

**AGS / NIA R13 Bedside to Bench Conference Series
Topic 2 Stress Tests and Biomarkers of Resilience
Bethesda, March 4-5, 2024**

Psychological Impacts on Resiliency in Older Adults



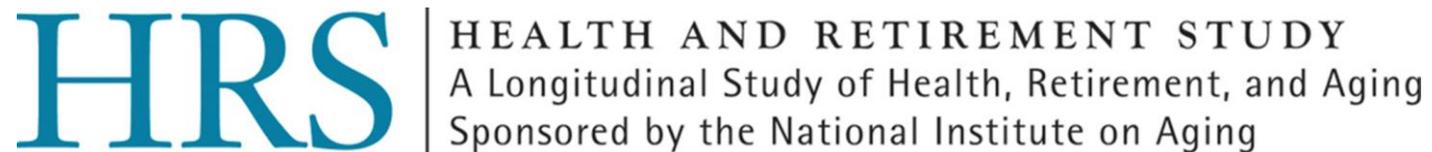
Jacqui Smith

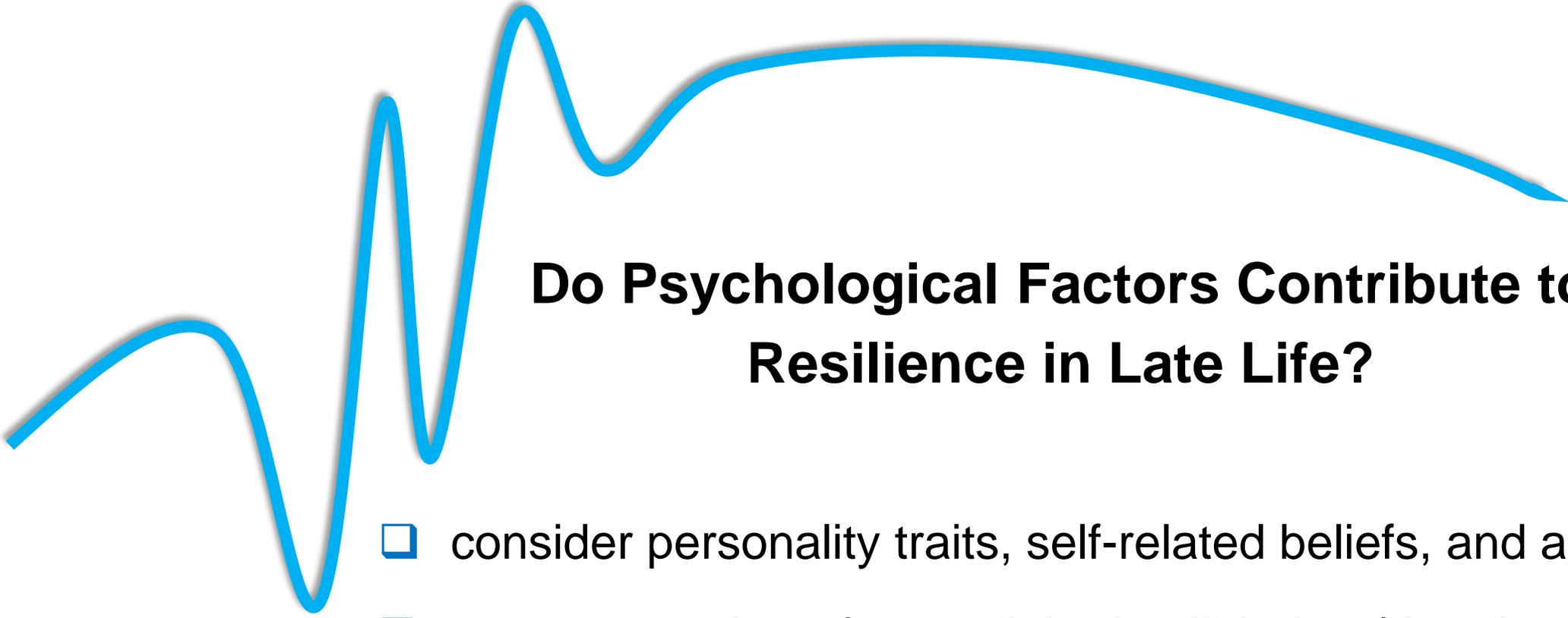
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Do Psychological Factors Contribute to Resilience in Late Life?

- ❑ consider personality traits, self-related beliefs, and appraisals
- ❑ most research on factors linked to ill-being (deterioration)
- ❑ less on resilience (e.g., recovery, growth, maintenance)



Predictive Power of Personality Traits?

Characteristics of an individual's behavior that are relatively enduring
(consistent) across situations and over time

CONSCIENTIOUSNESS

Tendency to be well-organized, disciplined, responsible, hardworking

NEUROTICISM

...moody, worrying, nervous, tense, not calm

EXTRAVERSION

...outgoing, friendly, lively, talkative

AGREEABLENESS

...helpful, caring, sympathetic

OPENNESS

...creative, imaginative, curious, broad-minded

Predictive Power of Personality Traits

CONSCIENTIOUSNESS

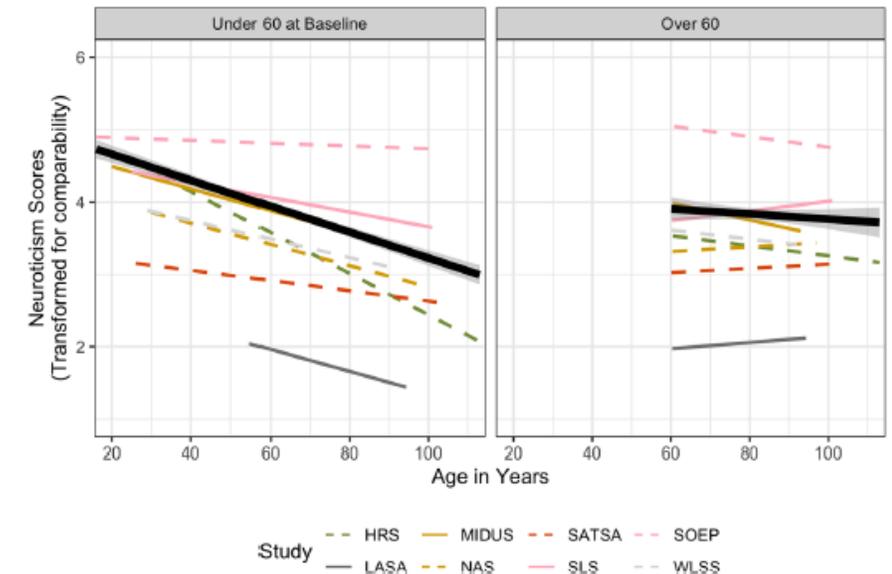
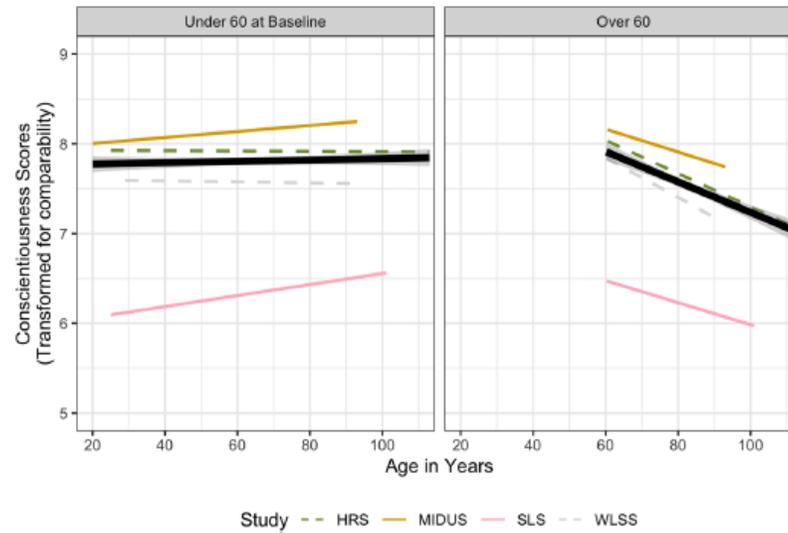
After controls for SES, age...^a

Hi C predicts longevity

NEUROTICISM

Lo N related to living longer; Hi N report more stress

High rank-order stability in individual differences, but mean-level change over time with age...^b



a. Roberts, B. W., et al. (2007). *Perspectives on Psychological science*, 2(4), 313-345.

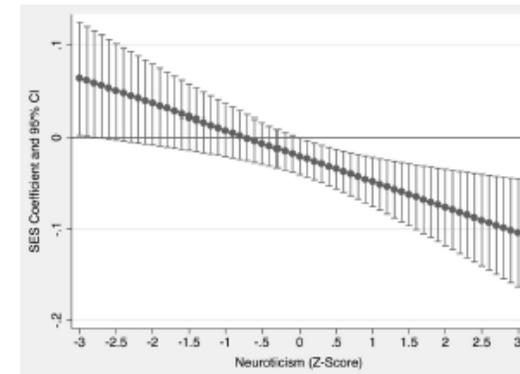
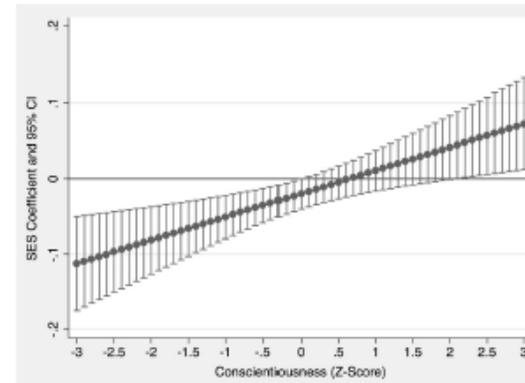
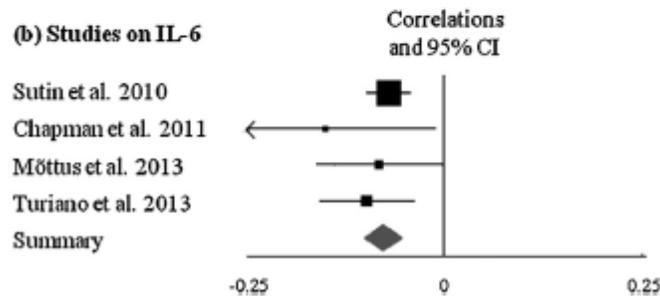
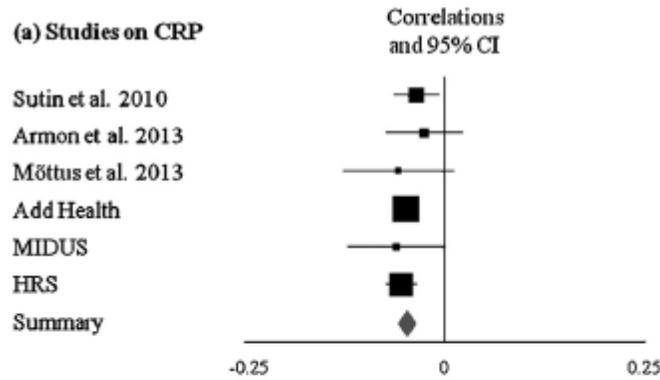
b. Graham, E. K., et al. (2020). *European Journal of Personality*, 34(3), 301-321.

Personality and Biomarkers?

- Most personality trait – biomarker research is cross-sectional: Associations are not explanations, indicate potential for resilience

Higher C associated with lower CRP & lower IL-6

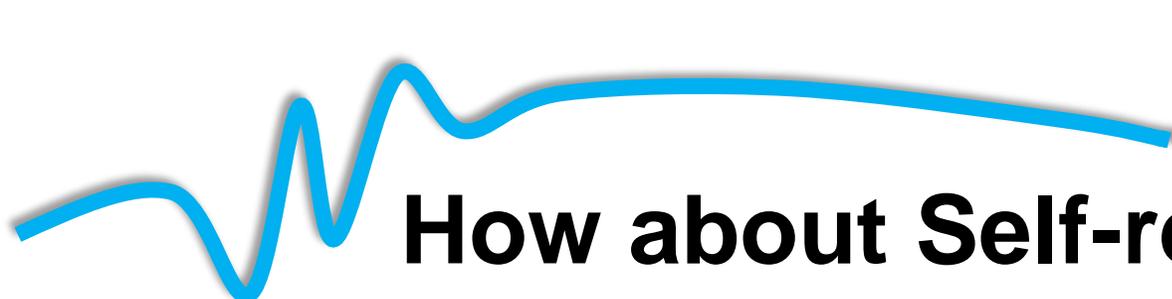
Meta-analyses -- large population studies...^a



C may buffer and N may amplify higher IL-6 risk associated with low SES...^b

a. Luchetti, M. et al (2014). *Psychoneuroendocrinology*, 50, 181-193.

b. Elliot, A. J. et al.(2017) *Annals of Behavioral Medicine*, 51(2), 240-250.



How about Self-related Beliefs / Appraisals?

Dynamic evaluative and regulation processes and self-related beliefs
involved in coping with life events and challenges

PURPOSE IN LIFE

SELF ESTEEM

CONTROL BELIEFS / MASTERY

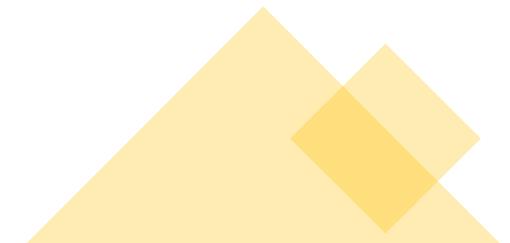
PERCEIVED SOCIAL SUPPORT

WILL TO LIVE

EMOTION REGULATION

OPTIMISM

RELATIONSHIP QUALITY



Boehm & Kubzansky (2012) *Psychological Bulletin*, 138(4), 655-691
Uchino, B. N. (2018). *Health Psychology*, 37(5), 462 - 471

Self-related Beliefs, Appraisals and Biomarkers?

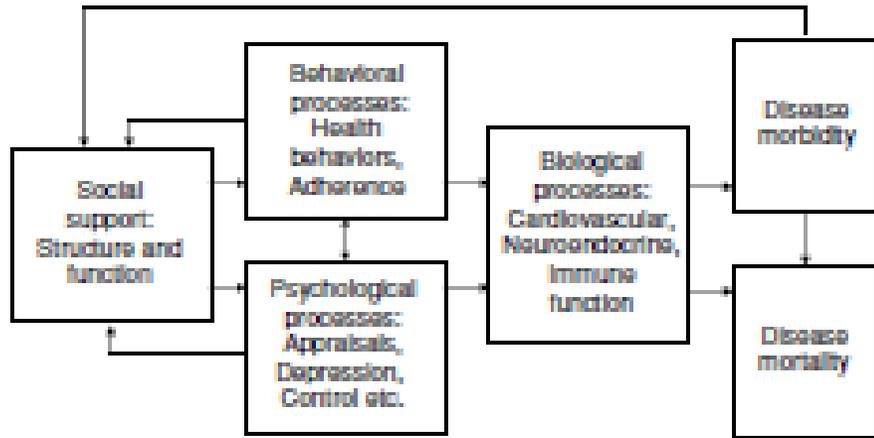


Fig. 1. Broad model highlighting potential pathways linking social support to physical health.

Uchino B. N. 2006 *Journal of Behavioral Medicine*, 29(4) 377- 387

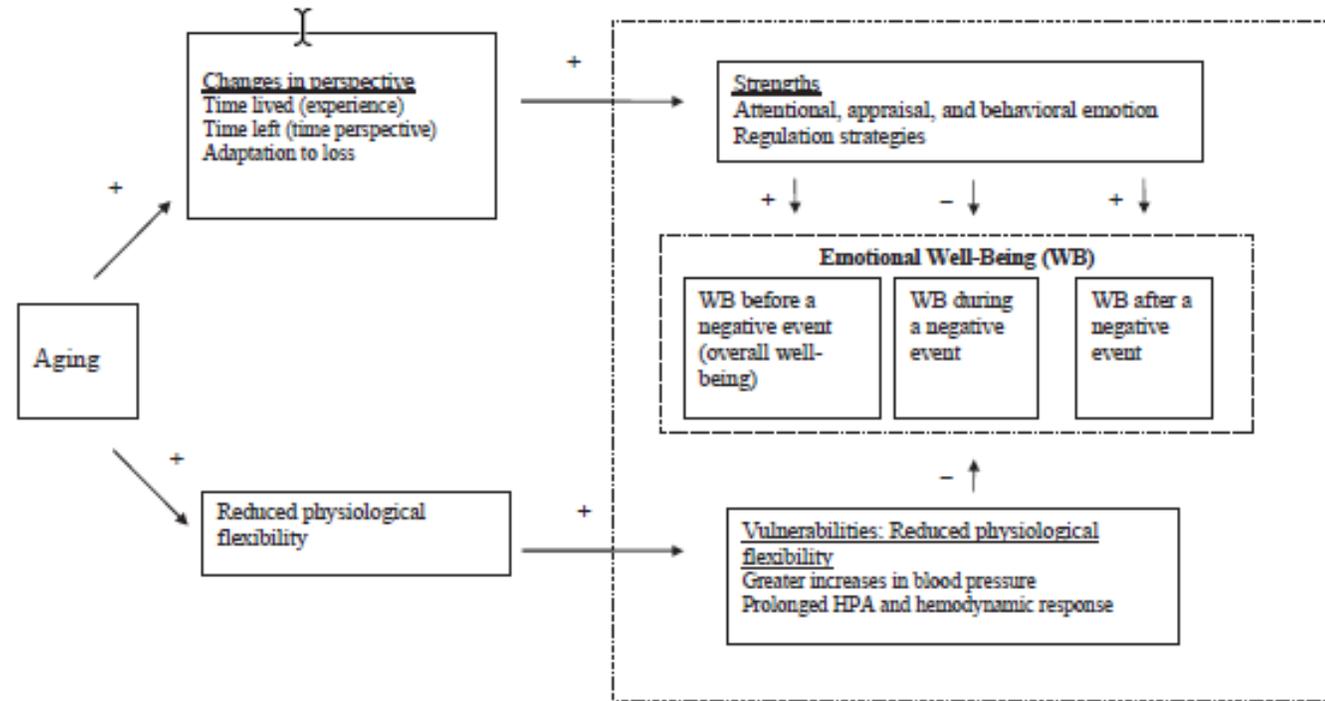
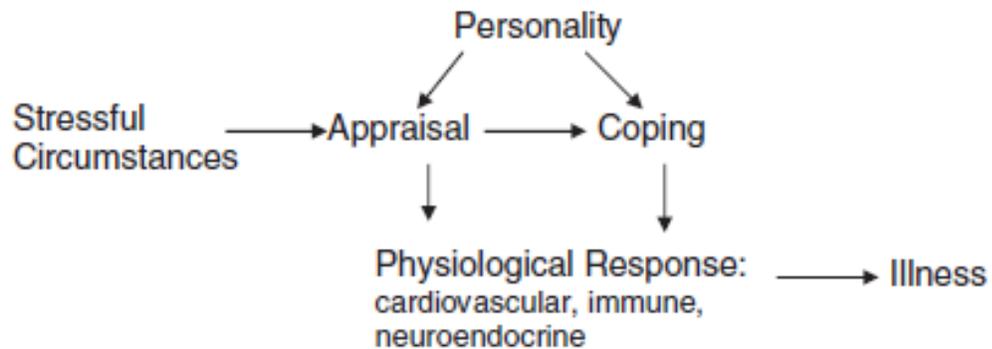


Figure 1. A model of strength and vulnerability integration. HPA = hypothalamic-pituitary-adrenal.

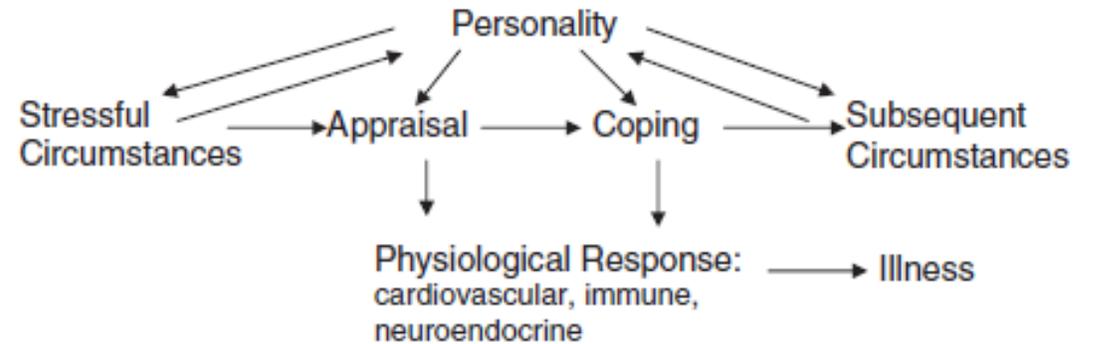
Charles S.T. 2010 *Psychological Bulletin*, 136(6) 1068-1091

How do the psychological factors work?

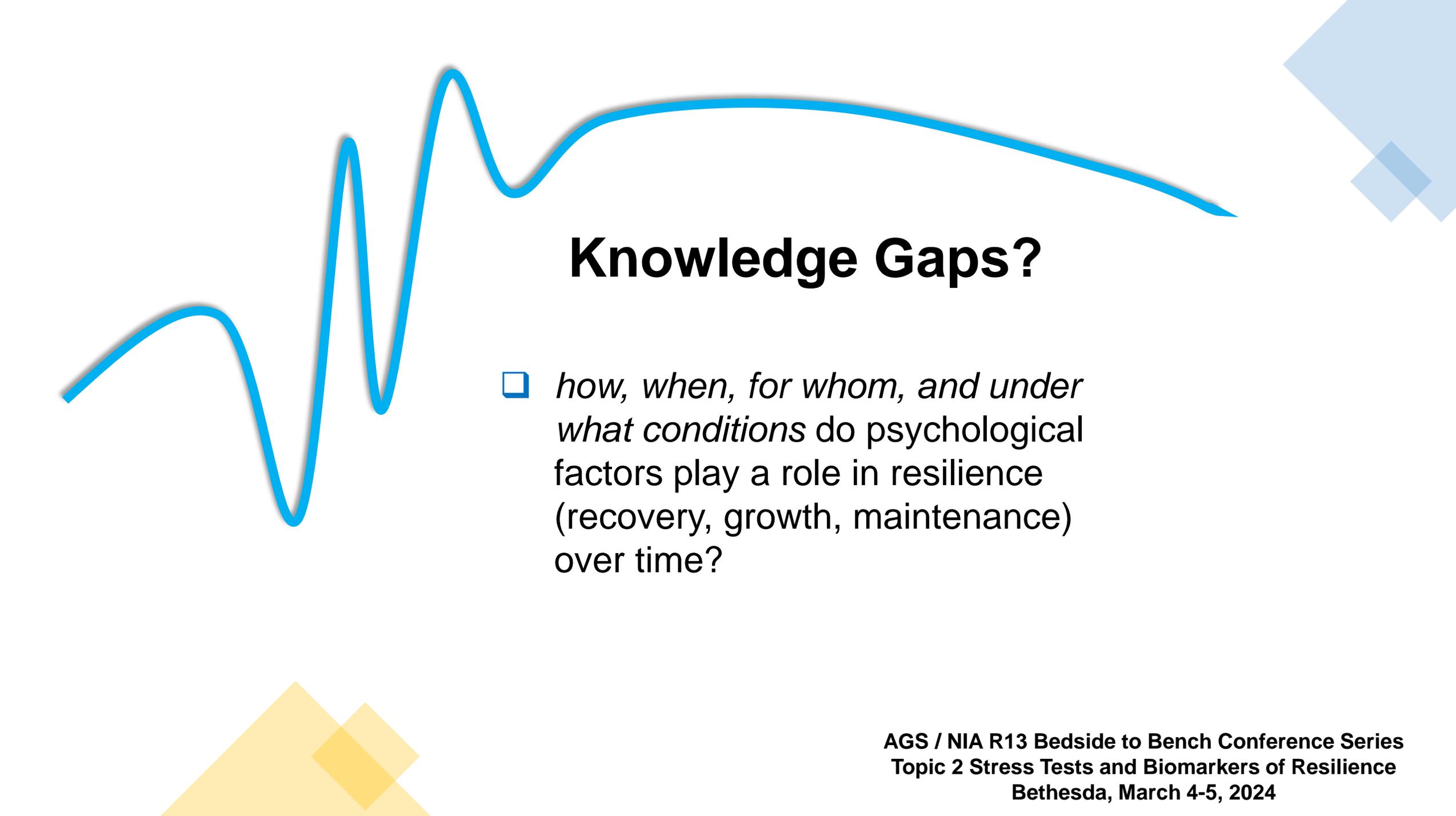
Interactional Stress Moderation Model



Transactional Stress Moderation Model



Smith, T. W. (2006). Personality as risk and resilience in physical health. *Current directions in psychological science*, 15(5), 227-231.

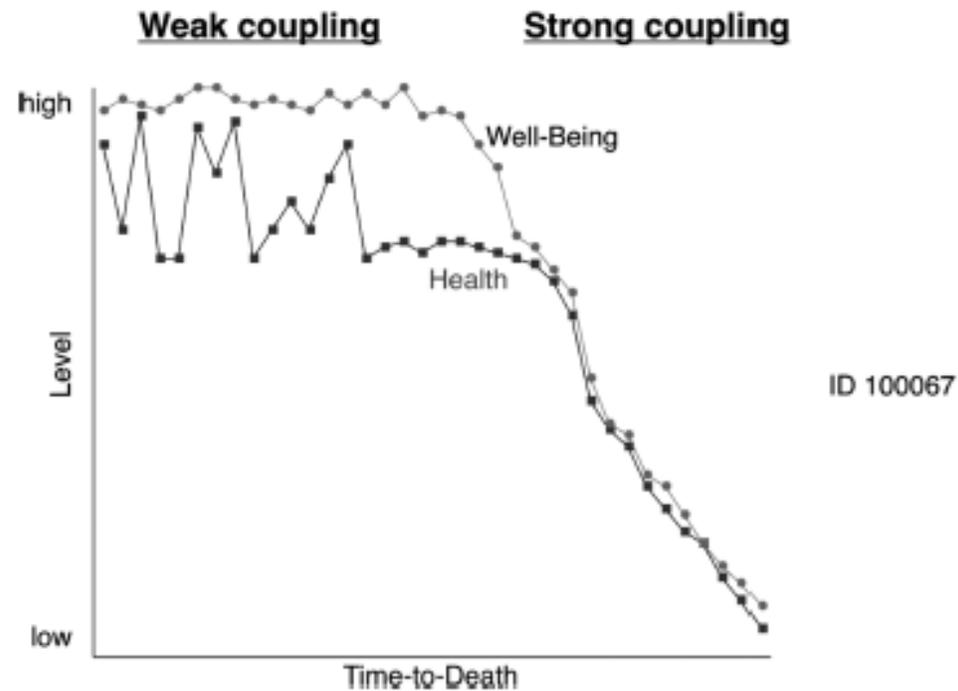


Knowledge Gaps?

- *how, when, for whom, and under what conditions* do psychological factors play a role in resilience (recovery, growth, maintenance) over time?

Knowledge Gaps?

Is consideration of terminal decline important?



Gerstorf, D., & Ram, N. (2013). Inquiry into terminal decline: Five objectives for future study. *The Gerontologist*, 53(5), 727-737