

Social networks, health and well-being: Evidence from SAGE

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Social networks, health and well-being

- Evidence of the impact on health and health-related outcomes
 - mortality (Berkman 1979, House 1982)
 - physical and mental illness (Kawachi 2001, Kessler 1985, Mendes de Leon 2003)
 - functioning and independence (Seeman 1996)
 - happiness (Fowler 2008)
 - risk factors (Christakis 2007, 2008)
- Differential effects in younger and older populations (Antonucci 1990, Pillemer 2000)

Social networks - framework

- Structural characteristics
 - Size, location, *density, homogeneity*
- Functional characteristics
 - Social support (emotional, instrumental...)
 - Social connectedness (presence/absence of ties, *appraisal of relationships*)
 - *Reporting loneliness, depression*
 - Trust

Research Questions

Is poor social network associated with higher level of disability and poor quality of life in low-middle income countries?

What are the patterns of happiness and well-being in low-middle income populations?

The SAGE study

Results for 45,000 individual 18+ years old across 6 countries.

Assess health, well-being and quality of life using standardized instruments: WHODAS-12, WHOQoL-8.

Social network questions from multiple modules - covering structural and functional aspects, trust, safety, and political/community engagement.

SAGE

Characteristics	China	India	Mexico	Russia	South Africa	Ghana
Total subject (N)	13,265	7,527	2,734	3,163	3,842	4,768
Sex (%)						
Men	47.0	38.7	38.3	37.1	42.5	52.8
Women	53.0	61.3	61.7	62.9	57.5	47.3
Age Group (%)						
18-49	11.0	41.6	15.6	8.5	9.1	15.8
50-59	39.5	26.2	15.8	34.1	40.1	33.1
60-69	26.3	19.9	34.2	24.9	29.2	23.6
70-79	18.5	9.4	22.6	23.7	15.7	19.3
80+	4.7	2.9	11.8	8.8	5.9	8.3
Highest education level (%)						
Completed college/university	6.2	10.8	6.4	20.8	7.3	7.4
Completed high school	17.8	19.5	4.8	50.7	10.7	34.7
Completed secondary	28.0	22.7	13.4	18.9	19.5	11.2
Completed primary	25.4	27.9	28.6	7.8	31.1	25.2
Less than primary	22.6	19.1	46.8	1.9	31.4	21.6
Current marital status (%)						
Not married	15.8	22.4	36.5	42.5	47.0	40.0
Married	84.2	77.6	63.5	57.5	53.0	60.0
Always live in the area (%)	55.7	56.7	75.7	53.6	71.3	65.9
Currently working (%)	50.6	64.2	53.5	36.8	32.3	73.2

Measuring Social Networks in SAGE

4 dichotomous Qs, mix of structural and functional characteristics

- Marital status
- Attend religious activities
- Participate in clubs
- Trust/confidant

Summation of scores

Social Cohesion Index
(0=Worst, 4=Best)

9 social network Qs and 5 trust Qs
Ordinal responses

How often in the last year have you?
How much trust do you have in different groups of people?

Exploratory Factor Analysis
2 Factor Solution → Quintiles of Factor Score

Social Network Index
(Q1=Worst, Q4=Best)

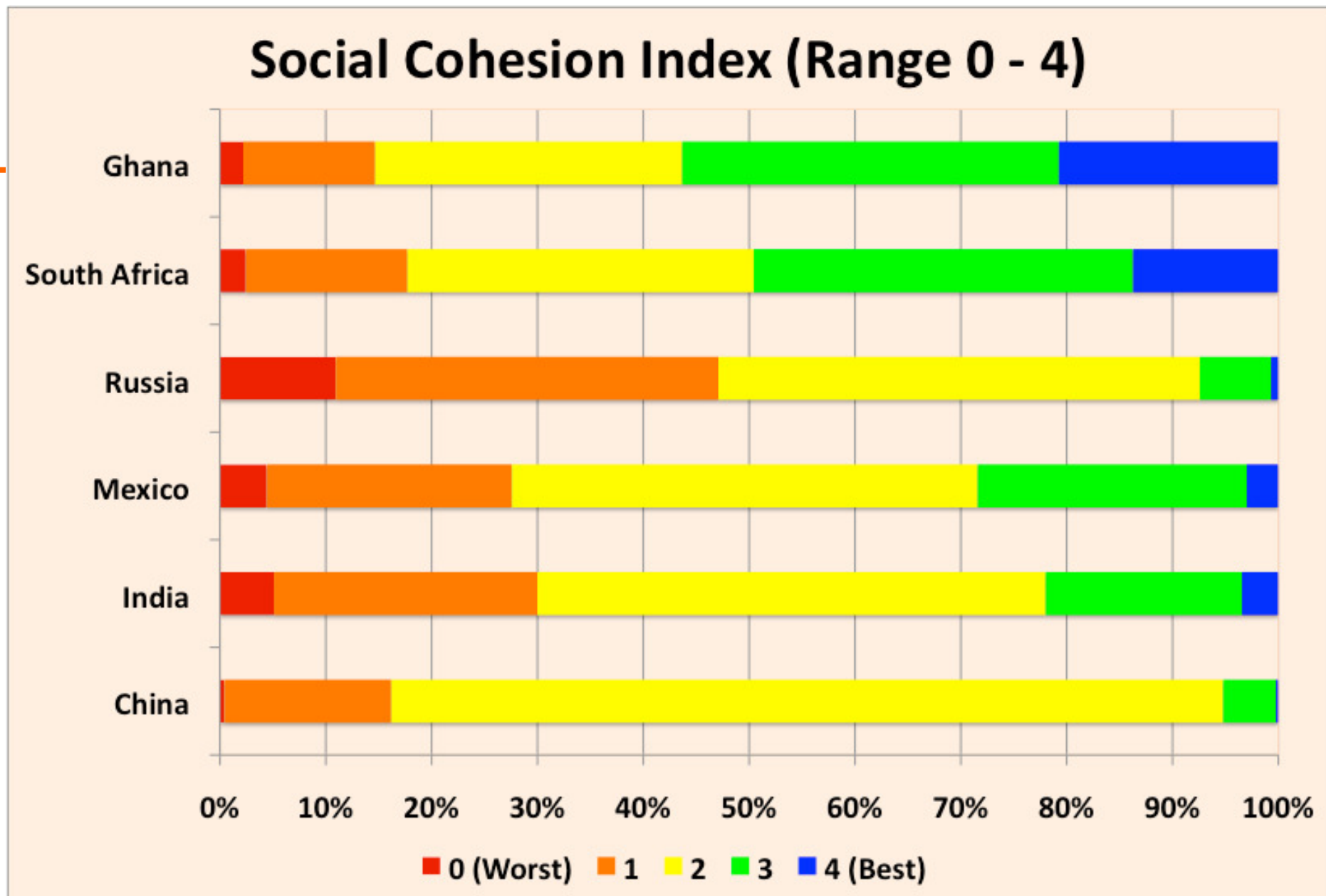
Trust Index
(Q1=Worst, Q4=Best)

Analysis

Outcome variables:

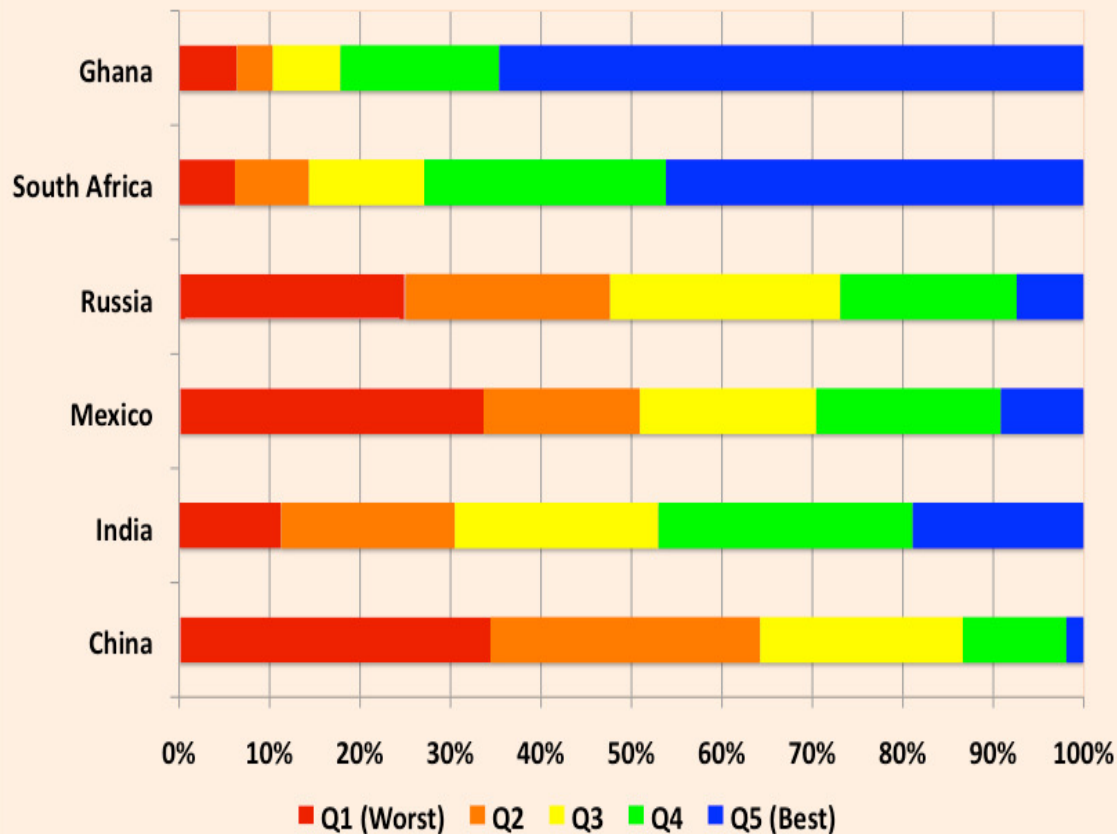
- **WHO DAS score (categorized into quartiles, 4th/best as reference)**
- **WHO QOL score (categorized into quartiles, 4th/best as reference)**

Ordinal logistic regression to assess the association between different indices and outcome variables

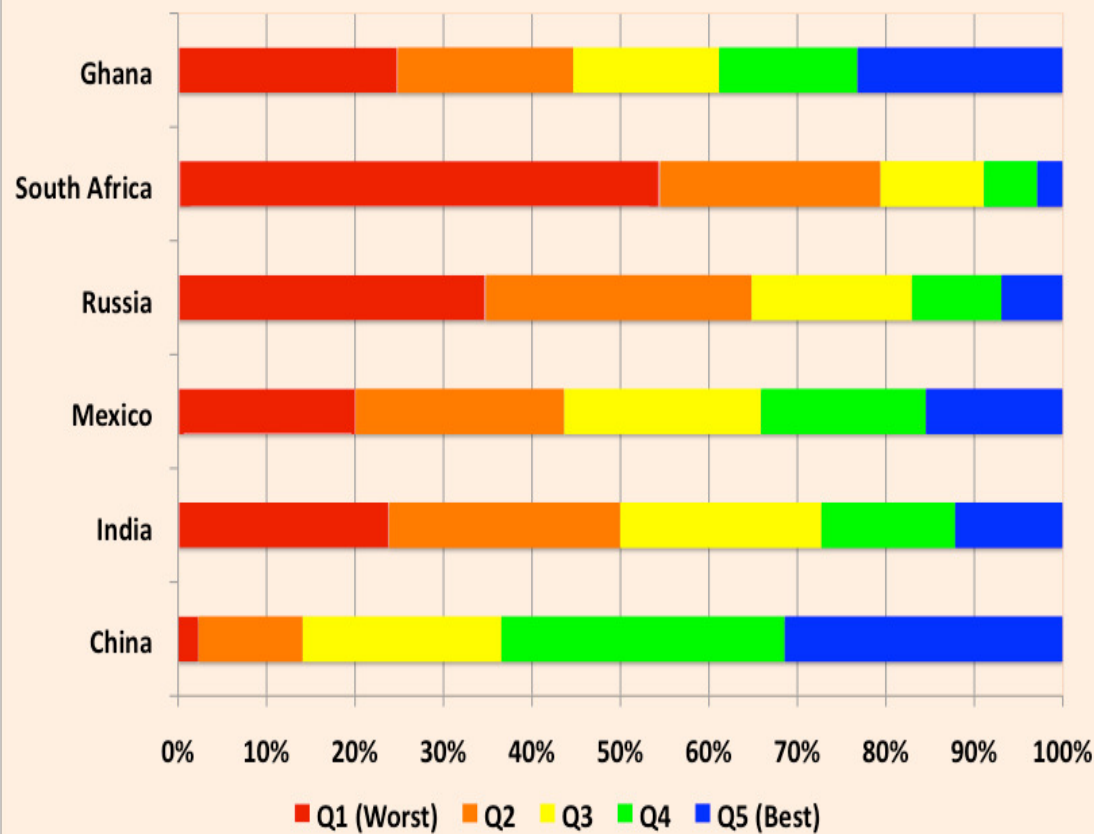


Social Network and Trust Indices

Network Index Quintiles

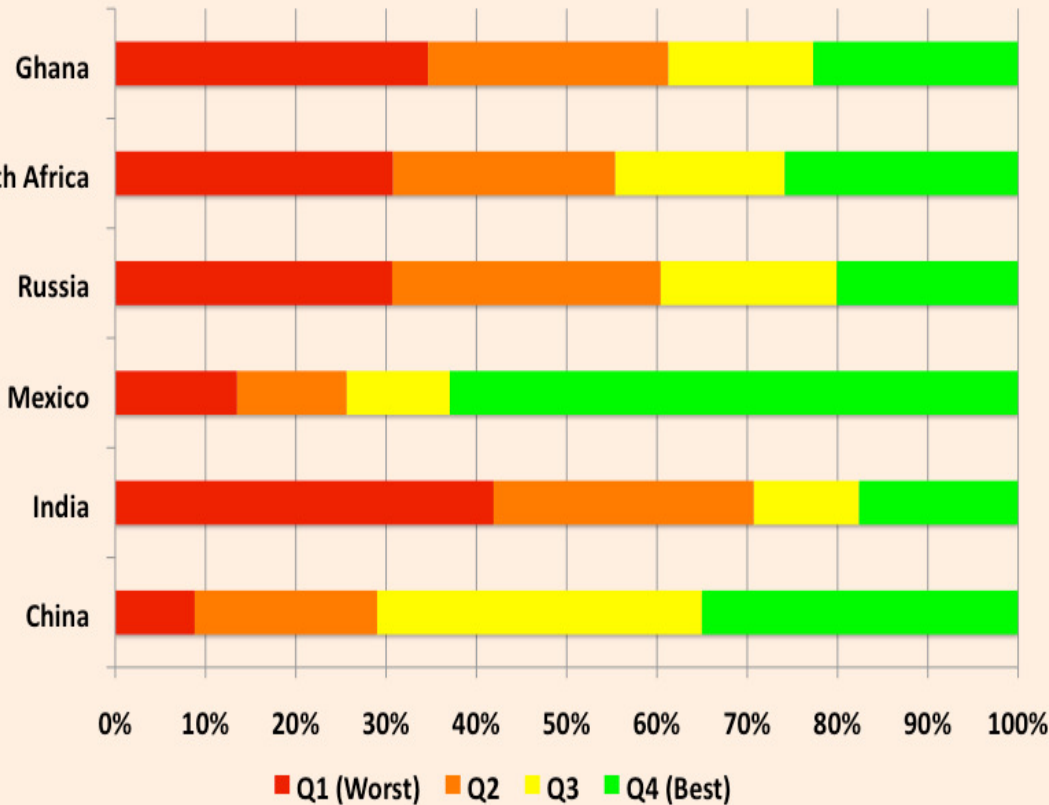


Trust Index Quintiles

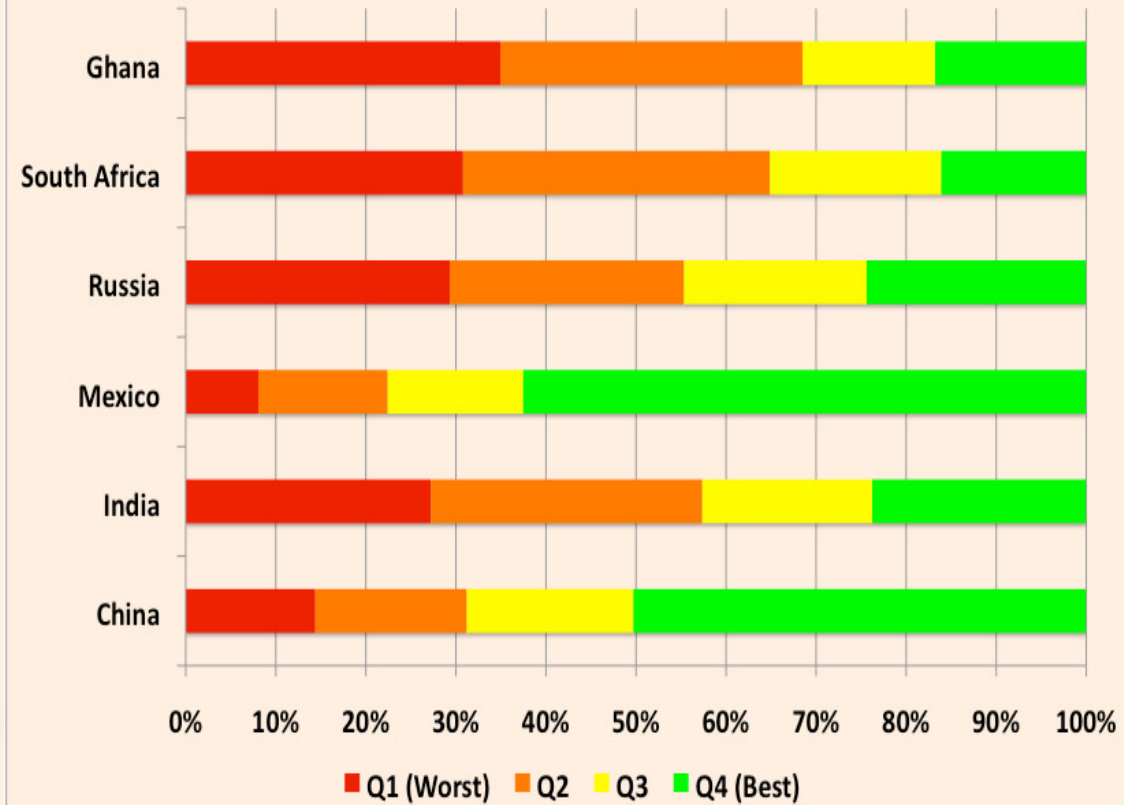


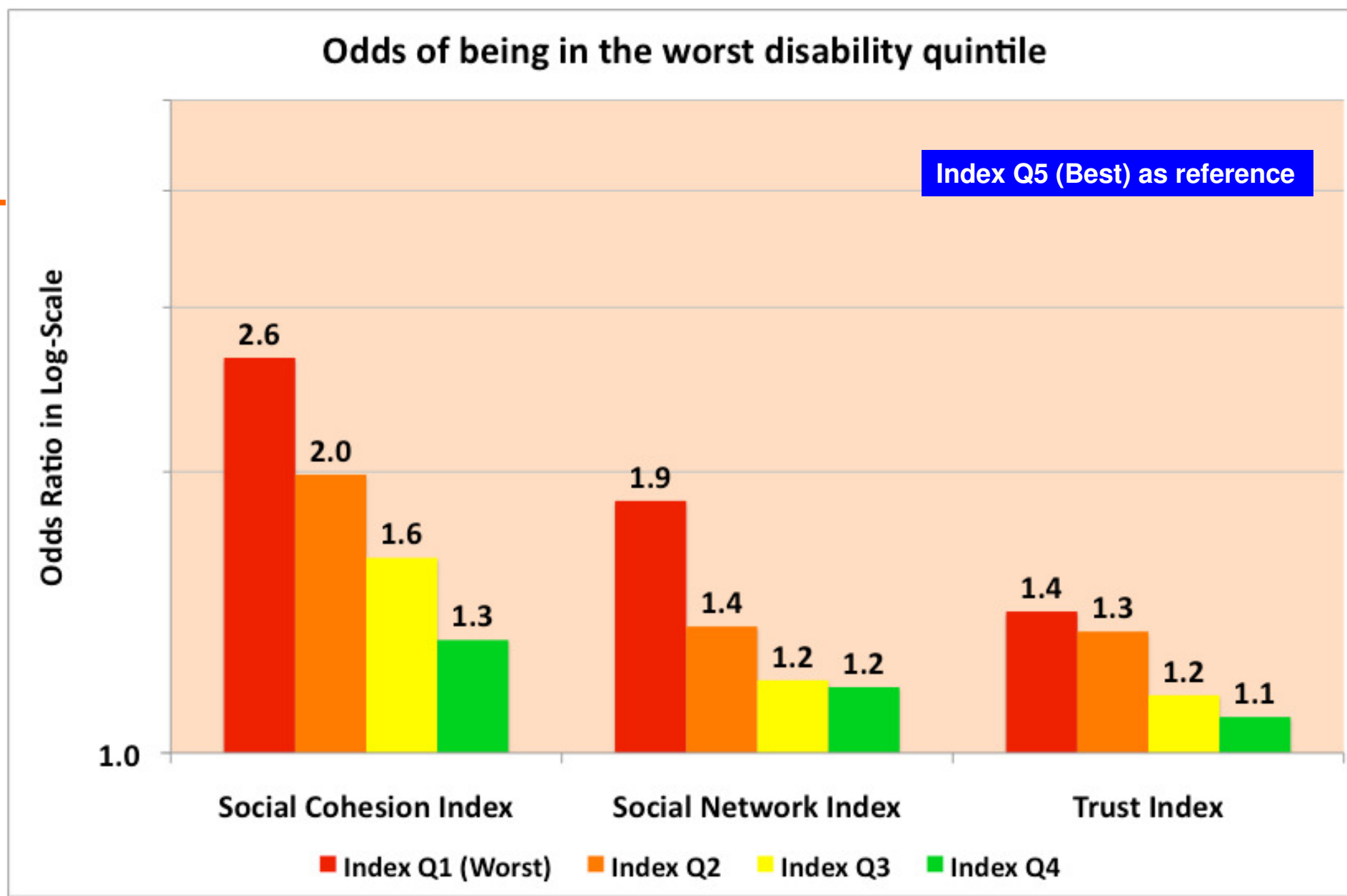
Disability and Quality of Life

WHO DAS Quartiles



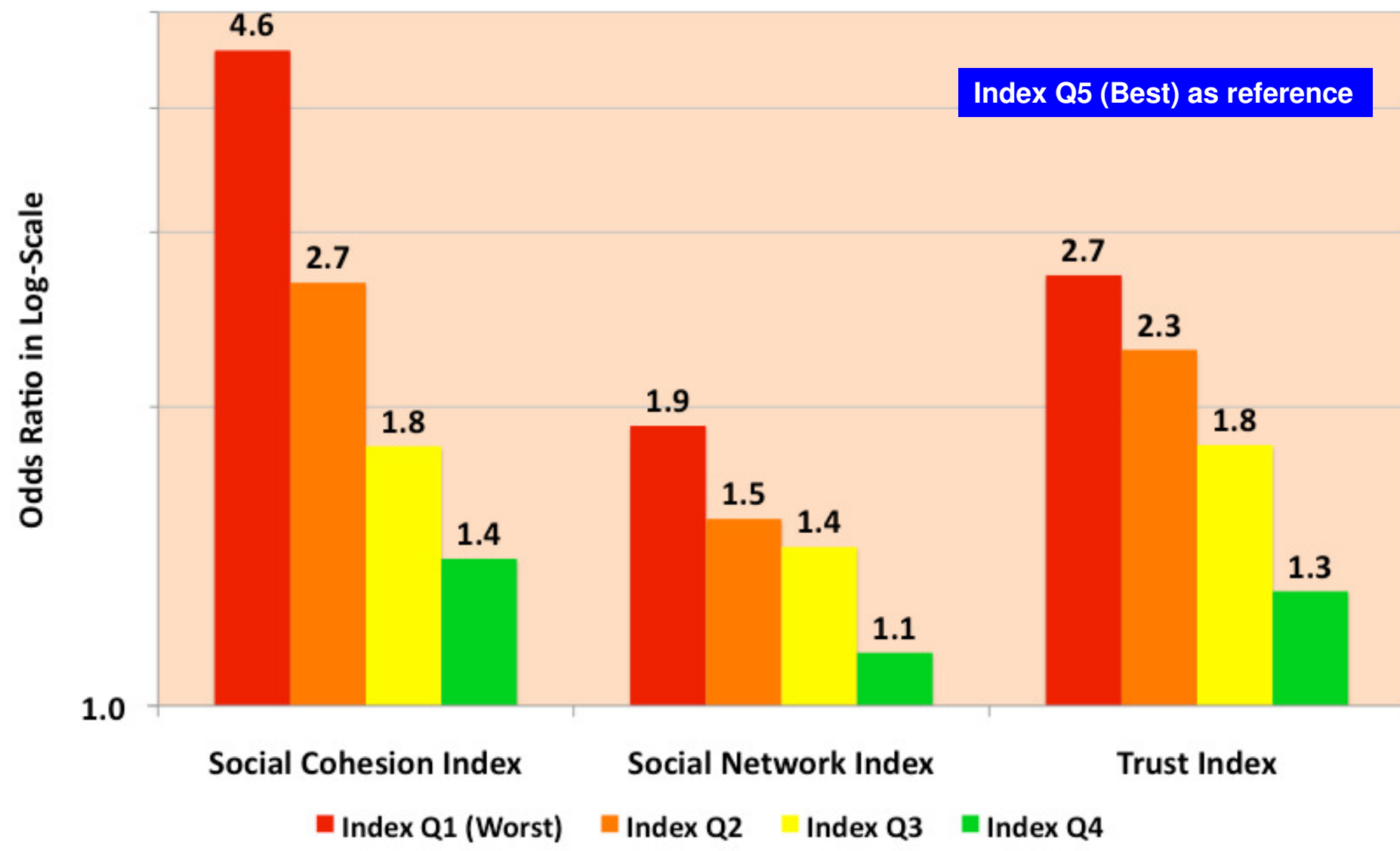
WHO QOL Quartiles





Adjusted for age, sex, highest education, marital status, country, lived continuously in the area, and currently working

Odds of being in the worst quality of life quintile

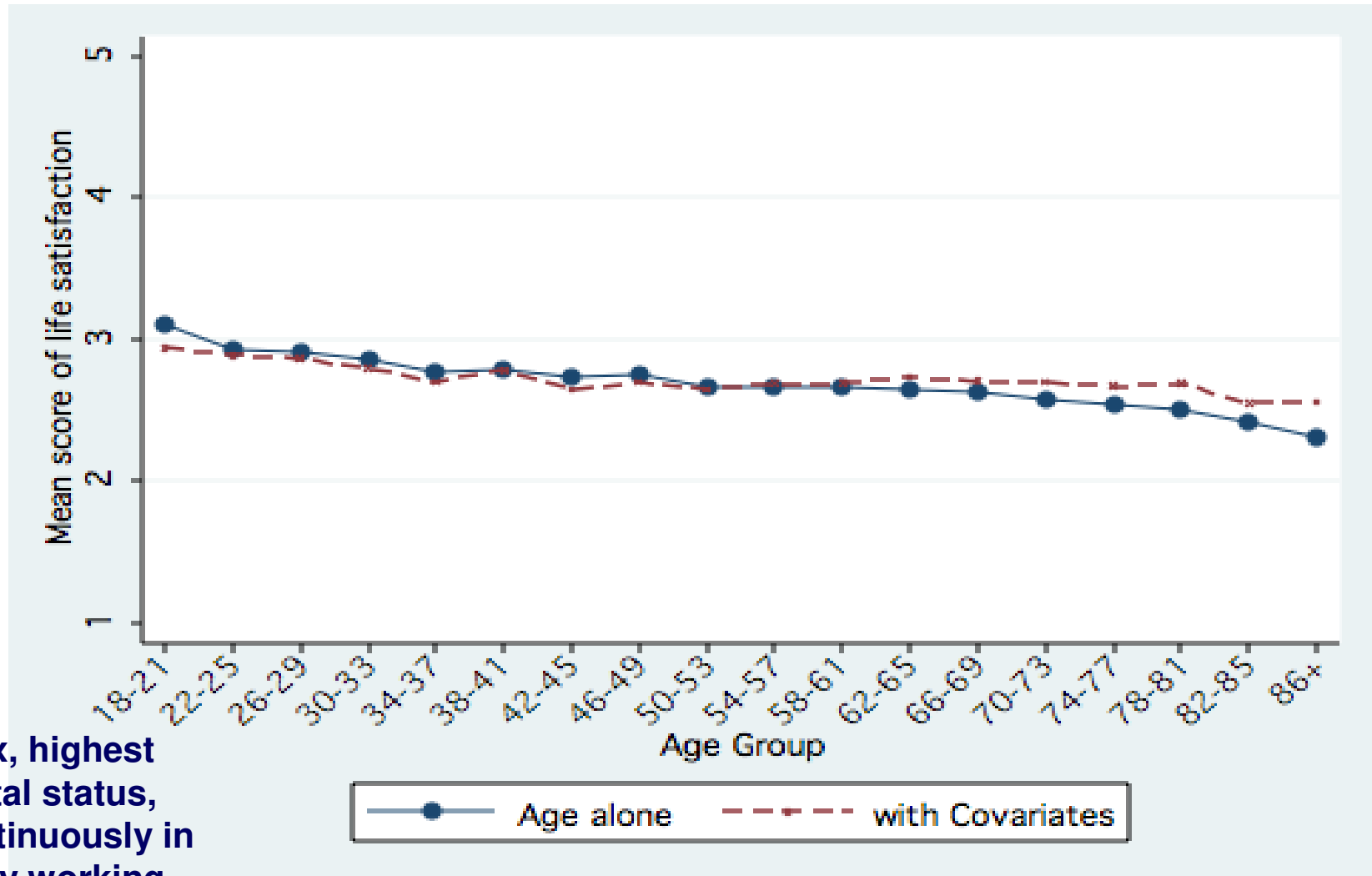


Adjusted for age, sex, highest education, marital status, country, lived continuously in the area, and currently working

Measuring Well-being and Happiness in SAGE

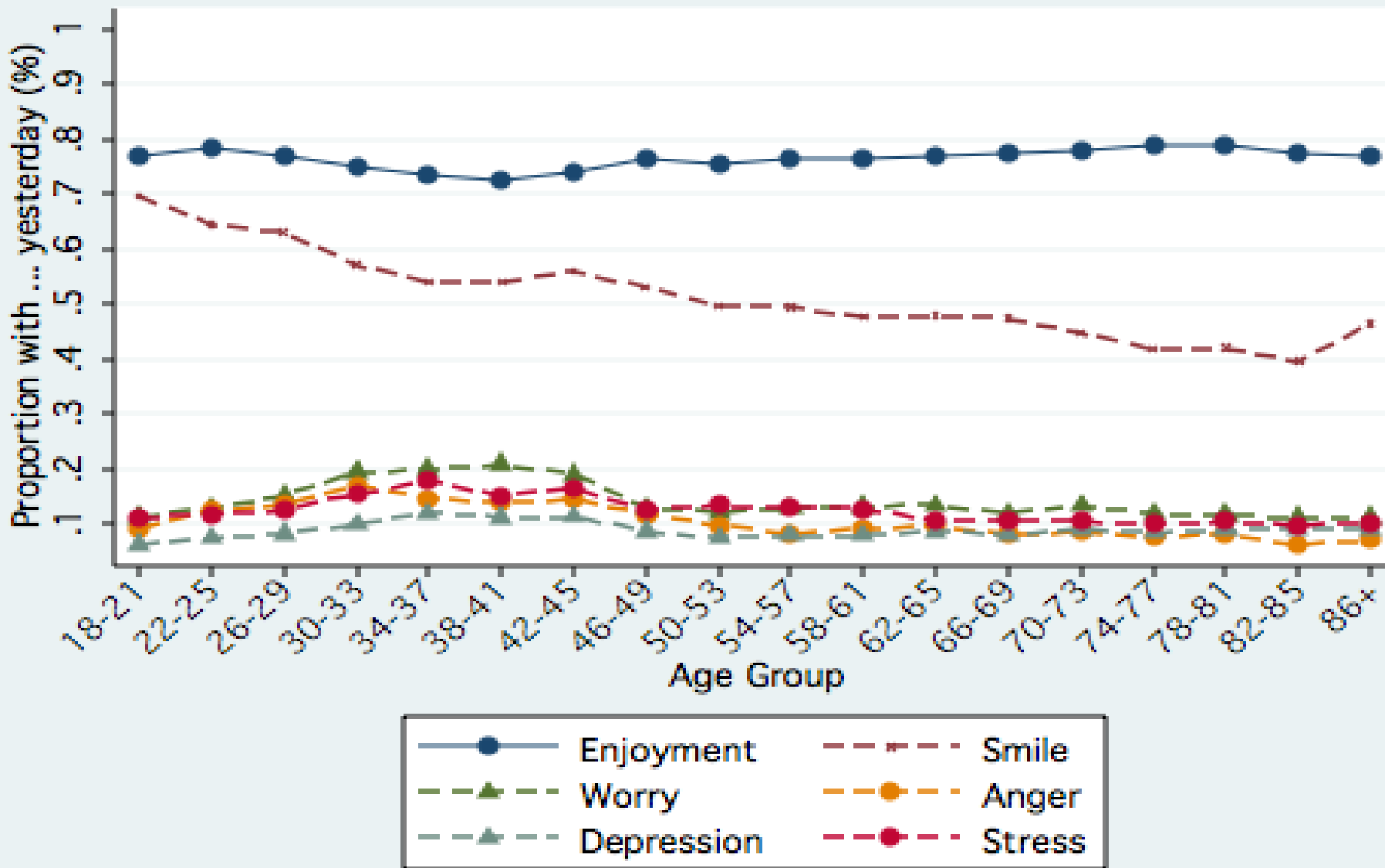
- SAGE – Evaluative and experienced well-being
 - WHOQoL-8
 - Day Reconstruction Method (Kahneman, Science 2004)
- "A snapshot...of psychological well-being..." Stone, PNAS 2010
 - Global WB = Evaluative
 - "Taking all things together, how satisfied are you with your life as a whole these days?"
 - Hedonic WB = Experienced
 - "Did you feel ... for much of the day yesterday?"
 - Positive: enjoyment; *smile/laugh*
 - Negative: worry; anger; *depression*; stress

Evaluative Well-being



Adjusted for sex, highest education, marital status, country, lived continuously in the area, currently working

Experienced well-being (- and +)



Conclusions

- Social network indexes show promise
 - Basic model demonstrates clear patterns
 - Second model provides additional details which can be used for policy and planning purposes
 - Adjust for reporting loneliness and depression
 - In some groups, internet social networking
 - Next steps: further develop models
- Initial results indicate scope for interventions – particularly in those with high levels of disability