

AN INTEGRAL CONCEPT OF FRAILTY

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SEARCHING FOR AN CONCEPTUAL AND OPERATIONAL DEFINITION OF FRAILTY

There is no consensus

Small and broad definitions



SMALL CONCEPTUAL DEFINITION

For example

A biologic syndrome of decreased reserve and resistance to stressors, resulting from cumulative declines across multiple physiologic systems, causing vulnerability to adverse outcomes.
(Fried et al., 2001)



SMALL OPERATIONAL DEFINITION

Phenotype of frailty, five criteria:

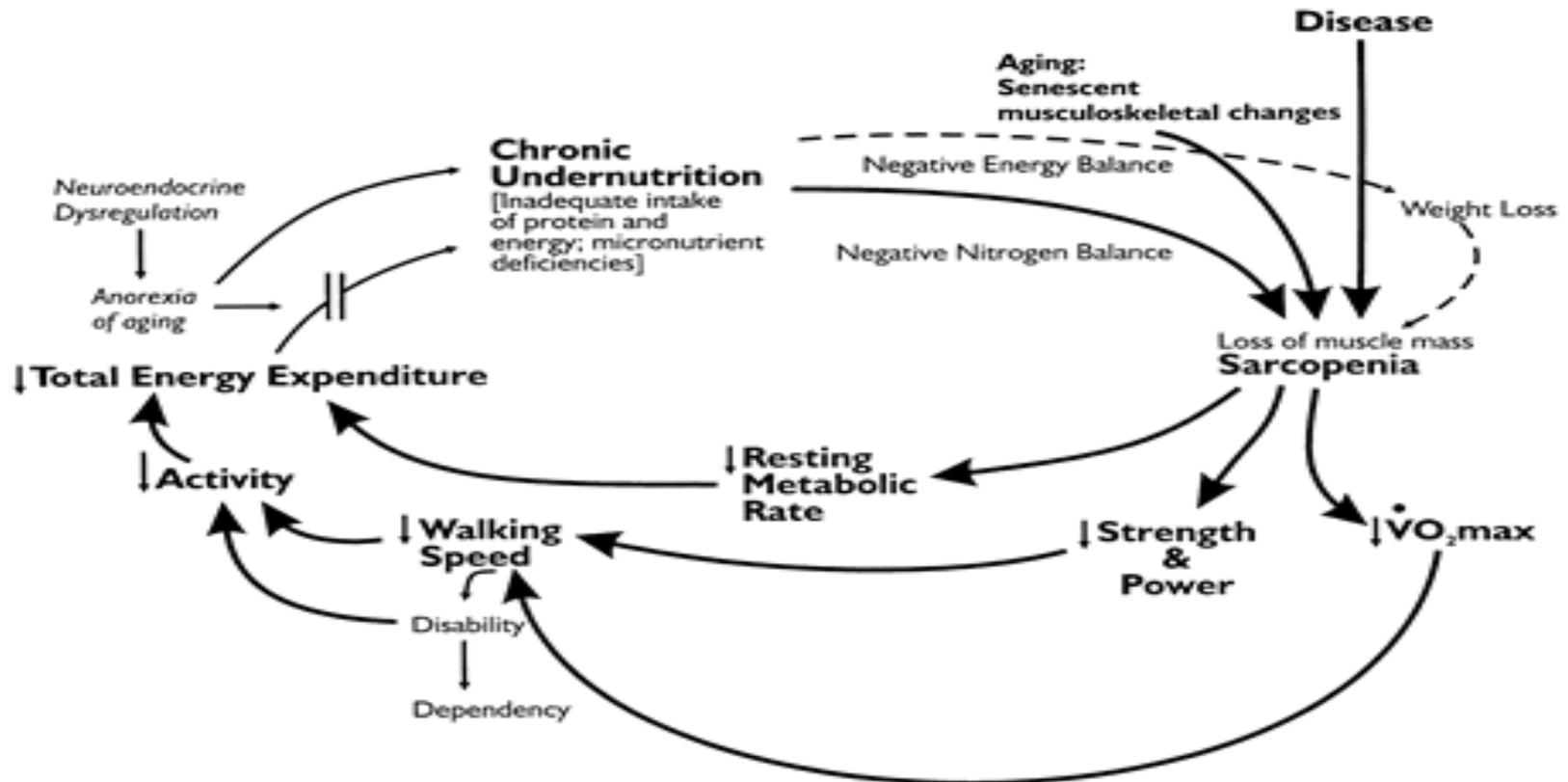
- Unintentional weight loss
- Weakness
- Poor endurance
- Slowness
- Low physical activity

Three frailty stages: not frail (score 0), pre-frail (score 1-2), frail (score 3-5)

(Fried et al., 2001)



CYCLE OF FRAILITY (FRIED & WALSTON, 1998)



TOWARDS AN INTEGRAL CONCEPT OF FRAILITY

Frailty provides a conceptual basis for moving away from organ- and disease based approaches towards a health-based, integrative approach (Bergman et al., 2007)

Focus exclusively on physical frailty; risk of fragmentation of care (Markle-Reid & Brown, 2003) and reduction in quality of care

Attention for the individual as a whole



EXPERT MEETINGS

Two meetings (America and The Netherlands)

20 experts: from America, Canada and The Netherlands

Experts were asked to score and discuss conceptual and operational definitions.



BROAD CONCEPTUAL DEFINITION

For example

Frailty is a dynamic state affecting an individual who experiences losses in one or more domains of human functioning (physical, psychological, social), which is caused by the influence of a range of variables and which increases the risk of adverse outcomes (Gobbens et al., 2010)



INTEGRAL OPERATIONAL DEFINITION

Physical frailty: nutrition (weight loss), mobility (slowness), physical activity, strength, endurance, balance, sensory functions

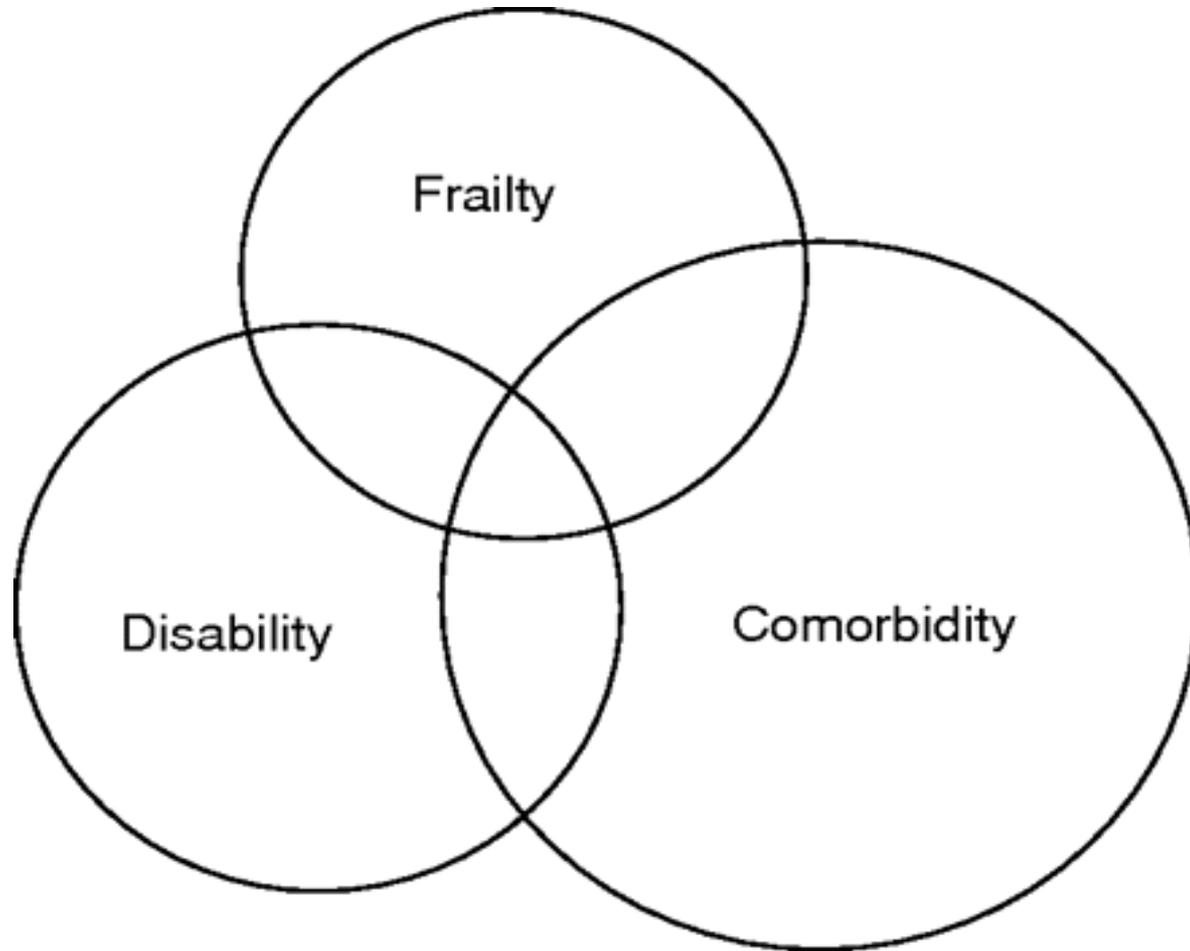
Psychological frailty: cognition, mood, coping

Social frailty: social relations, social support

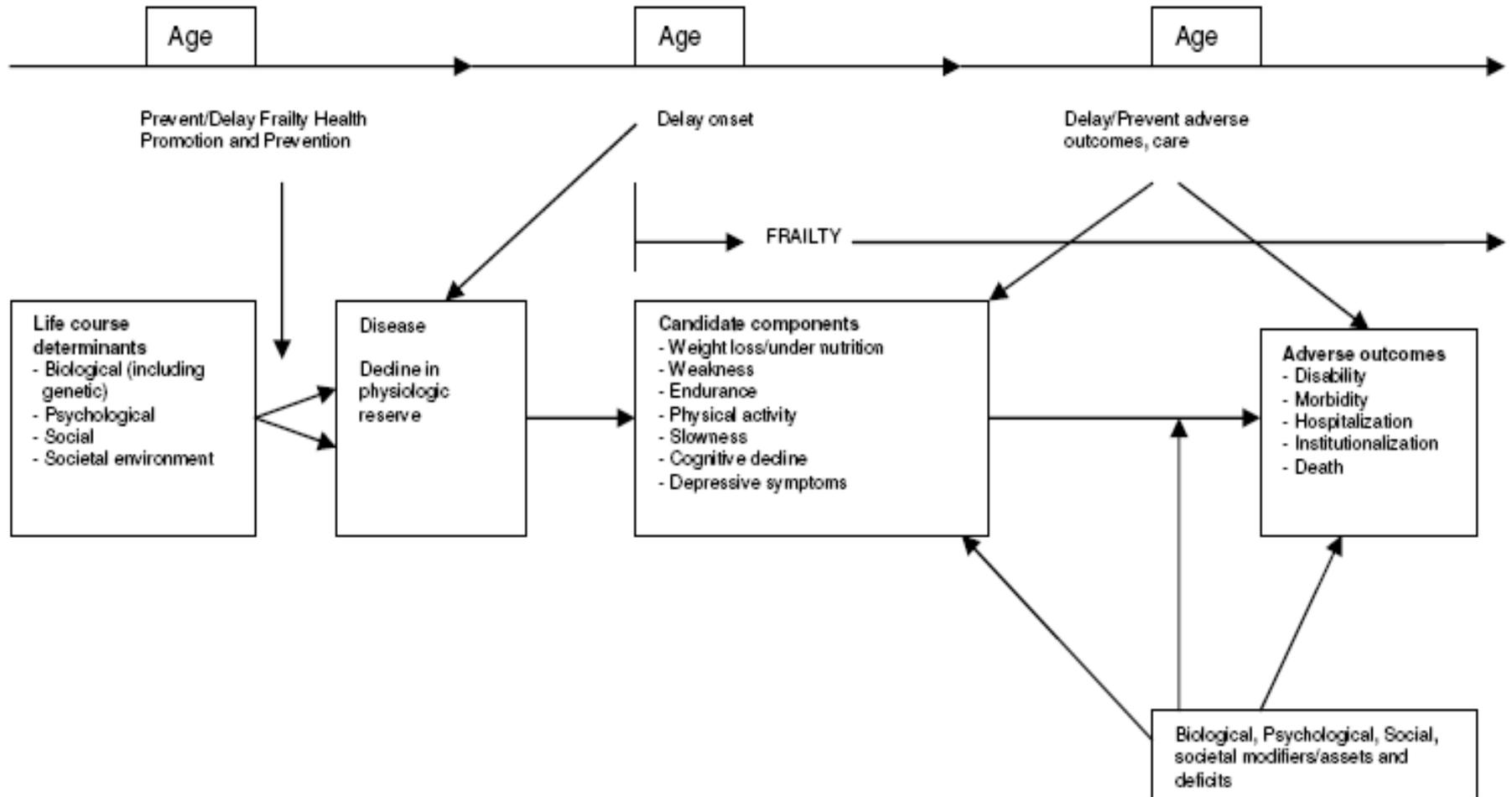


FRAILITY, DISABILITY, COMORBIDITY

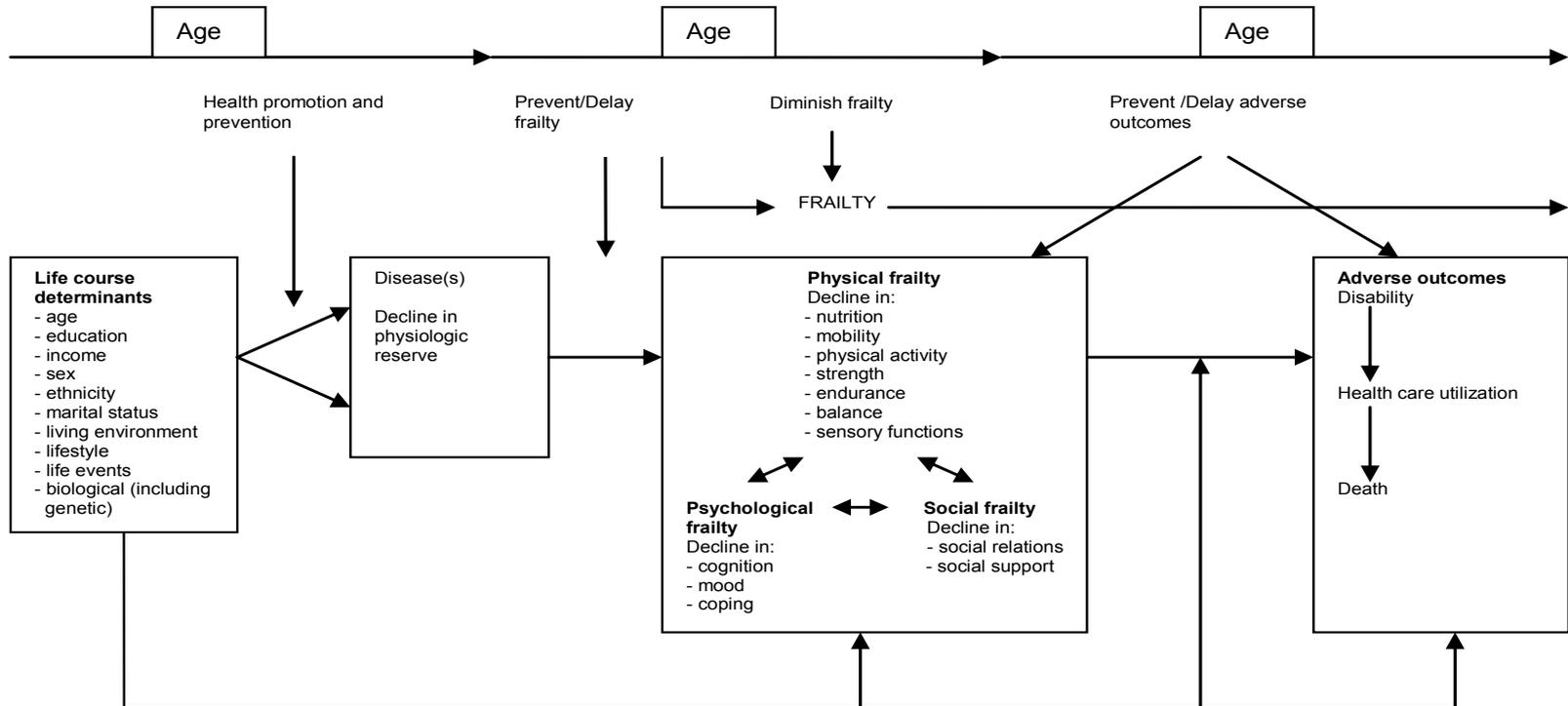
(FRIED ET AL., 2004)



A WORKING FRAMEWORK IN DEVELOPMENT (BERGMAN ET AL. 2004)



AN INTEGRAL CONCEPTUAL MODEL OF FRAILITY (GOBBENS ET AL. 2010)



DETERMINANTS OF FRAILITY

	Physical	Psychological	Social
Age	x		
Sex			x
Marital status			
Education			
Income			x
Unhealthy lifestyle	x	x	x
Life-events		x	
Multimorbidity	x	x	

Gobbens et al., 2010



TILBURG FRAILTY INDICATOR (TFI)

A user-friendly instrument, based on the integral conceptual model of frailty

Aim: identification of frailty

Two parts:

Determinants of frailty, 10 questions e.g.: age, income, lifestyle

Components of frailty, 15 questions e.g.: balance, cognition, social relations

Differs from other measurement instruments

Includes only self-reported information

Measures three domains of human functioning (physical, psychological, social)

Does not refer to disability and multimorbidity



TILBURG FRAILTY INDICATOR (PSYCHOLOGICAL AND SOCIAL SUBSCALE)

Psychological components

- | | | | |
|---|-------|-------------|------|
| 19. Do you have problems with your memory? | 0 yes | 0 sometimes | 0 no |
| 20. Have you felt down during the last month? | 0 yes | 0 sometimes | 0 no |
| 21. Have you felt nervous or anxious during the last month? | 0 yes | 0 sometimes | 0 no |
| 22. Are you able to cope with problems well? | 0 yes | | 0 no |

Social components

- | | | | |
|--|-------|-------------|------|
| 23. Do you live alone? | 0 yes | | 0 no |
| 24. Do you sometimes miss having people around you? | 0 yes | 0 sometimes | 0 no |
| 25. Do you receive enough support from other people? | 0 yes | | 0 no |



TILBURG FRAILTY INDICATOR (TFI)

Scoring, range 0-15

Frail, score ≥ 5

A systematic review by Sutton et al. (2016) concluded:

‘The TFI has the most robust evidence of reliability and validity and has been the most extensively examined in terms of psychometric properties’.



PREDICTION OF HEALTHCARE UTILIZATION

A multidimensional assessment predicted one and/or two years later:

- contacts with healthcare professionals
- hospitalization
- personal care
- nursing
- informal care
- facilities in residential care

Gobbens et al., 2012



PREDICTION OF DISABILITY

Physical frailty: Tilburg Frailty Indicator (TFI), 8 items

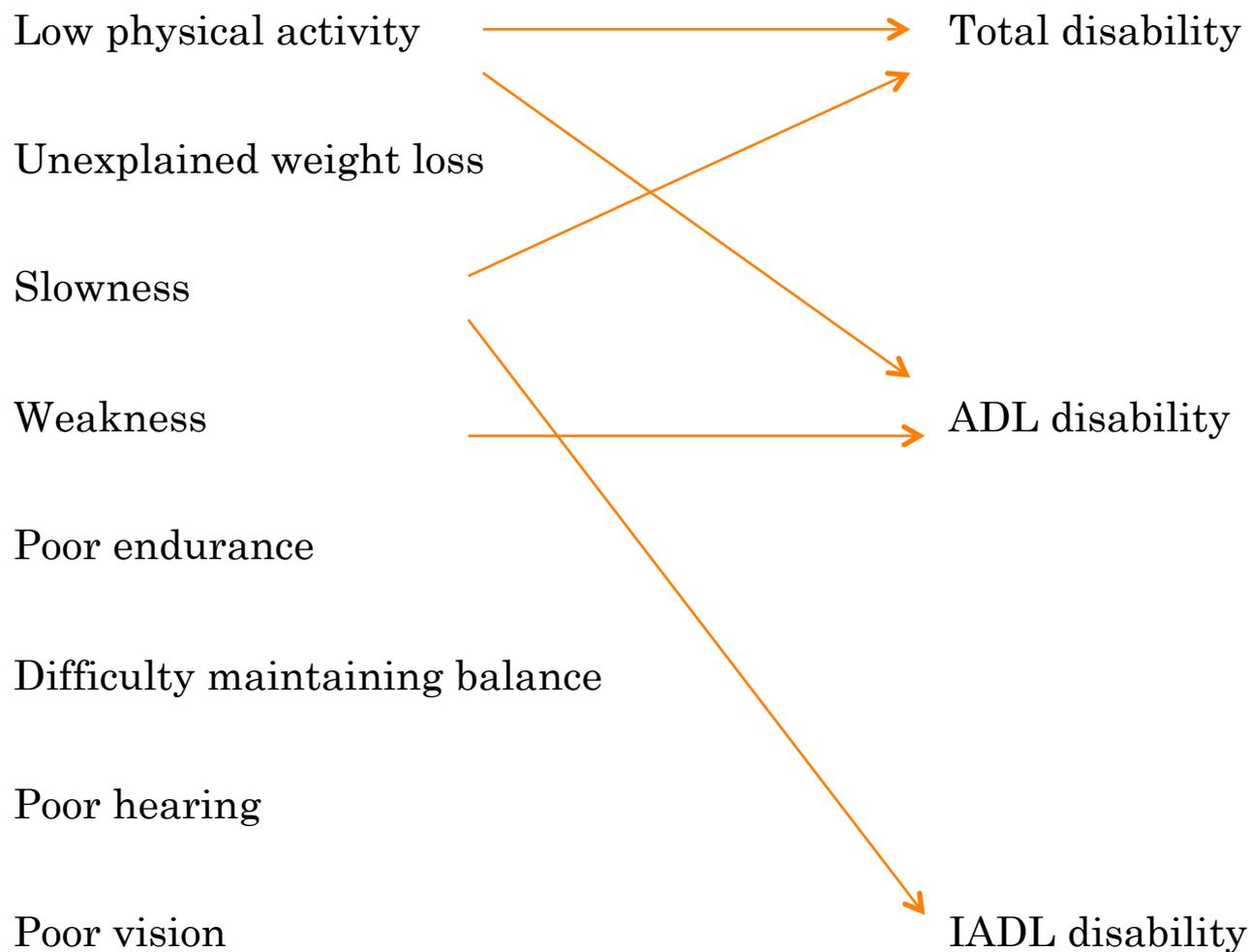
Disability: Groningen Activity Restriction Scale (GARS), 18 items (11 ADL) and 7 IADL (Kempen et al., 1996)

Results:

Bivariate associations: all eight items were associated with total, ADL and IADL disability



RESULTS SEQUENTIAL LINEAR REGRESSION ANALYSES



PHYSICAL ACTIVITY



PREDICTING QUALITY OF LIFE OF OLDER PEOPLE

Physical, psychological and social frailty: TFI

Quality of life domains (physical health, psychological, social relations, environmental):
WHOQOL-BREF (WHOQOL Group, 1998)

Bivariate associations: all four psychological and three social components were associated with all four quality of life domains.



CONCLUSIONS

The prediction of all four quality of life domains by physical frailty was improved after adding psychological and social frailty.

Feeling down significantly improved prediction of all quality of life domains, after controlling for the effect of all other variables.

Lack of social relations and lack of social support significantly improved the prediction of three quality of life domains, after controlling for the effect of all other variables.



TAKE HOME MESSAGE

Adverse outcomes of frailty are differently and uniquely affected by the three domains of frailty (physical, psychological, social) and their components.

Findings of several studies emphasize the importance of an integral concept of frailty.



FINALLY

Thanks for your attention!

Questions?

My e-mailaddress is:

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SCP, 2011



‘Ik voel mij helemaal niet kwetsbaar, ik voel mij in optima forma. Ik kan alles nog en doe alles nog zelf: lopen, wassen, mijn bed opmaken. De zusters zeggen wel eens: ‘We doen zo weinig voor je!’ Ik sta elke dag om half zes op, drink twee borreltjes per dag en op zondag drink ik er drie. Ik kan zo wel 1000 worden.’