



# The Association Between Religious Association and Adherence on County-Level Physical Health Outcomes in the United States



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## Introduction

- Self-rated health is a strong predictor of mortality with data showing a 2.49x higher mortality risk in those who report poor or very poor in comparison to those who report high or very high
- 14-16% of US adults report fair or poor health, while chronic diseases account for 6 out of 10 deaths and most healthcare spending
- Cancer is the second leading cause of death with 2 million new cases and 600,000 deaths annually
- Religious involvement is linked to health benefits, with frequent attendance associated with 40% lower mortality risk. However, most research focuses on individuals rather than community level religious presence.

## Research Questions

- Is higher county-level religious adherence associated with better self-rated health
- Is higher religious adherence associated with lower levels of social isolation
- Does this relationship persist after controlling for income, education, and social connectedness

## Methods

### Sample

- 2373 US counties with complete data across all variables
- ARDA (religious adherence)
- Christian adherence constructed by summing Catholic, Orthodox, evangelical Protestant, and mainline Protestant denominational adherence rates across 373 ARDA-catalogued traditions

### Measures

- Response variables: positive self-rated health (B29\_rev), social connectedness (B31\_rev)
- Controls: % below poverty line (F14), % without high school diploma (F2)
- Analysis: simple and multiple linear regression

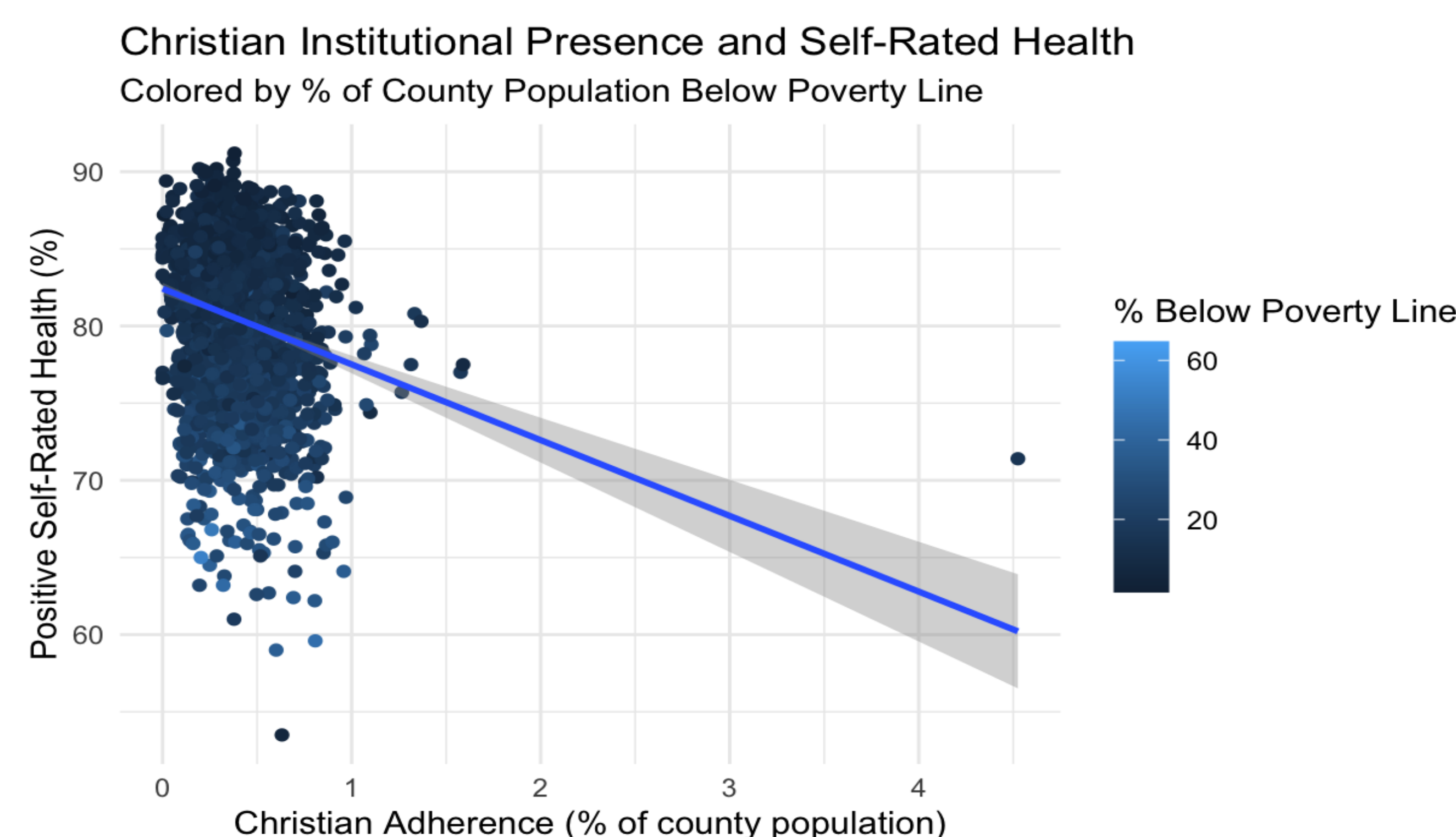
## Results

### Bivariate

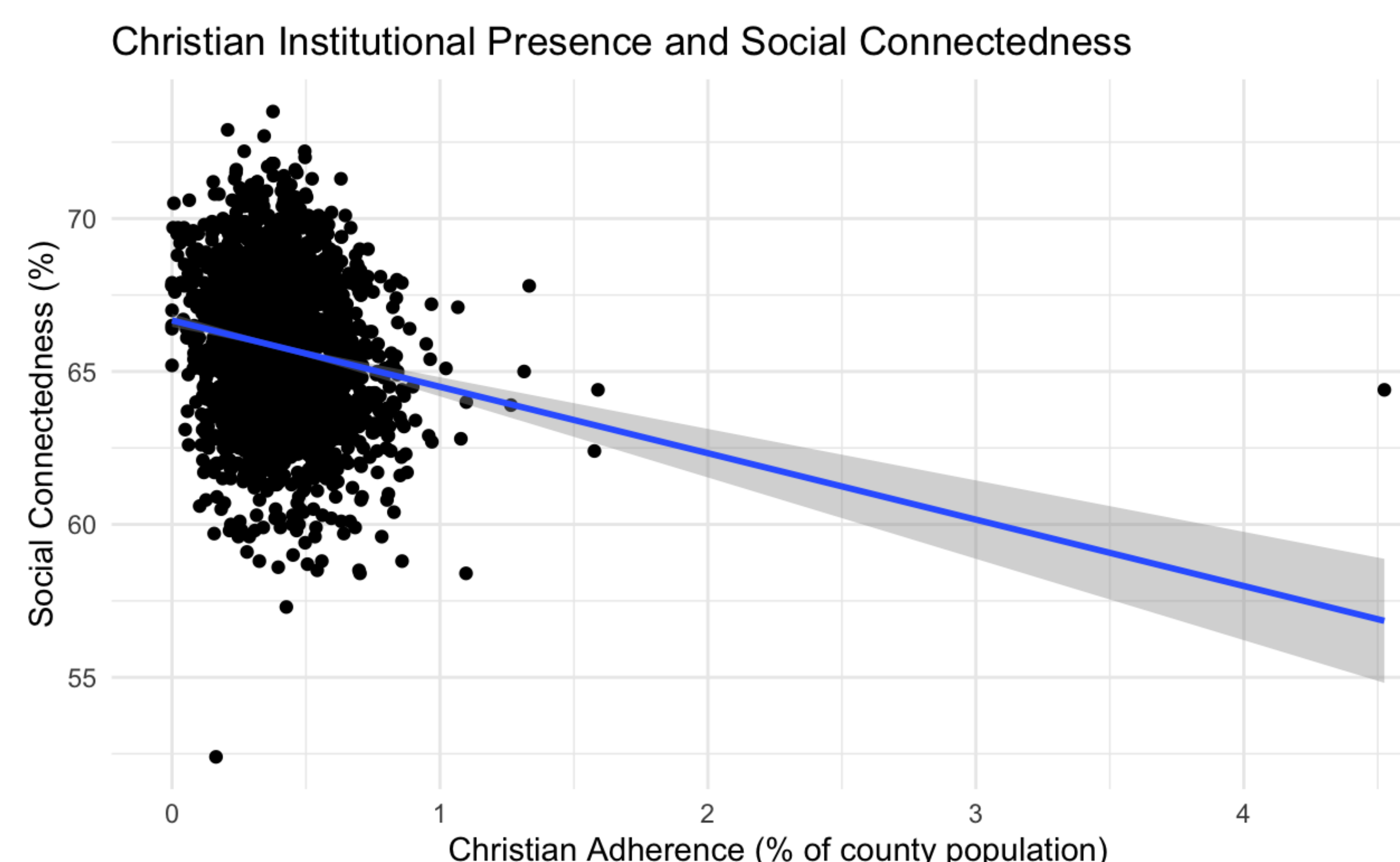
- Without controls: Christian adherence negatively associated with self-rated health ( $B=-4.91, p<.0001, Rsq=0.04$ )
- The same goes for social connectedness: ( $B=-2.17, p<.0001, Rsq=0.03$ )

### Multivariate

- After controlling for poverty and education, negative self-rated health and Christian adherence remains significant ( $B=-1.25, p<.0001$ )
- Poverty ( $B=-0.38, p<.0001$ ) and Education ( $B=-0.45, p<.0001$ ) are both strong predictors:  $Rsq=0.78$
- After controlling for poverty and education, Christian adherence and negative social connectedness remains significant ( $B=-1.08, p<.0001, Rsq=0.25$ )
- Christian adherence is persistently and negatively associated with both outcomes.



**Figure 1: Christian adherence and positive self-rated health**



**Figure 2: Christian adherence and Social Connectedness**

## Discussion

These findings are counter to the primary hypothesis. Higher Christian adherence at the county level is associated with worse self-rated health and lower social connectedness. This negative association persists after controlling for poverty and education, suggesting that it is not simply socioeconomic disadvantage. The  $Rsq$  value of .78 does indicate some heavy lifting of these factors however. Future research should examine whether specific denominational compositions, rather than aggregate Christian adherence, produce differential health outcomes

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