

# The Effect of Social Capital on Mental & Physical Health Status: Accounting for Reverse Causation

*Presented at the 135<sup>th</sup> Annual Meeting of  
the American Public Health Association*

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November 7, 2007

# Elements of Social Capital

Efforts to translate these definitions into measures have included indicators of:

- trust
- goodwill
- cooperation
- civic engagement
- collective efficacy
- mutual obligations
- reciprocity
- sense of community

# Major Findings

- Social capital and self-rated health are endogenous
- Social capital has a positive impact on health
  - Effect on mental health is nearly 50% larger than physical health
- The effect of social capital on health is *independent* of social support
- Individuals who feel “relatively deprived” are less capable of reaping health benefits from social capital

# Social Capital and Health

- Observed relationships have been identified between community “social capital” and population health
  - reduced infant mortality
  - increased life expectancy
  - lower disability rates
- Importance of social ties has long been recognized
  - Lynch calls social capital “a new and more fashionable label for what used to be called social support”

# Problems with Social Capital Research

- Definitional ambiguity
- Unit of Analysis
- Endogeneity

# Concept of Social Capital

## Collective

Woolcock (1998)

- Shared resources which enable people to act collectively

WHO (1998)

- the degree of social cohesion which exists in communities

## Individual

Bourdieu (1985)

- Information & opportunities available from “acquaintances”

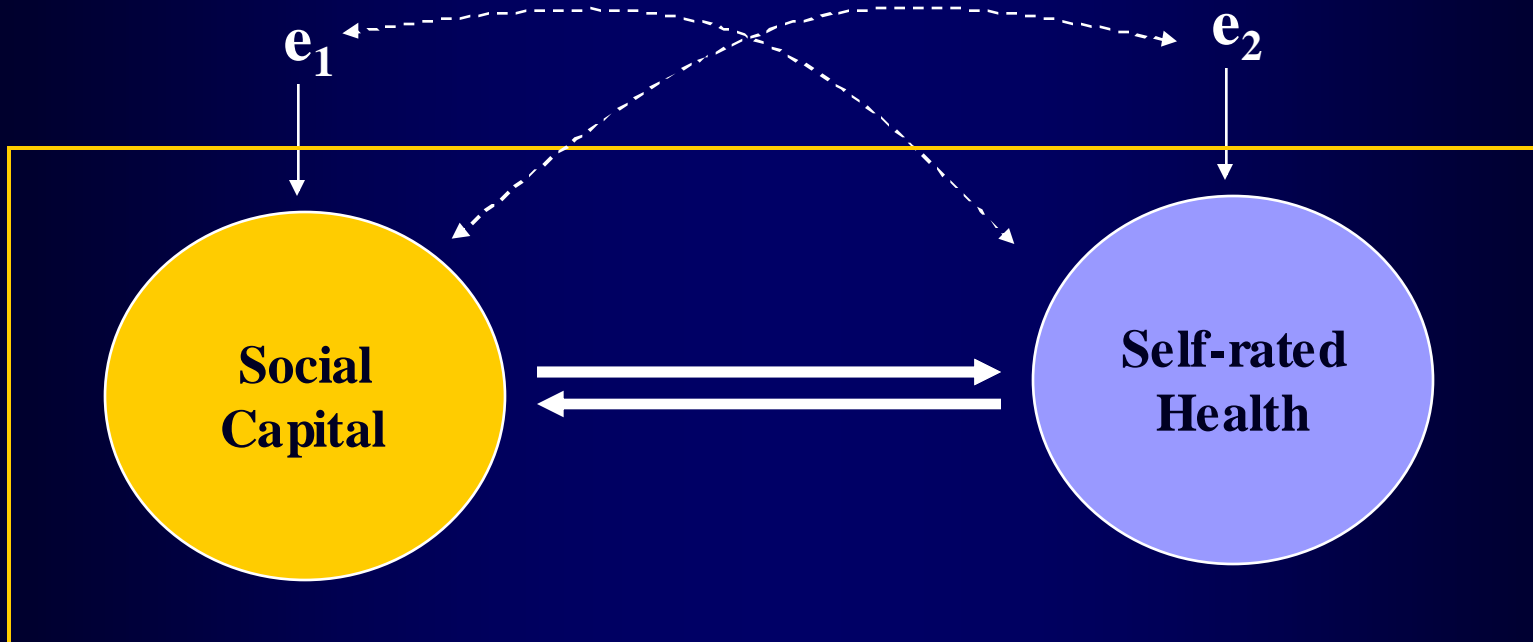
Flap (2002)

- resources accessible through one’s personal social network

# Social Capital: Study Definition

*Social capital consists of resources embedded in social relations and social structure, which can be accessed when an individual wishes to increase the likelihood of realizing a given objective.*

# Research Question #1

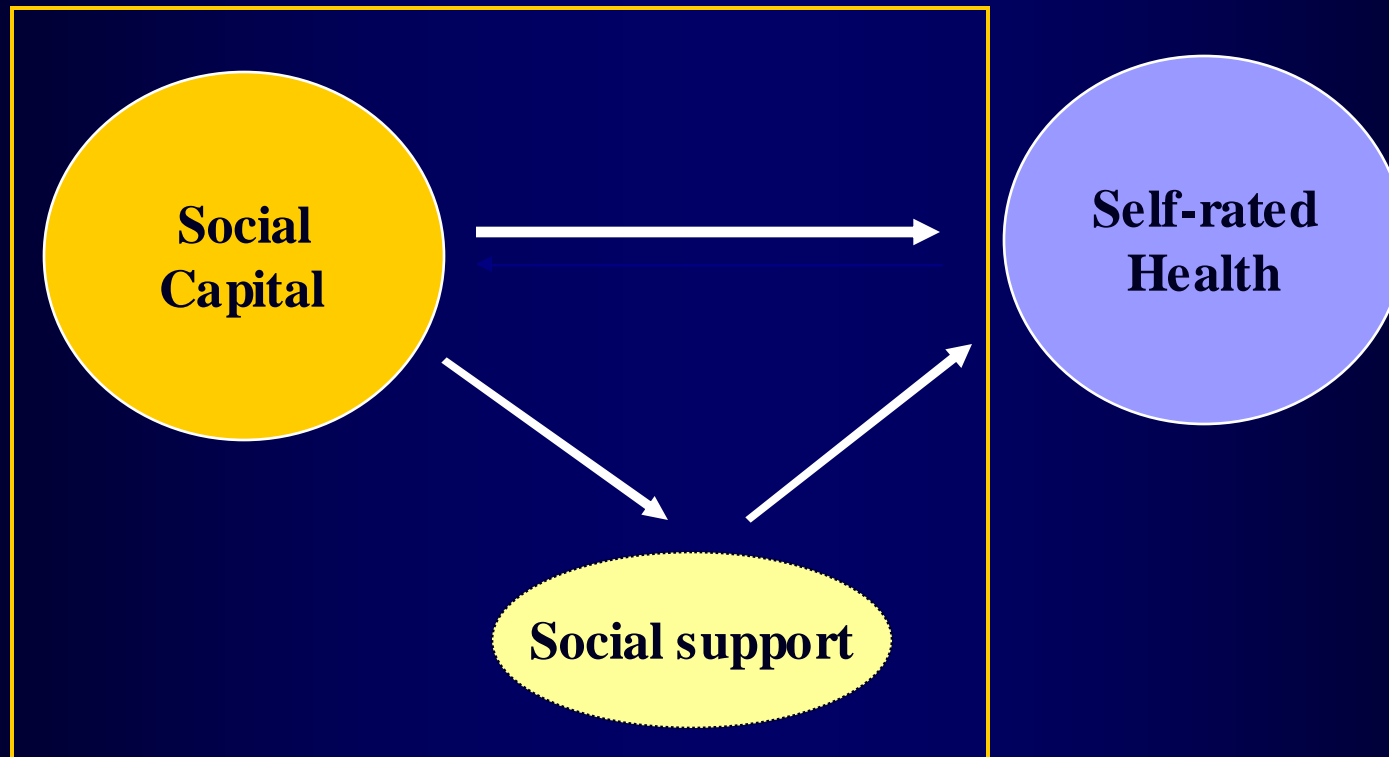


## Endogeneity Dilemma:

- If the relationship between SC and SRH is non-hierarchical, OLS is biased.

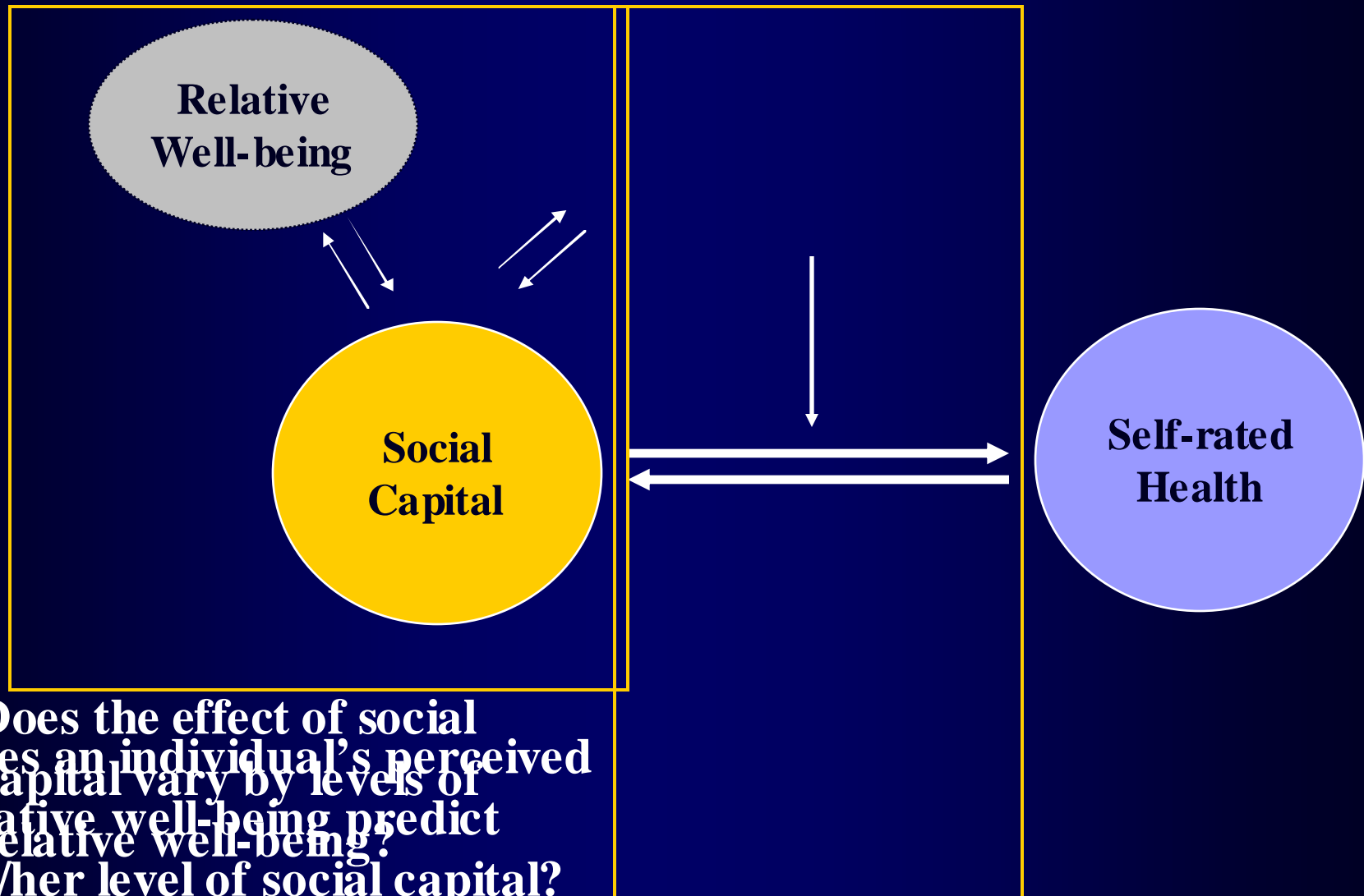


## Research Question #2



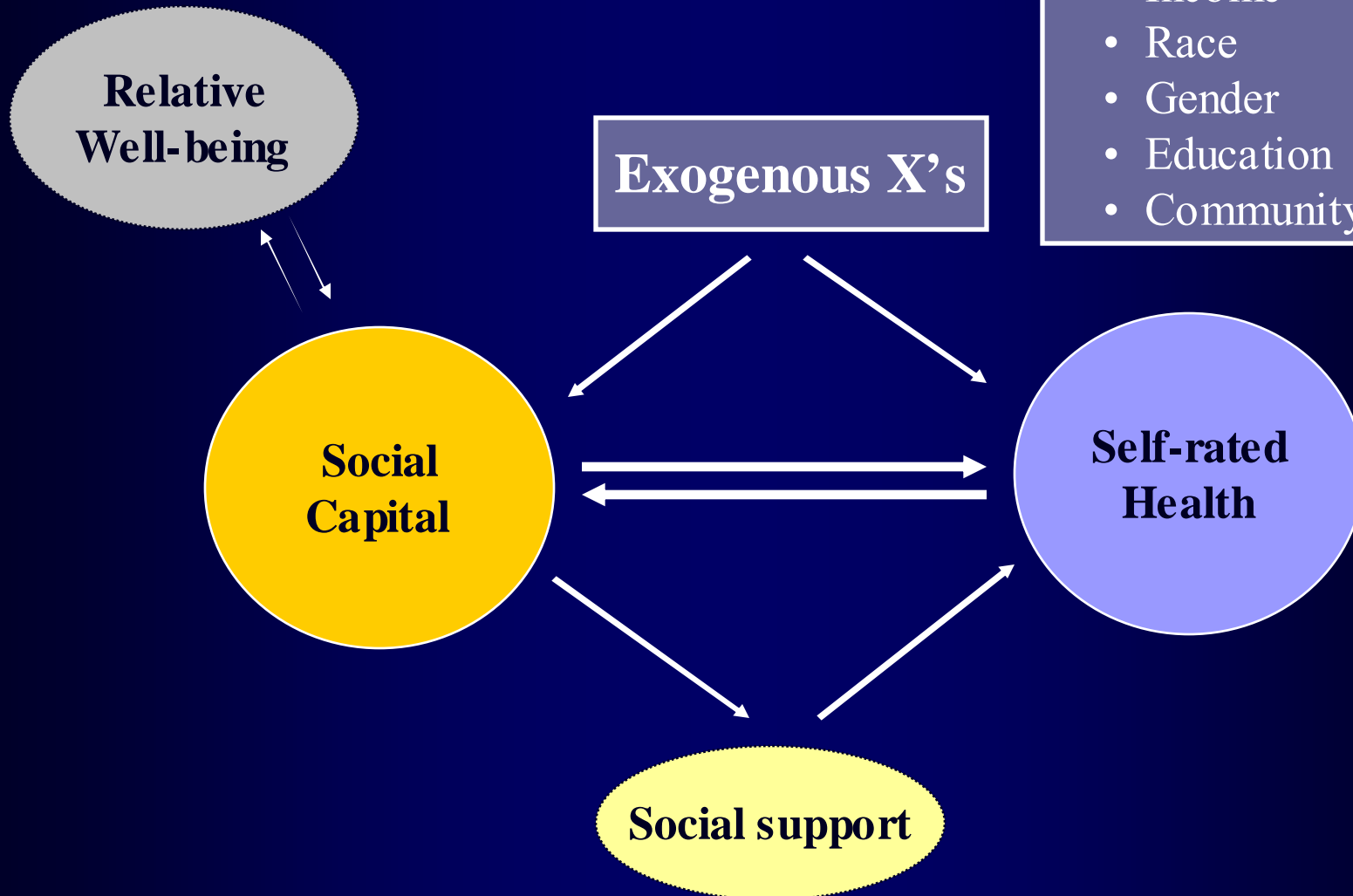
- **Are the health effects of social capital and social support mutually exclusive?**
- **Does social support mediate the relationship between SC & SRH?**

## Research Question #3



- Does the effect of social capital vary by levels of relative well-being?
- Does an individual's perceived relative well-being predict his/her level of social capital? And vice-versa?

# Study Overview



# Primary Data Source

## National Health Service Corps Community Assessment Survey (NHSC) 1997-1998

- Purposive subsample of 8 communities in five states
  - Pennsylvania
  - Kansas
  - Rhode Island
  - Colorado
  - Connecticut

N = 5,879

# *Markers of Social Capital Instrument*

- Items examined include:
  - trust
  - influence
  - cooperation
  - sense of community
  - public safety
  - political activity
- Two multi-item Social Capital subscales resulted:

Social Integration (**SI**)                       $\alpha = 0.74$

Civic Participation (**CP**)                       $\alpha = 0.67$

# Measuring Self-rated Health: SF-12

## MCS-12

- social functioning
- mental health
- vitality (vs. fatigue)
- role limitations due to mental health

## PCS-12

- physical functioning
- general health
- bodily pain
- role limitations due to physical health

- subscales have different distributions (general pop.)
- in this study, MCS-12 is higher than PCS-12

PCS-12 mean = 47.3

MCS-12 mean = 53.0

# Methodology

Two-stage least squares (2SLS)  
with instrumental variables

## Social Capital

- years in community
- Culture Index
- Crime Index
- # of houses of worship in zip code

## Physical Well-Being

- smoking history
- relative income
- screening compliance

## Social Health

- history of depression
- Air Quality Index

# OLS vs. 2SLS Estimates

## Social capital and health

- Estimates of the effect of social capital on health are 3-4 times greater with 2SLS than with OLS
- <civic participation> is positively related to physical health – not mental health nor general health
- <social integration> is positively related to all measures of self-rated health

## Social capital and social support

- the *partial* effect of social capital on health is positive and statistically significant, even after controlling for social support (SS)
- SS itself only affects mental & general health



# Summary of Findings

## Social capital and health

- bidirectional
- effect of <social integration> is twice that of <civic participation>
- effect on mental health is nearly 50% larger than physical health

## Social capital and social support

- the *partial* effect of social capital on health is positive and statistically significant
  - *even after controlling for social support*

# Summary of Findings (contd.)

## Relative well-being

- as one's relative well-being diminishes, the health benefits of social capital are mitigated
- contrary to expectations, “social integration” increases as an individual's relative well-being *diminishes*
- civic participation, though, is negatively affected

# Study Limitations

- Purposive sample of convenience
- Lack of heterogeneity in sample
- Use of clustered, hierarchical data
- Use of self-rated health

# Policy Options

- Potential paths to social capital
  - Multi-use zoning ; mixed land use policy
  - Greenspace / recreational facilities
  - Pedestrian/bicycle infrastructure

**Thank you.**

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# Comparison of Estimates: OLS vs. 2SLS

	Health Status					
	Physical		Mental		Overall	
	OLS	2SLS	OLS	2SLS	OLS	2SLS
<b>Methods:</b>	OLS	2SLS	OLS	2SLS	OLS	2SLS
<b>Social Integration</b>	.09***	.09*	.14***	.40***	.01***	.04**
<b>Civic Participation</b>	.02**	.13***	.01	.27	.00**	.01
<b>Social Support (SI eqn.)</b>	-.08	.12	.26***	2.75***	.03**	.13***
<b>Social Support (CP eqn.)</b>	.02	.16	.07	.22	.01	.07**

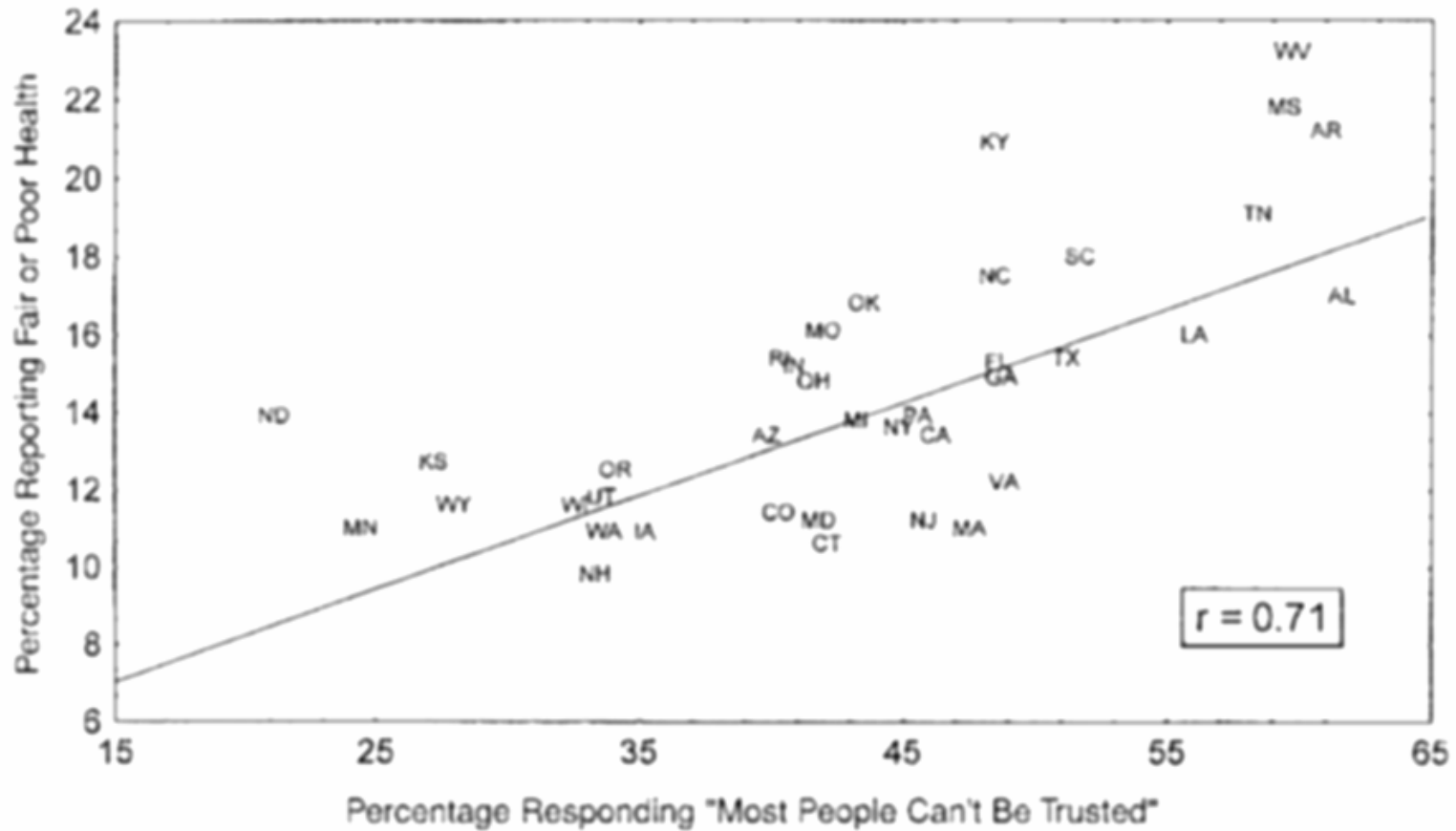
\* p<.05

\*\* p<.01

\*\*\* p<.001

# Social Capital & Mental Health

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advantage of you if they got the chance.

Source: Kawachi et al 1997