Presentation prepared for
Institute of Aging at Hallym University

Social Connectedness and All-Cause Mortality: Focus on Older Adults' Chronic Health Stress

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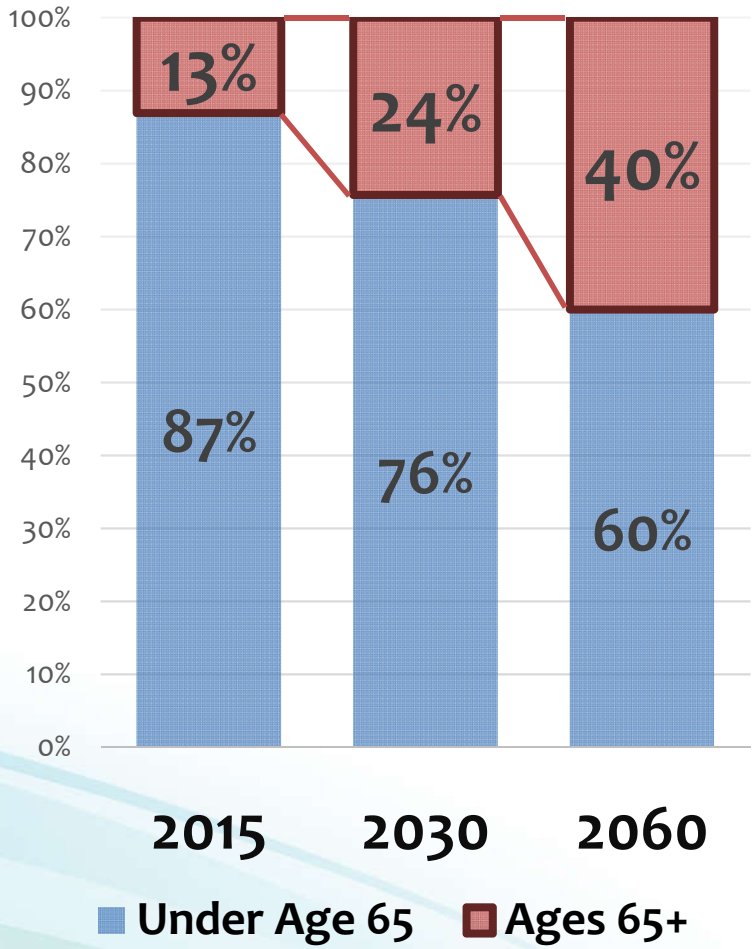
I. Research Interests

Health and Well-being in Late Life

THE GRAYING OF KOREA



- More live alone:
  7.4% in 2015 → ***15.4% in 2035***
- ***48%*** older adults report ***poor health.***
- Life expectancy at 65:
  Men 18 years *vs.* ***Women 22.4 years***

Source: Statistics Korea. http://kostat.go.kr/portal/korea/kor_nw/2/1/index.board?bmode=read&aSeq=348565

AGING and HEALTH

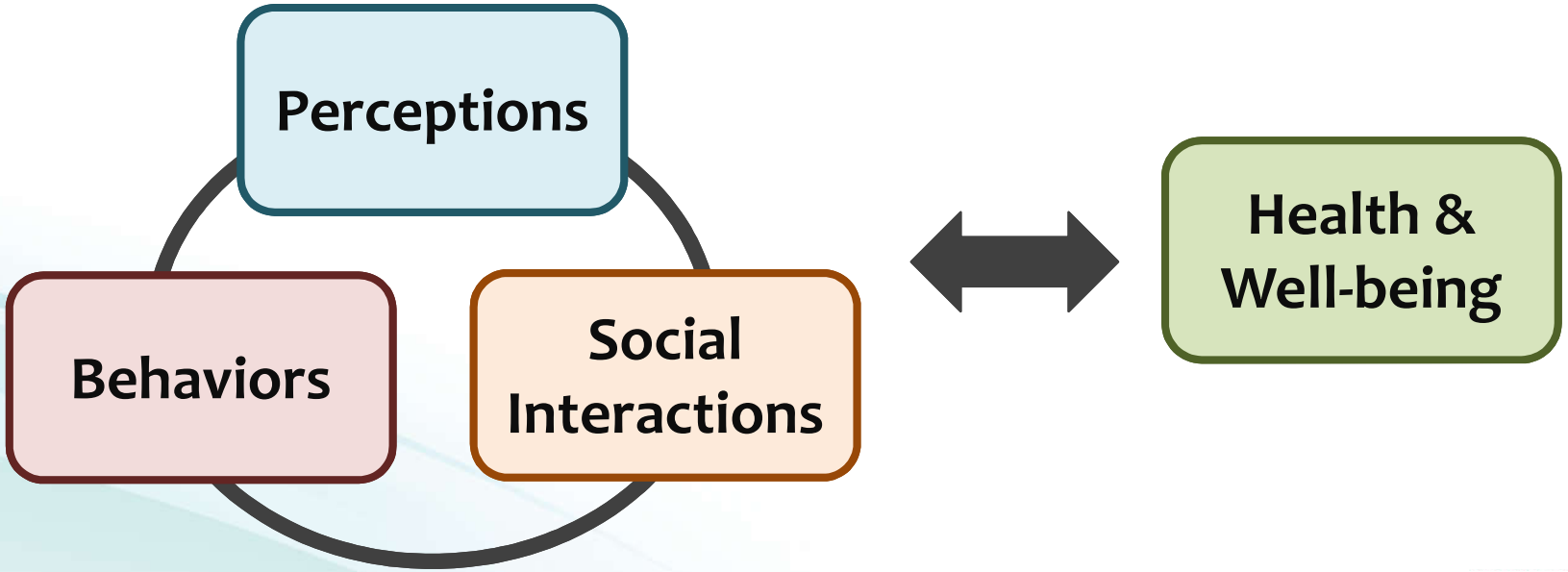
"Health is crucial to how we experience old age." *(WHO website)*

Source: http://www.who.int/ageing/events/world-report-2015-launch/en/

RESEARCH FOCUS

To promote health and well-being in late life

To reduce the gaps in health service access and use by older adults and their families



II. Dissertation Project

Social Connectedness and All-Cause Mortality: Focus on Older Adults' Chronic Health Stress

RESEARCH QUESTION

Social Connectedness **?** ↔ ***Mortality***

Does Social Connectedness promote Longevity?

BACKGROUND

- Theoretical Orientations

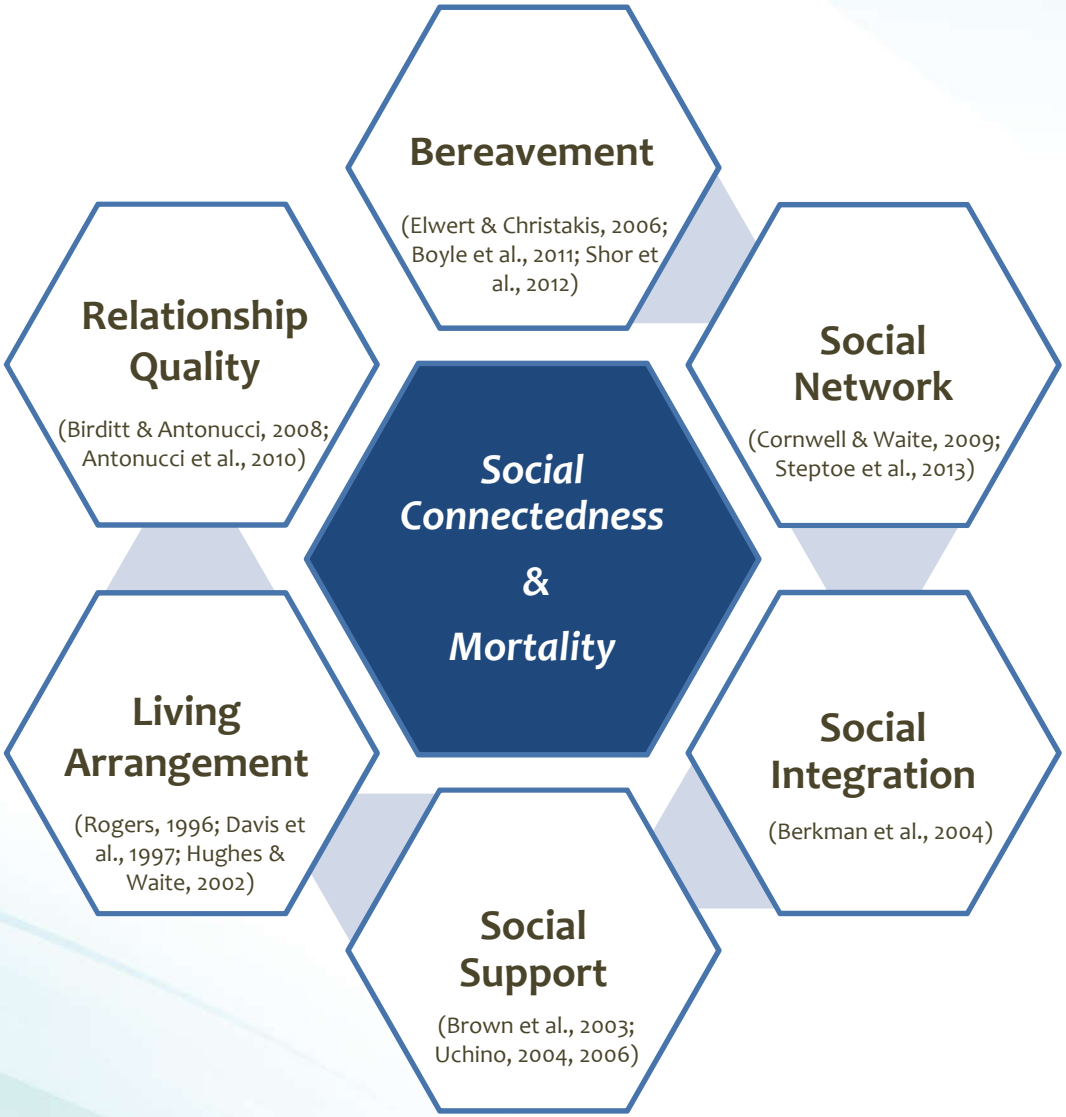
Sociological Approach:
Social Integration and Suicide (Durkheim, 1897)

Psychological Approach:
Attachment Theory (Bowlby, 1969; 1980)

Social Connectedness

→ ***Beneficial for health and survival***

EMPIRICAL EVIDENCE



ISSUES in PREVIOUS STUDIES

- Underdeveloped theoretical frameworks
- Complexity of the concept of social connectedness
  - *Multi-dimensional (e.g., functional support, quality)*
  - *Multiple directions of support exchange*
  - *Multiple sources*
- Variations in measurements
- Quality of social relationships often left out
- Lack of consideration regarding the context of life-challenging situations

(Berkman et al., 2000; Uchino, 2004; Holt-Lunstad et al., 2010; Holt-Lunstad & Simth, 2012)

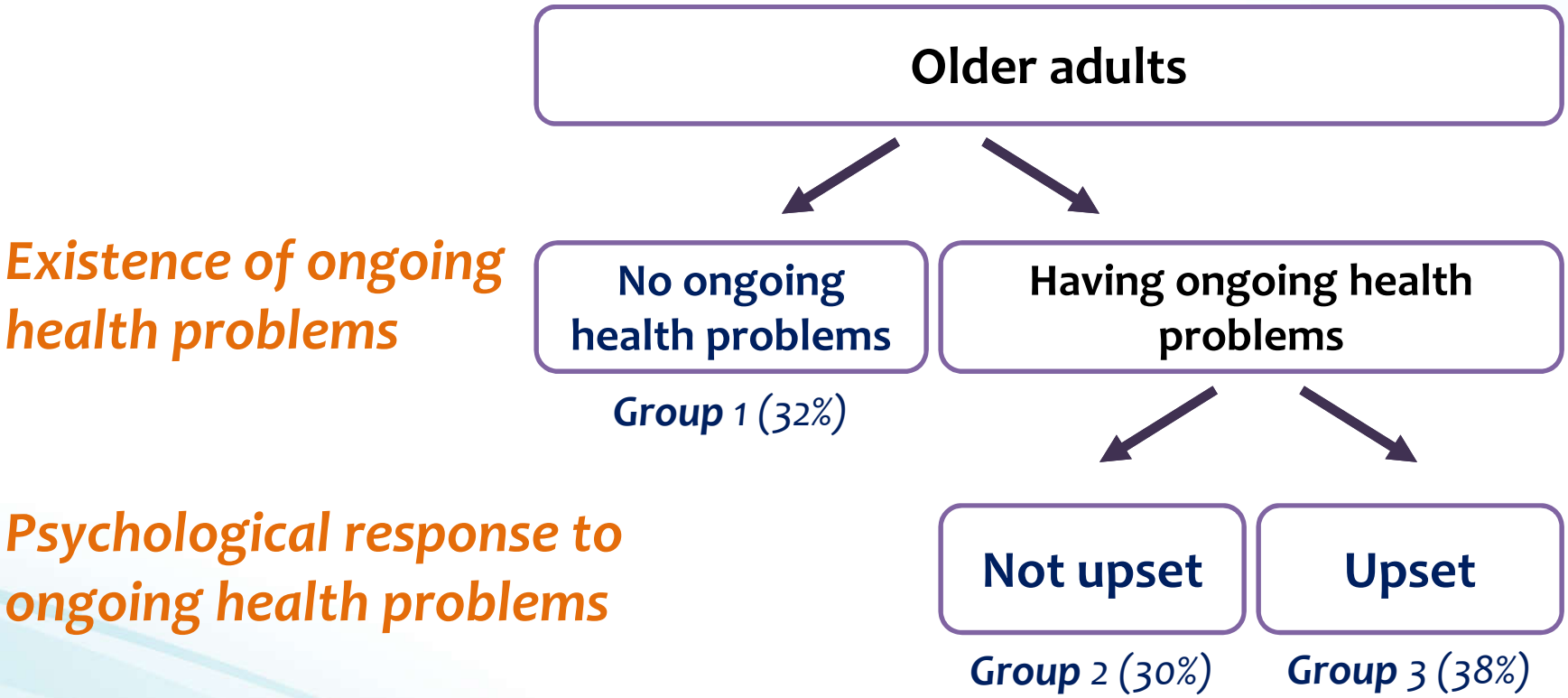
EXISTING MODELS

- Main Effects Model
  - *Everyday support, meaning of belonging, companionship, behavioral guidance/purpose/meaning*

- Buffering Effects Model
  - *When individuals face Stressors*

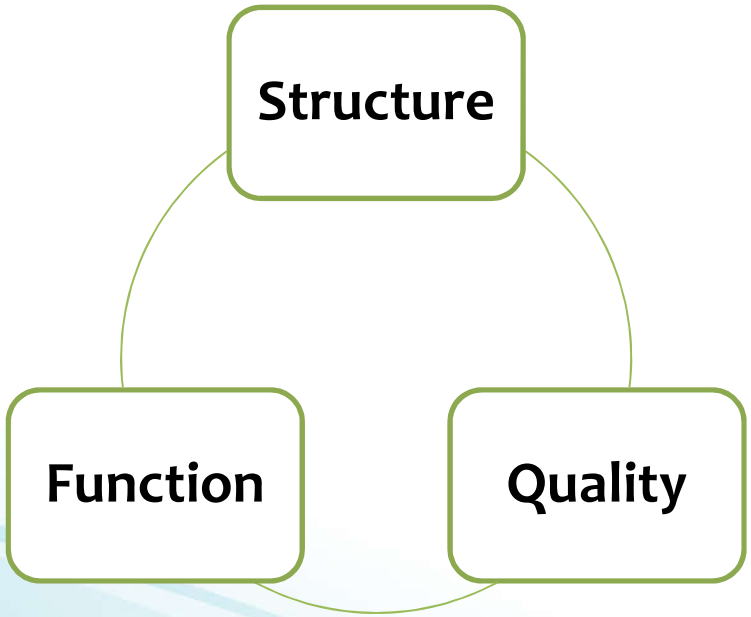
    (e.g., Health problems: commonly experienced in old age)

CONCEPTUAL MODEL 1: CHRONIC HEALTH STRESS

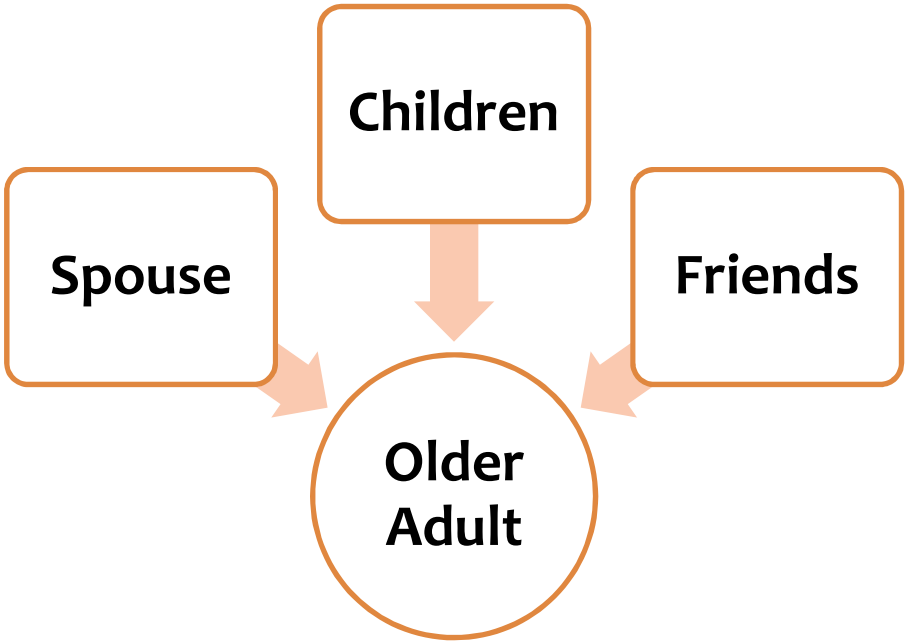


CONCEPTUAL MODEL 2: SOCIAL CONNECTEDNESS

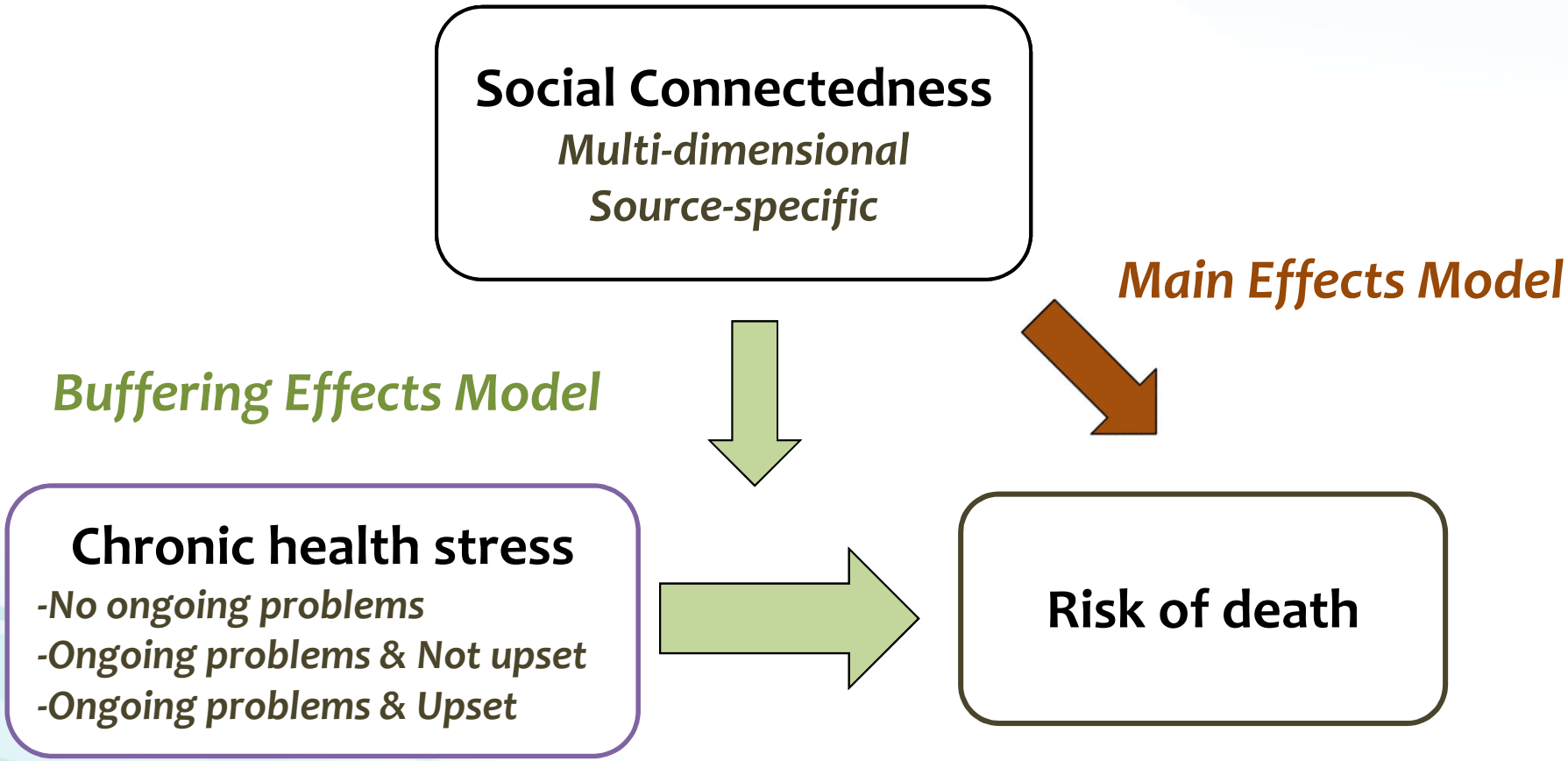
Multi-dimensional



Source-specific

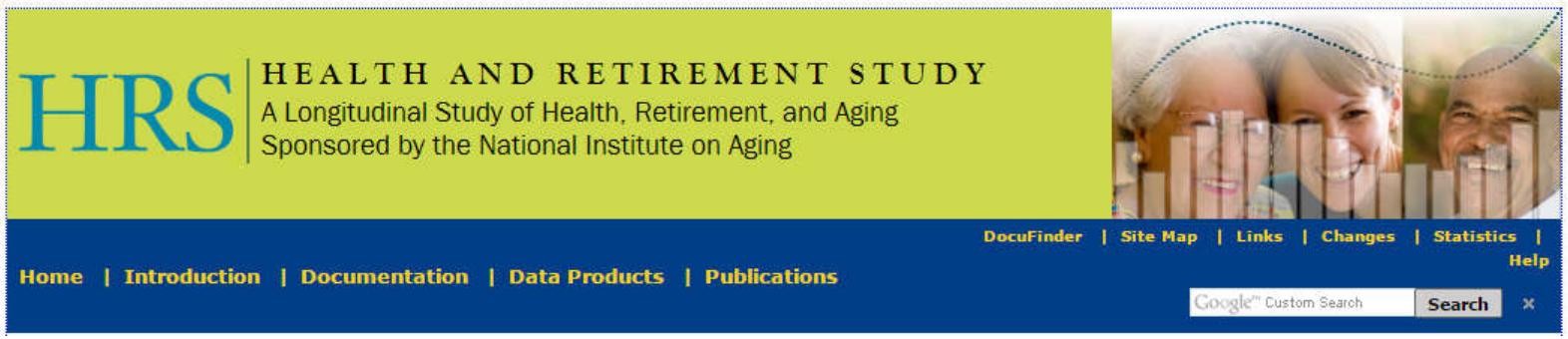


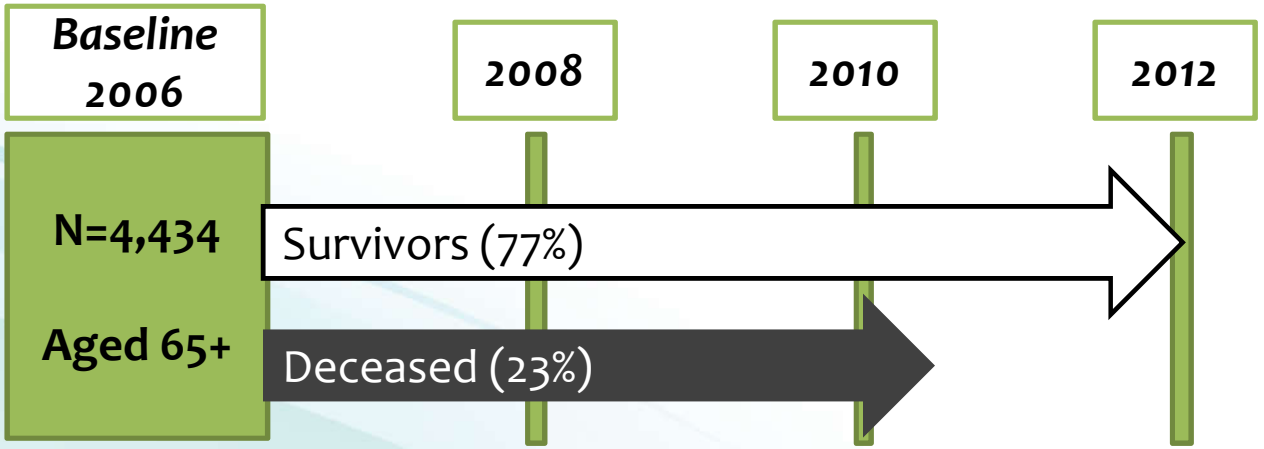
OVERALL CONCEPTUAL MODEL



METHOD

- Data
  - *2006-2012 waves of Health and Retirement Study* (HRS)
  - Aged 65+ at baseline (N = 4,434)





Mean age: 74 y/o
Women: 57%
White: 81%
Married : 63%
Some college: 38%
Good health: 71%

METHOD

- Key Measures
  - Survival time
  - Social Connectedness:
    - *Structure, Function, and Quality of relationships with Spouse, Children, and Friends*
  - Chronic Health Stress:
    - *No ongoing health problems, Not being upset about health problems, and Being upset about health problems*
  - Covariates:
    - *Demographic and socio-economic variables, health behaviors, and health status*

METHOD

- Analysis
  - Survival Analysis
    - Main Effects Model

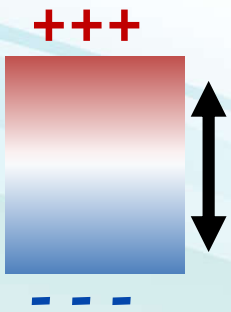
$$\log h(t_{ij}) = \log h0(t_j) + \left[\beta_1 Social\ Relationships_{ij} + \beta_2\ ChronicHealthStress_{ij}\right]$$

    - Buffering Effects Model

$$\log h(t_{ij}) = \log h0(t_j) + \begin{bmatrix}\beta_1 Social\ Relationships_{ij} + \beta_2\ ChronicHealthStress_{ij} \\ + \beta_3 Interaction\ terms_{ij}\end{bmatrix}$$

Spouse: Main Effects Model

Spouse	*Variable-specific*	*Dimension-specific*	*All dimensions*
Structure			
No spouse	+++	NS	+
Function §			
Receiving help	+++	+	+++
Providing help	NS	NS	NS
Quality §			
Positive interaction	-	NS	NS
Negative interaction	NS	NS	NS



Greater risk of death

NS: Not significant

Lower risk of death

No spouse → Greater risk of death

Receiving functional help (= Greater dependence) → Greater risk of death

Spouse: Main Effect - Receiving Help

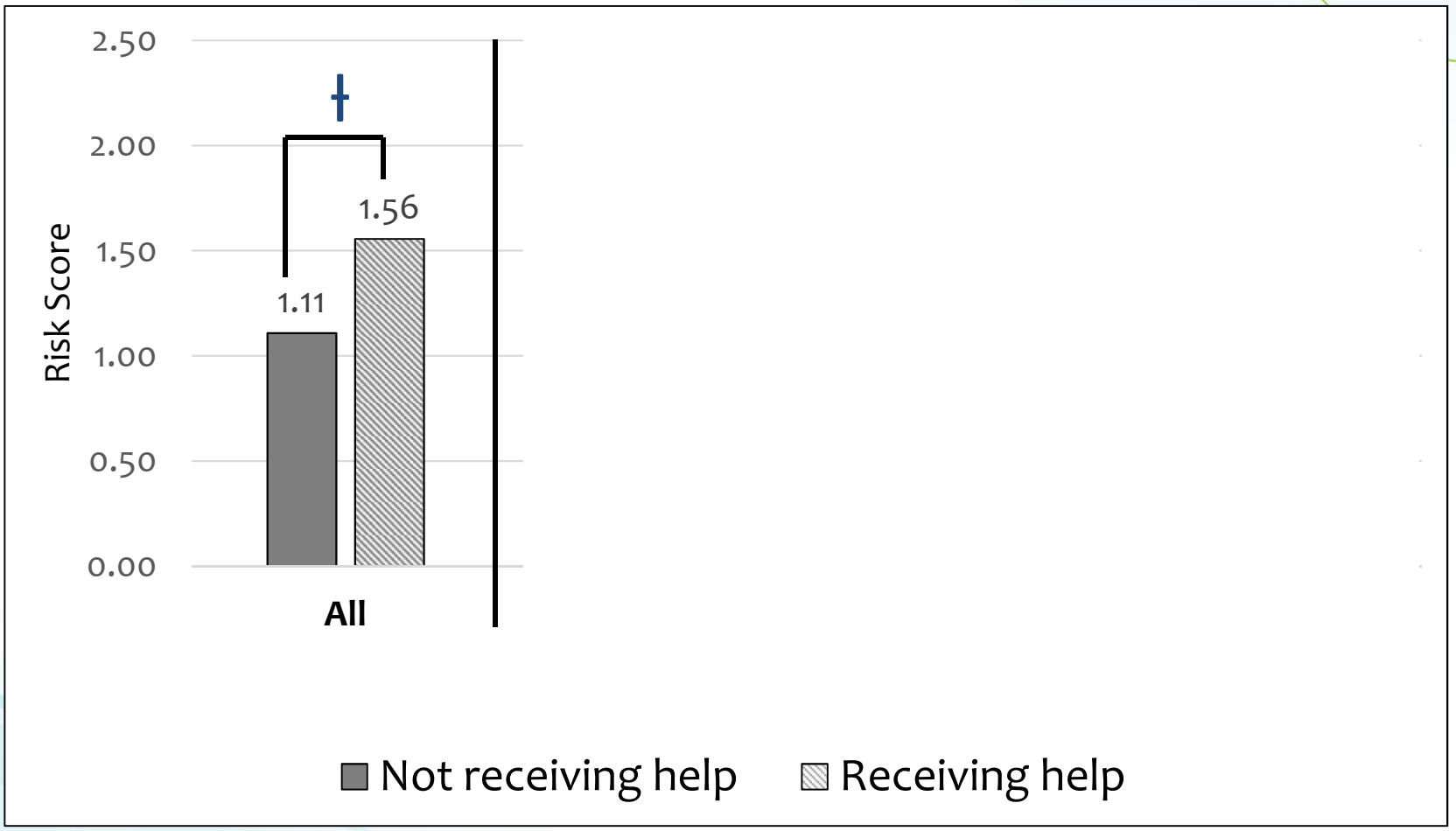


Figure 1. Risk scores for respondents receiving help from spouse by three chronic health stress groups († $p < .10$)

Spouse: Buffering Effect – Receiving Help

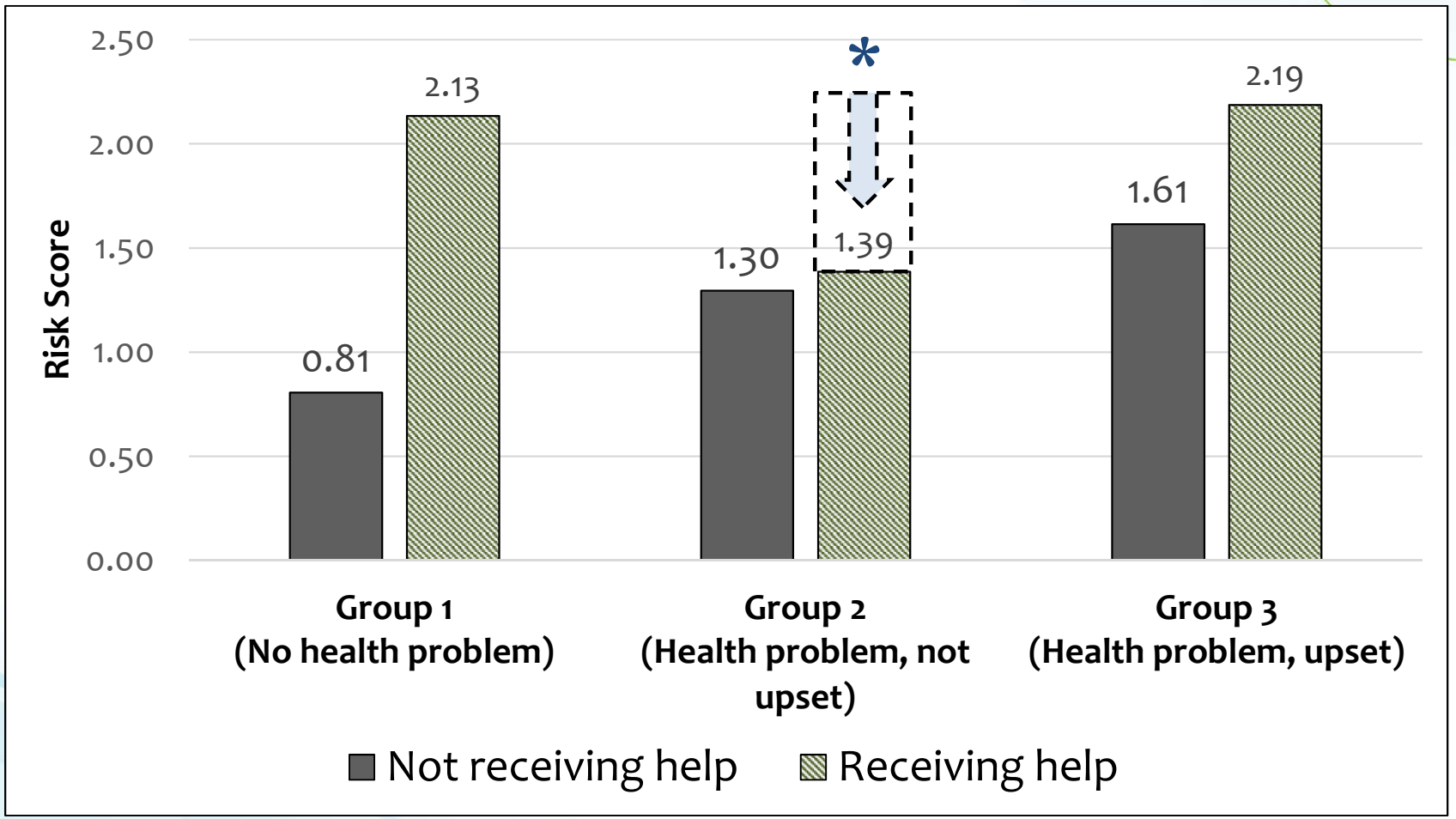


Figure 2. Risk scores for respondents receiving help from spouse by three chronic health stress groups (* $p < .05$)

Spouse: Main Effect – Positive Quality

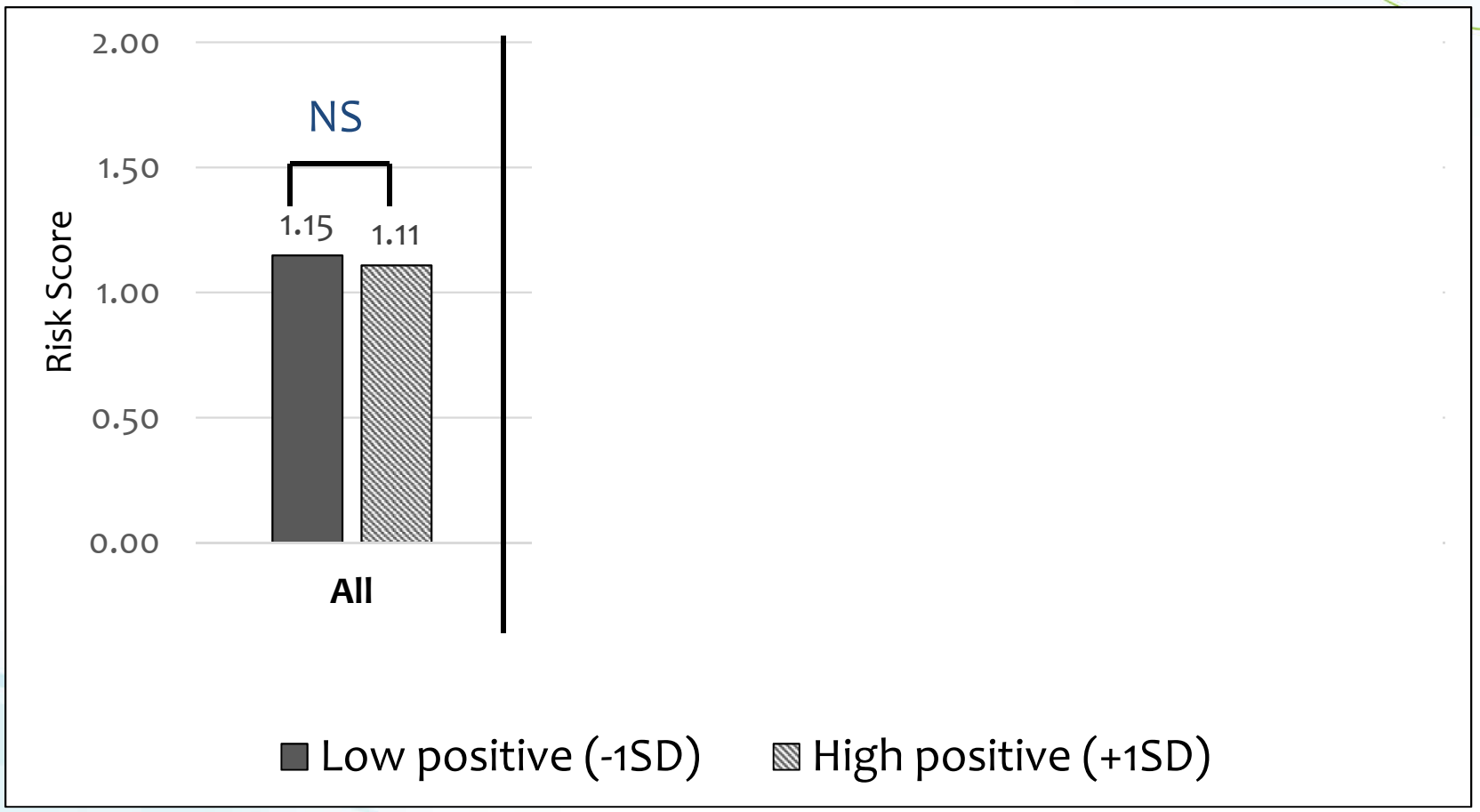


Figure 3. Risk scores for respondents with high and low positive relationship scores (with spouse) by three chronic health stress groups (*NS: Not significant*)

Spouse: Buffering Effect – Positive Quality

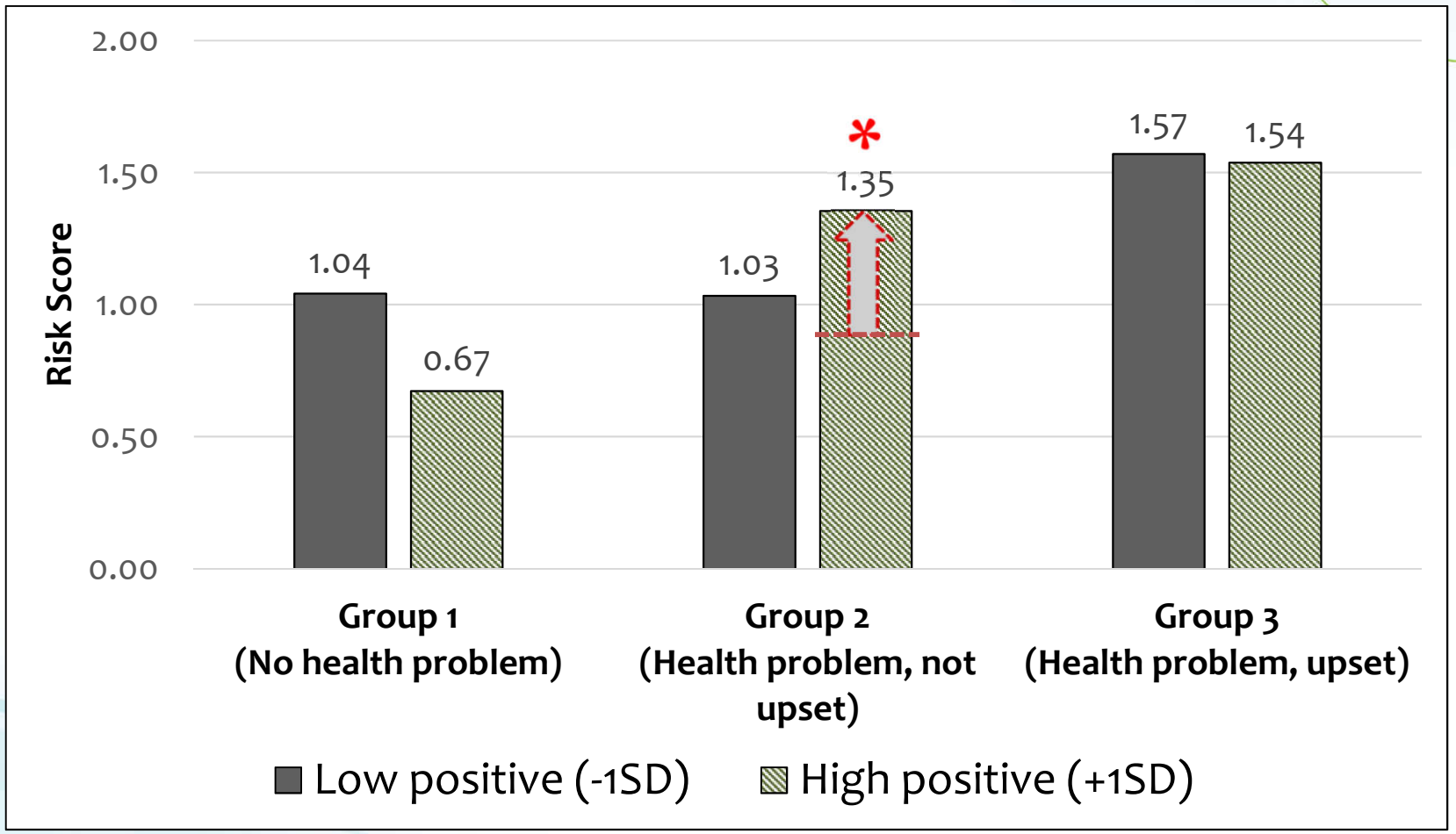


Figure 4. Risk scores for respondents with high and low positive relationship scores (with spouse) by three chronic health stress groups (* $p < .05$)

Children: Main Effects Model

Providing help → ↓ risk of death ***Low freq. phone call → ↑ risk of death***

Children	*Variable-specific*	*Dimension-specific*	*All dimensions*
Structure			
No child	NS	-	-
Living with children	++	NS	NS
Living near	NS	NS	NS
Meeting up: low freq	+	NS	NS
Phone: low freq	++	+	+
Function §			
Receiving help	+++	NS	NS
Providing help	---	-	NS
Quality §			
Positive interaction	-	NS	NS
Negative interaction	++	NS	NS

Children: Main Effect – Low Freq. Phone

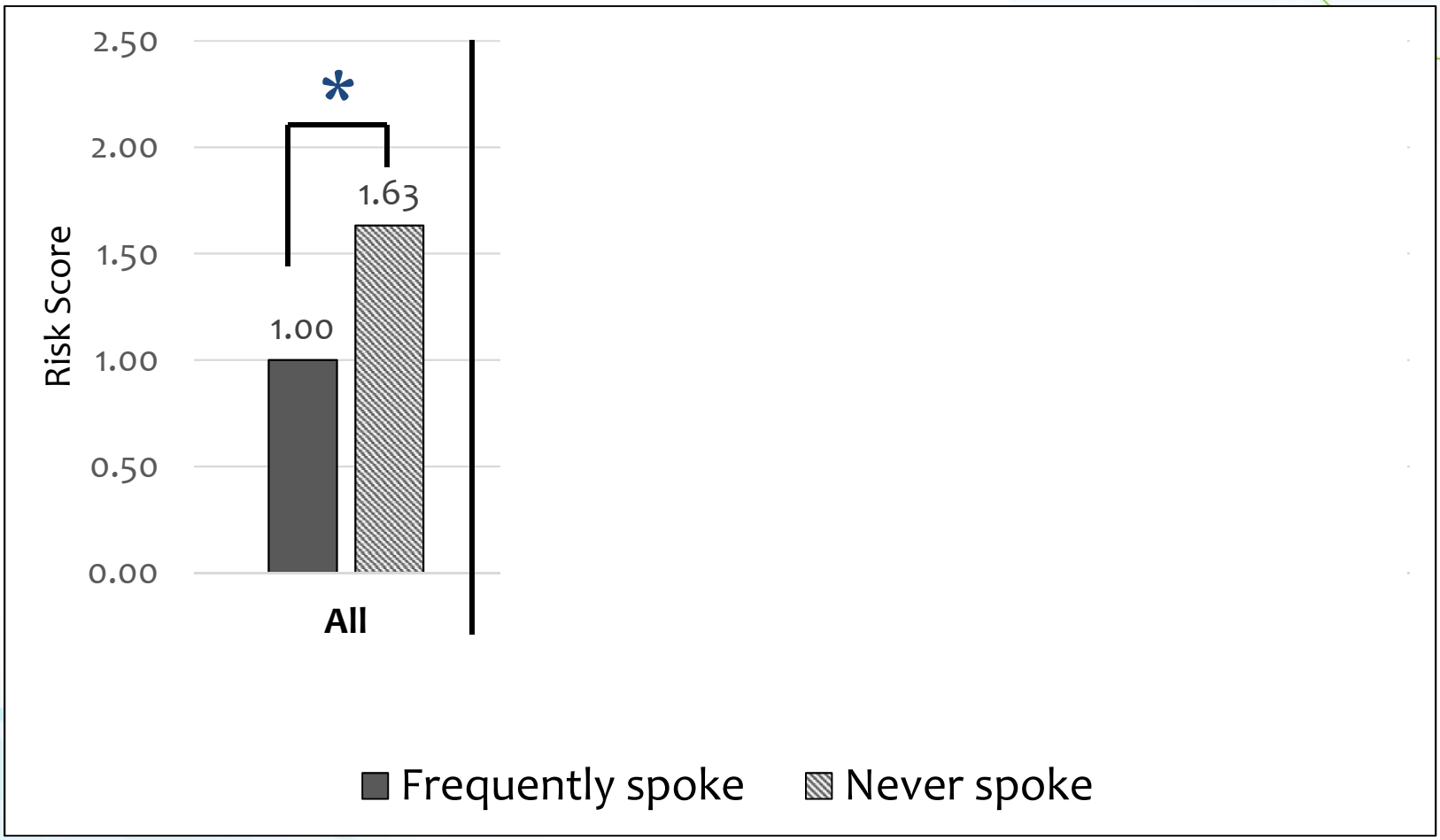


Figure 5. Risk scores for respondents speaking on the phone with children by three chronic health stress groups (* $p < .05$)

Children: Buffering Effect – Low Freq. Phone

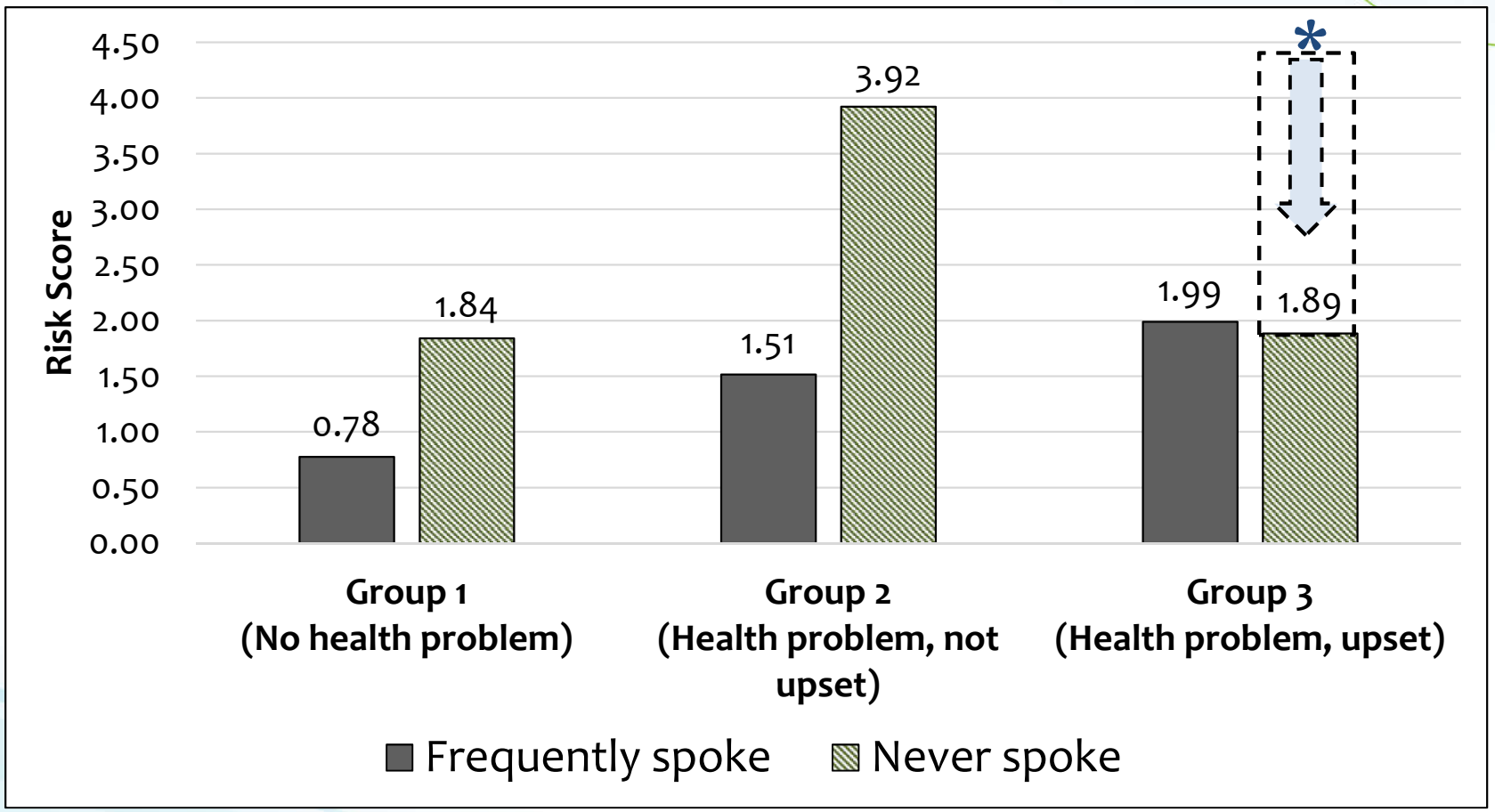


Figure 6. Risk scores for respondents speaking on the phone with children by three chronic health stress groups (* $p < .05$)

SUMMARY OF MAJOR FINDINGS I

- ***Each dimension of late-life social connectedness exerts different outcomes*** in terms of older individuals' longevity.

Structure:	*↑ Social ties*	*↓ Risk of death*
Function:	*Receiving help*	*↑ Risk of death*
	Providing help	*↓ Risk of death*
Quality:	*↑ Positive interaction*	*↓ Risk of death*
	↑ Negative interaction	*↑ Risk of death*

SUMMARY OF MAJOR FINDINGS II

- ***The importance and impact of late-life relationship sources*** on older individuals' longevity vary.

- Older individuals' ***self-perception on their ongoing health problems make a difference***.
  - *Older individuals who express satisfaction with their ongoing health problems appear to benefit more from their positive social relationships.*

RESEARCH IMPLICATIONS

- Social Connectedness
  - *Multiple dimensions with multiple sources*
- Main and Buffering effects models are partially supported.
- Multidisciplinary approach
  - Integration between psychological (stressor) and sociological perspectives (social tie / integration / support)

CLINICAL & POLICY IMPLICATIONS

- May help identify risk groups by assessing late-life social connectedness status

- Consider older patients' social connectedness with multiple dimensions when developing care plans

- Patient/family education/support program development
  - *e.g., stress management, support arrangement based on needs*

CONCLUDING REMARKS

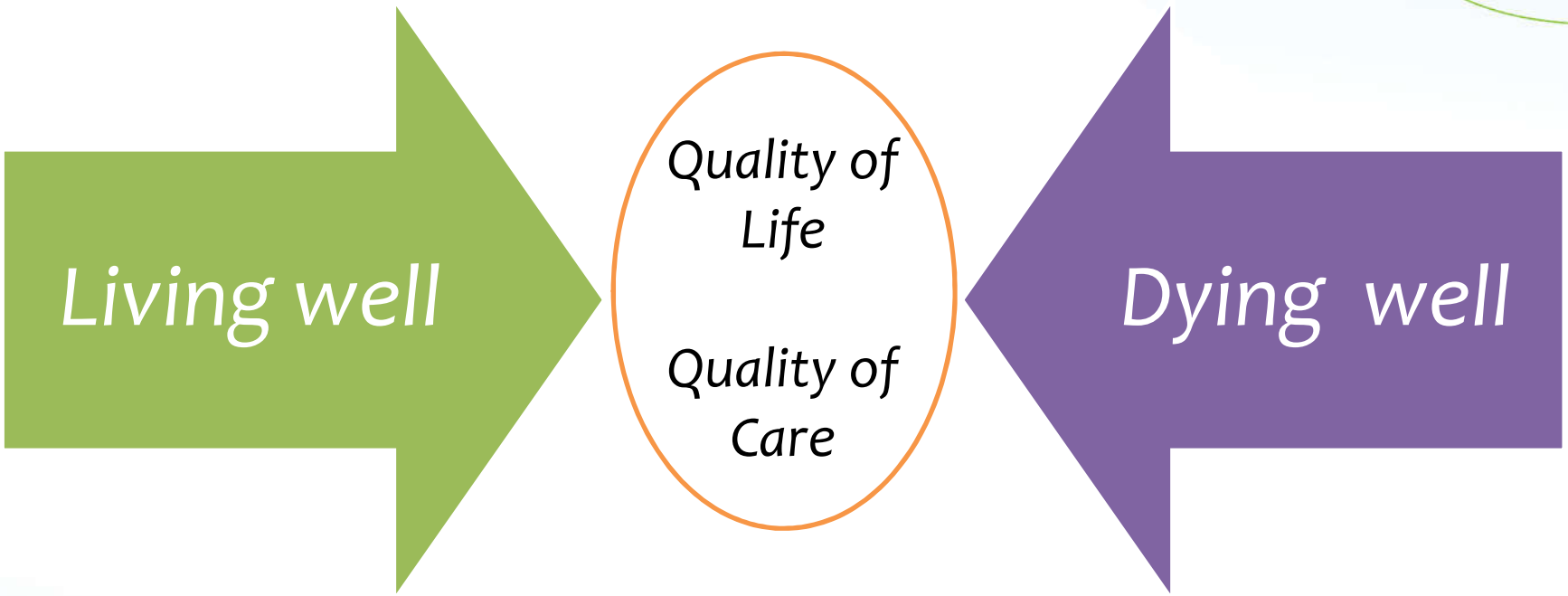
- Main effect: ***Social connectedness matters with regard to the risk of death in old age***.
  - *Social connectedness, multiple-dimensional concept, with different sources, work differently in terms of older individuals' longevity.*

- Buffering effect: Older individuals' ***optimistic self-perception on or sustainable response to their health problems*** plays a critical role, when considering their longevity and *benefits of strong social connectedness (social ties, support, and supportive relationship quality)*.

III. Current Work

- Research

CURRENT WORK

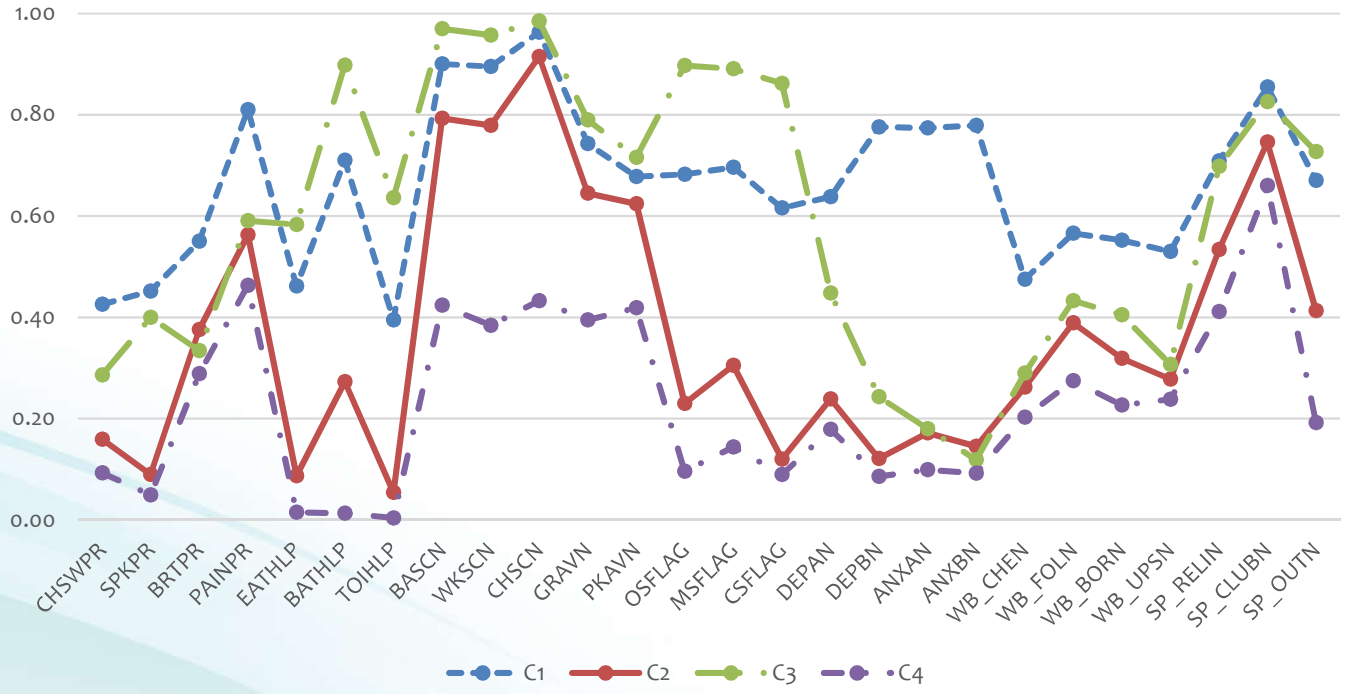


How to improve Quality of Life and Care nearing death?

Patient-Centered, Informed Choices, Shared Decision-making among older patients, caregivers, and health care professionals

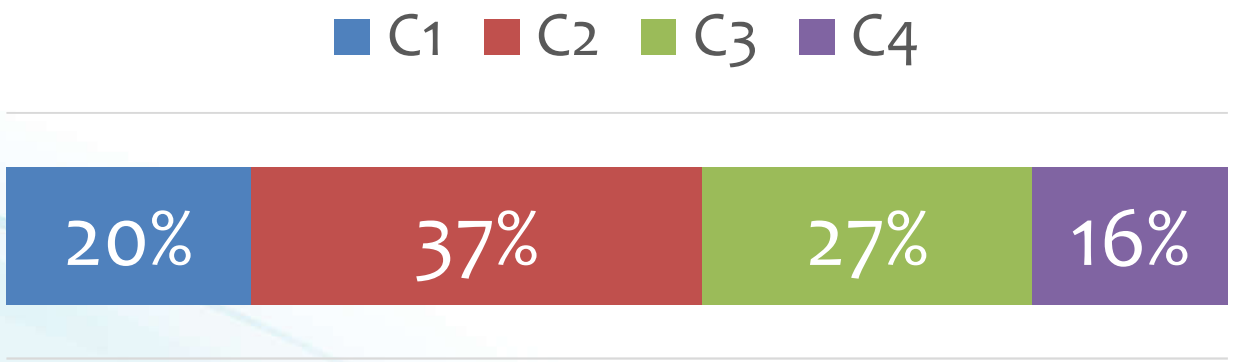
WORKING PAPER

- Daily health and well-being before dying: Associations with quality of life and care
  - Aims 1) to classify older adults based upon their daily activities, symptoms, capacities, and social engagements in their last year before dying and 2) to examine their associations with quality of life and quality of care at the end of their lives.



WORKING PAPER cont.

- Groups based on daily health and well-being
  - C1: Healthy and happy
  - C2: Frail but happy
  - C3: Cognitively impaired and modestly distressed
  - C4: Highly impaired and distressed



WORKING PAPER cont.

- End-of-life quality of life
  - not being alert, being able to get out of bed, no pain, no trouble breathing, no anxiety or sadness
  - C1: highest QoL score
  - C4: lowest QoL score (β = -.60; 95% CI = -.84, -.37),

- End-of-life quality of care
  - EoL decision made with input of the deceased or family, unwanted care or tx, unmet personal care needs, treated with respect, family kept informed about condition
  - No sig differences across 4 classes
    - Dying at home: associated with a greater score in QoC

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THANK YOU!

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