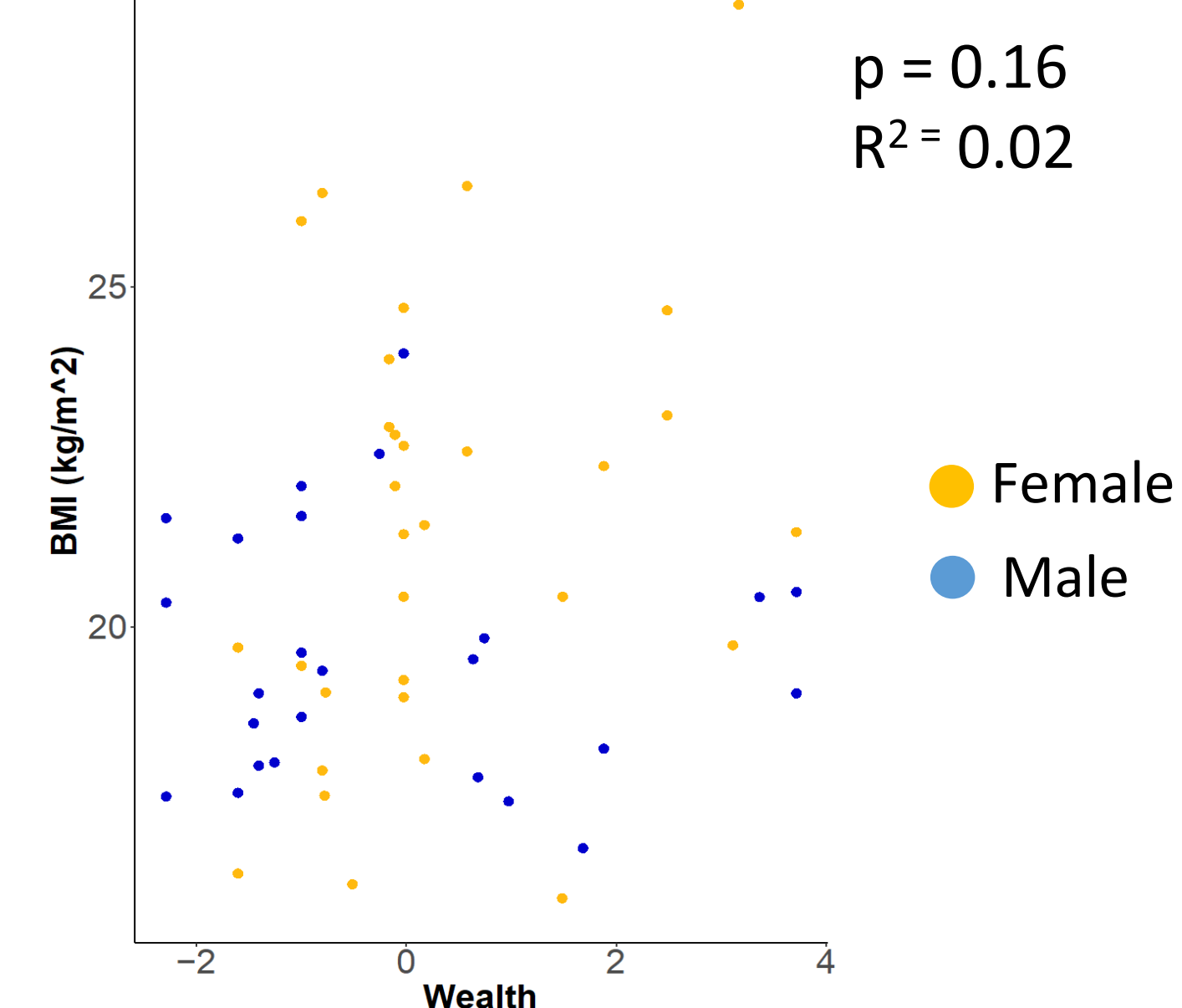


II. Wealth, Healthcare and Health Status

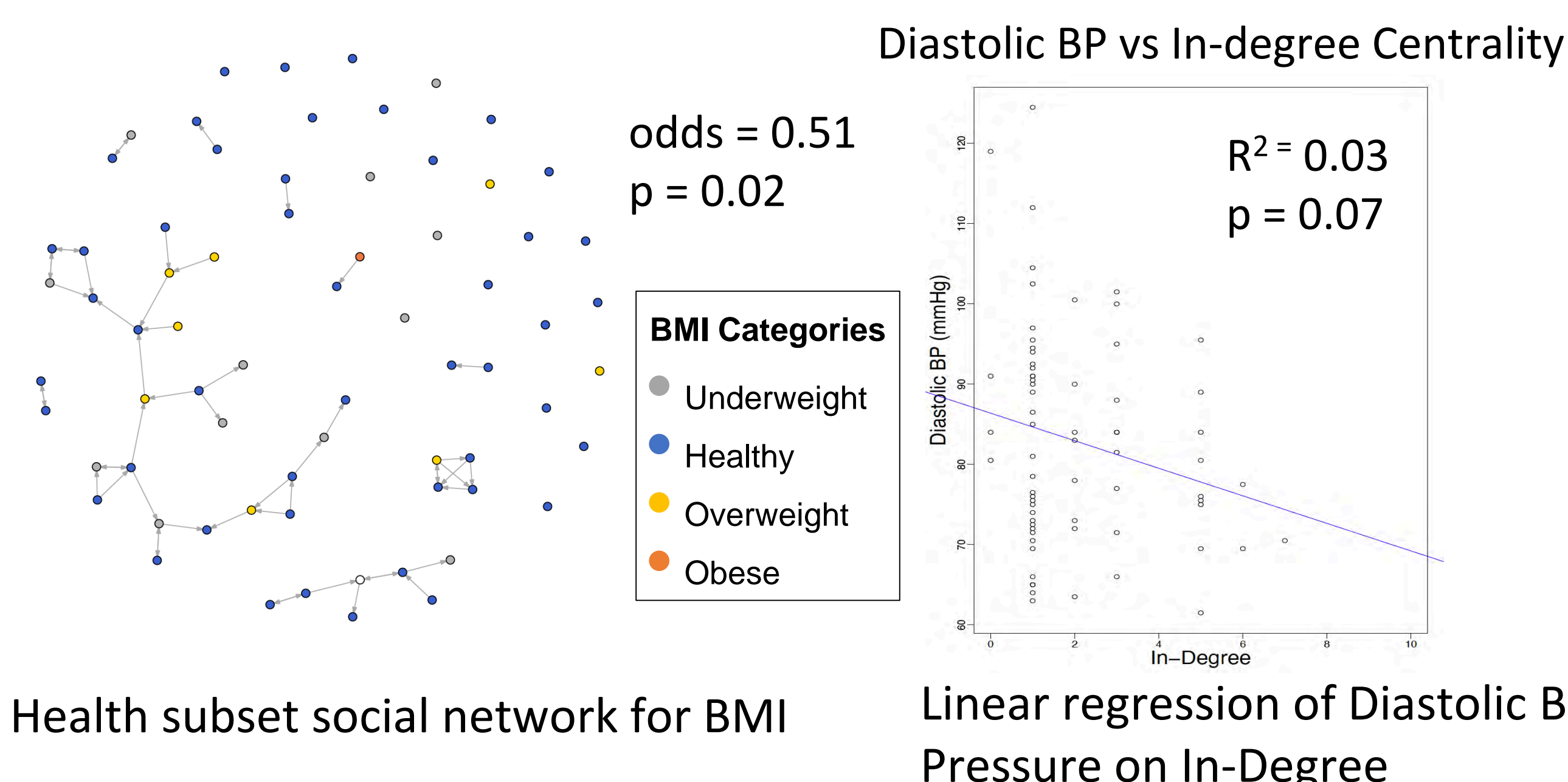
Logistic Regression for Predicting Healthcare Barriers from Wealth

Barriers to seeking care (N=150)	p-value
Money	0.02*
Distance	0.78
Not wanting to go alone	0.64

BMI vs. Wealth Index N=57



III. Social Networks and Health Phenotypes



DISCUSSION

I. We found a significant difference in health seeking behavior between those with insurance and those without ($p=0.038$). Individuals with insurance were 10% more likely to seek care for a recent fever than those without insurance.

Is the observed increase in health seeking behavior due to health insurance or wealth?

II. Increased household wealth was associated with decreased likelihood of finding money to be a barrier to seeking care, but not increased healthcare utilization or increased likelihood of having insurance. We found no association between household wealth and BMI or blood pressure.

Is social connectedness a better indicator of health status than household wealth?

III. Assortative mixing (homophily) for gender, smoking behavior, and BMI category were all present in the network. No significant results were found in support of an association between in-degree score and health outcome.

Homophily is the tendency for individuals to form ties with similar individuals.

METHODS



Household Surveys delivered to all available households



Social Network and Health Surveys selected and delivered using snowball sampling

FUTURE DIRECTIONS

How does social reciprocity impact individual's access to resources that influence health?

