Modeling Resilience in Late Life in WHI

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Resilience:

• "The capacity of an organism to resist and respond to a challenge" (LeBrasseur, 2017)

• "Physical resilience...ability to resist or recover from functional decline following a health stressor such as infection, surgery, fracture, bed rest or chemotherapy" (Whitson, 2016)

• “Opposite of vulnerability" (Franco, 2009)
Resilience Trajectories

TIME

Stressor

FUNCTION

Recover

Resist

Compensate
Generic Model of Resilience

Stressors/Exposures:
- Genotypes
- Disease states
- Pathologies
- Insults, injuries
- Procedures, treatments
- Social conditions
- Economic conditions

Outcomes:
- Cognitive function
- Physical function
- Social function
- Behavioral function
- Role function
- Absence of health event
- Absence of impairment

Mediators/Moderators:
- Social
- Economic
- Physical
- Biological, Medical
- Psychological
- Behavioral

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Examples of Stressors/Exposures Available in WHI

- APOE-4 genotype (Hayden, Resnick)
- Other genotypes
- Alzheimer’s Disease-Pattern Similarity score (Casanova)
- CVD/stroke/MI
- Fractures
- Depression
- Lower SES/education
- Cancer (chemo, radiation)
- Higher multi-morbidity
- Higher frailty (sWHI Frailty Index)
- Obesity
- Diabetes
- Trauma
Q & A