

Mental Health as a Risk Factor

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Mental health as a risk factor

- Depression and anxiety as clinical conditions
- Depressed or anxious mood in the population in general

Mental health as a risk factor

Risk factor for:

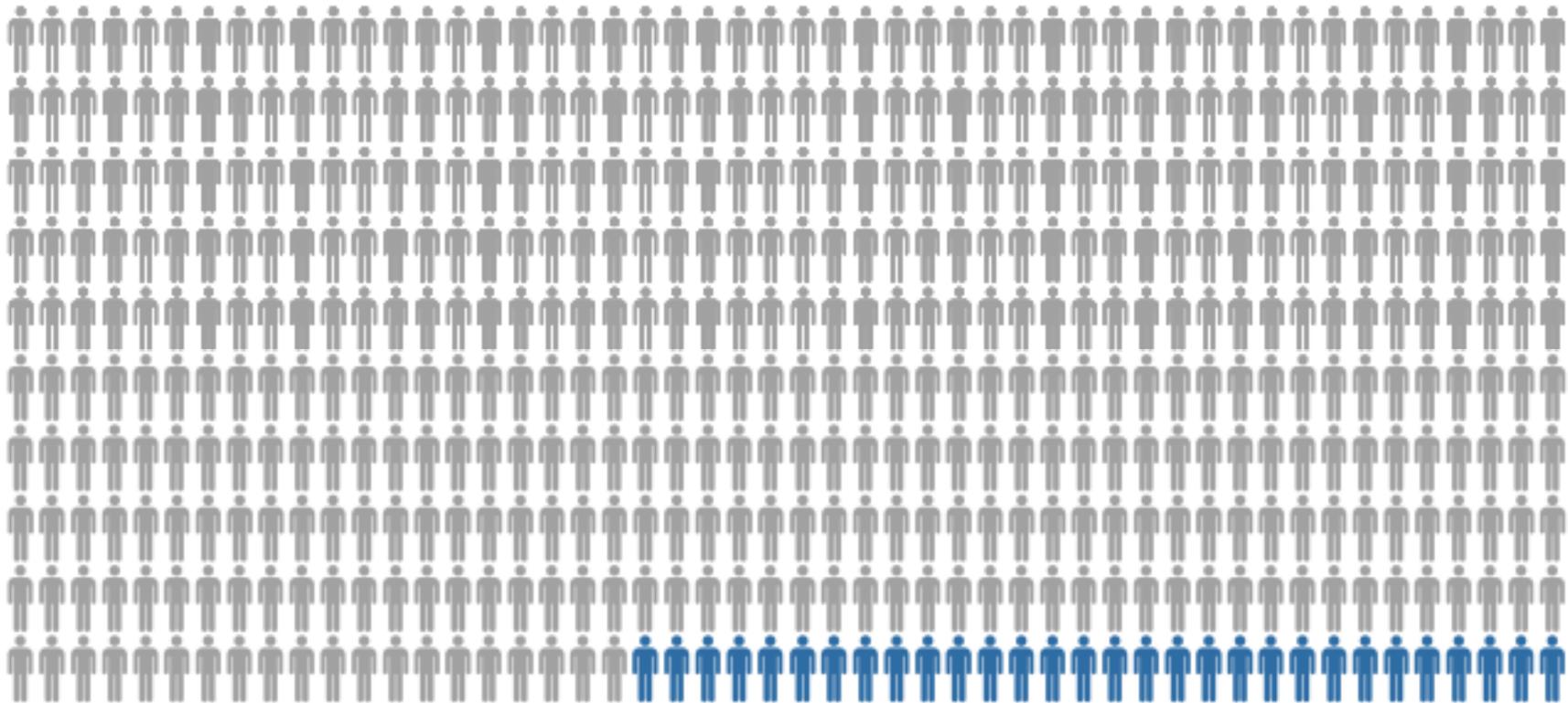
- Premature mortality
- Long-term physical conditions
- Mortality among people with serious physical illness
- Disability and sickness absence

Depression and mortality

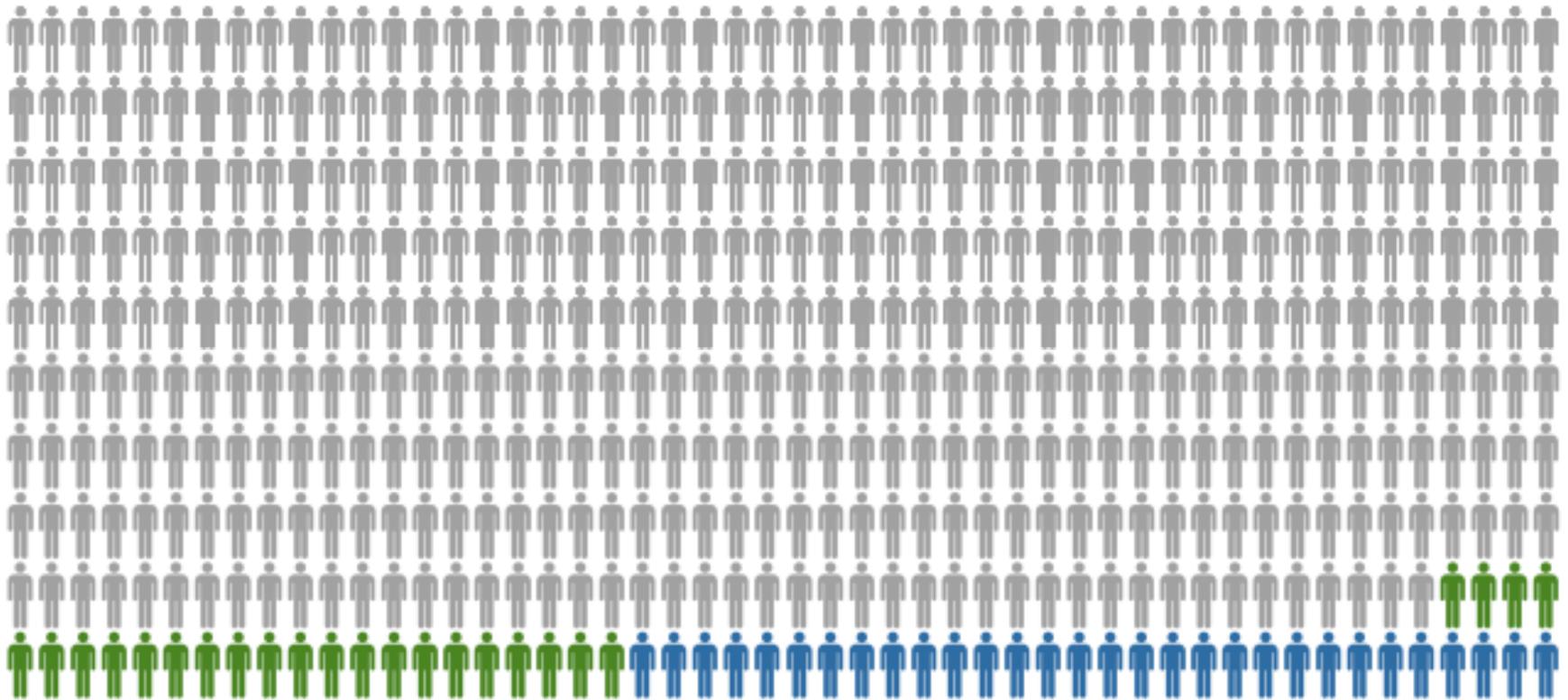
- 25 longitudinal community studies, 106,628 participants
- Duration of follow-up: 2 – 16 years
- Mostly questionnaire measures of depression
- Relative risk 1.81 (1.58 to 2.07)

Guijpers & Smit, 2002

Depression and mortality



Depression and mortality

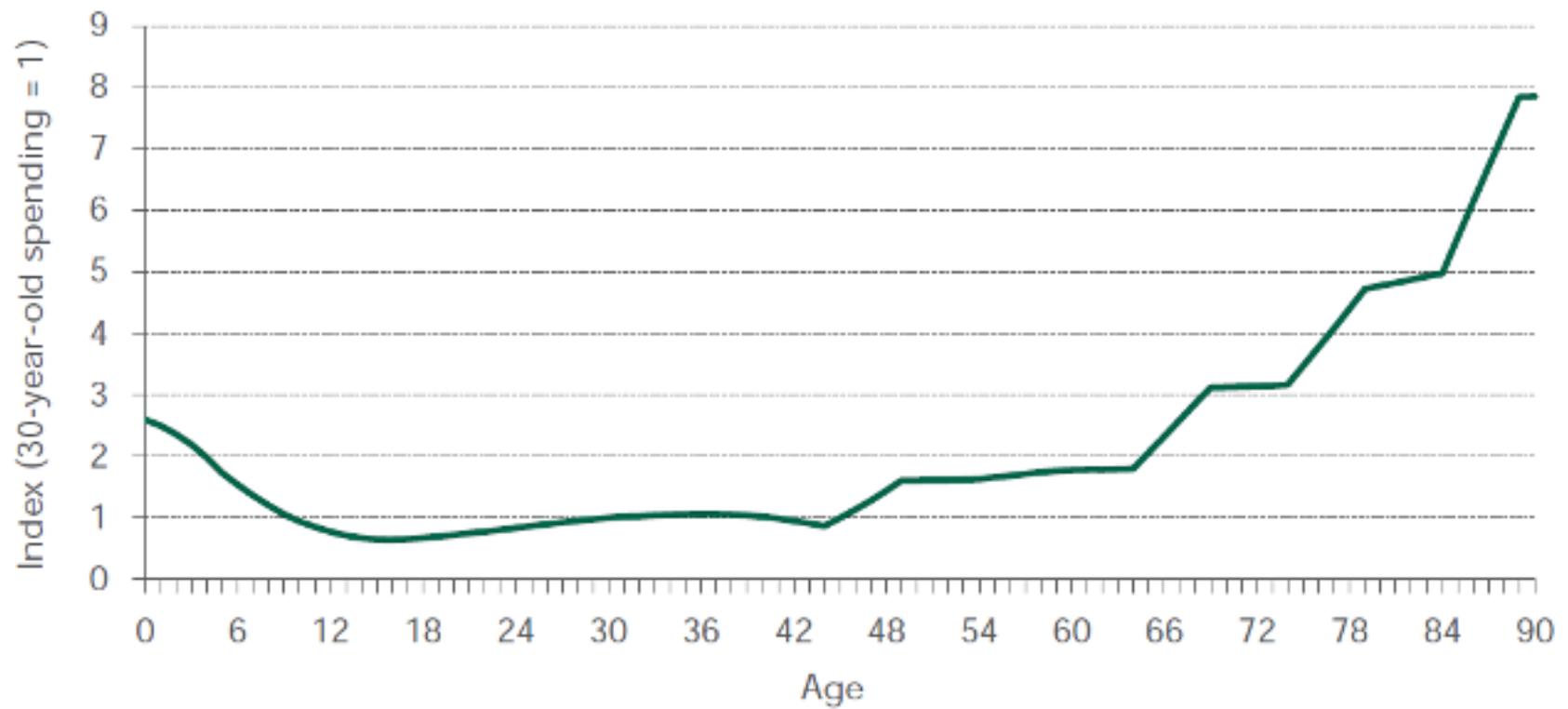


Anxiety and mortality

- Meta-analysis of 36 articles, 127,000 participants
- Increased mortality risk for clinical anxiety compared with controls: HR 1.09 (1.01-1.16)
- No increased mortality in community samples

Miloyan et al, 2016

Figure 5.8. Age profile of public health spending in the UK (relative to 30-year-olds)



Institute for Fiscal Studies, 2017

Mental health as a risk factor

Risk factor for:

- Premature mortality
- **Long-term physical conditions**
- Mortality among people with serious physical illness
- Disability and sickness absence

Mental and physical health

- Levels of depression and distress are raised in people with chronic diseases

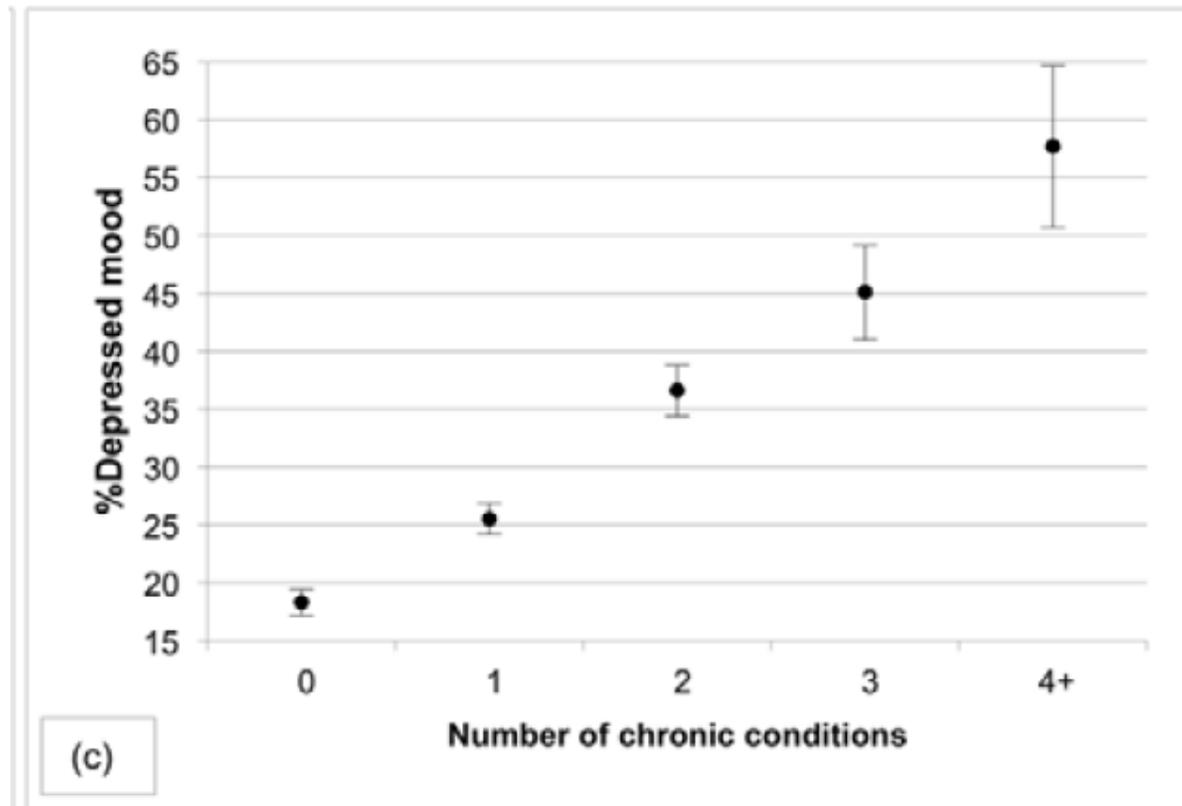
Depression in chronic illness

| | N studies | Health condition | Measure | Prevalence |
|---------------|------------------|-------------------------|----------------|-------------------|
| Mitchell 2011 | 70 | Cancer | Int + quest | 13-17% |
| Matte 2016 | 8 | COPD | Int + quest | 27% |
| Ali 2006 | 10 | Type 2 diabetes | Int + quest | 18% |
| Ciesla 2001 | 10 | HIV+ | Interview | 9% |
| Thombs 2006 | 14 | Coronary heart disease | Interview | 20% |
| Bair 2003 | 42 | Chronic pain | Interview | 52% |
| Stubbs 2016 | 49 | Osteoarthritis | Int + quest | 20% |
| Ayerbe 2013 | 43 | Stroke | Int + quest | 29% |
| Wariach 2004 | 23 | General population | Interview | 4% |

Mental and physical health

- Levels of depression and distress are raised in people with chronic diseases
- Multimorbidity associated with higher levels of depression and distress

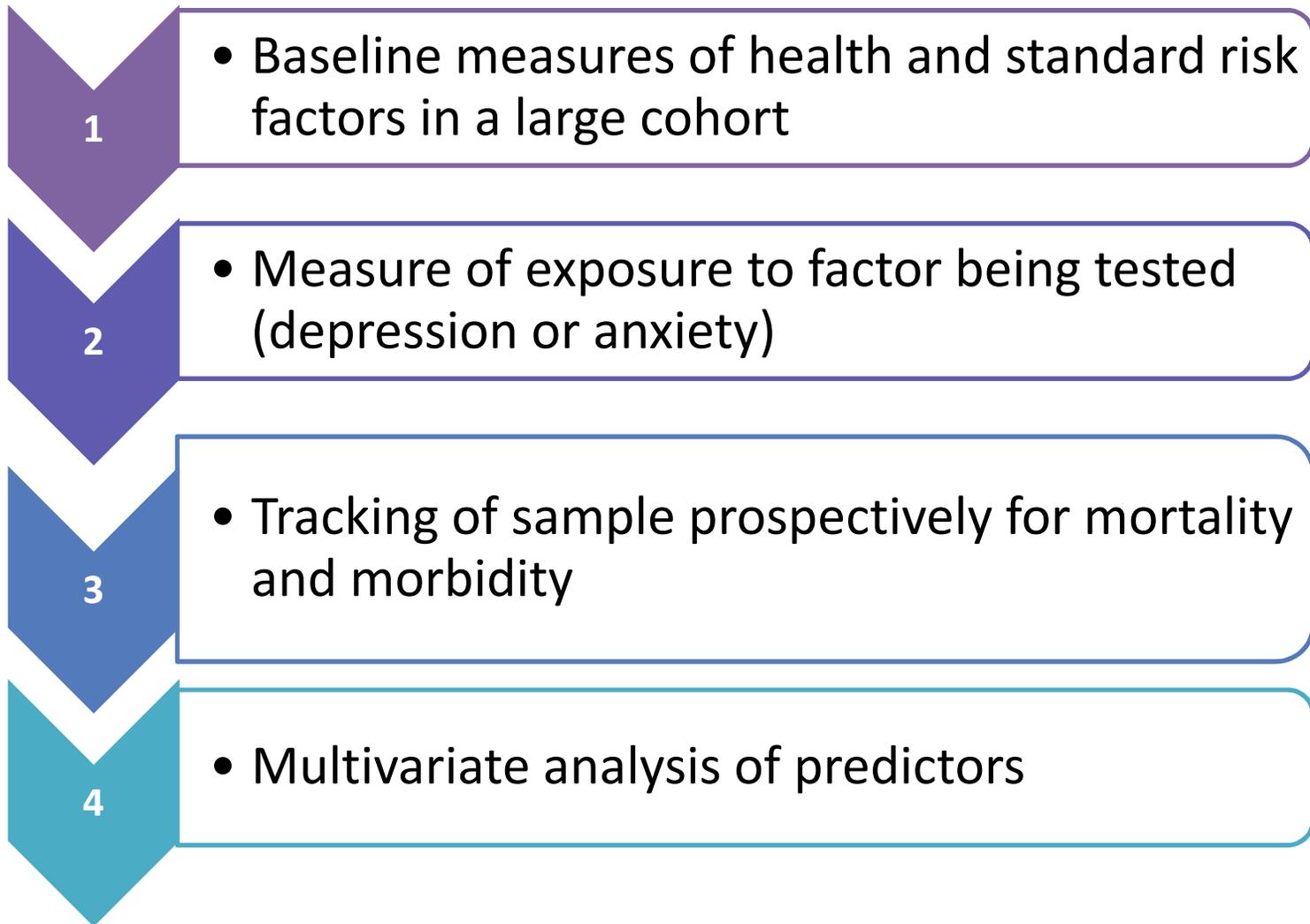
Depressive symptoms and physical illness



N = 11,523
adjusted for age, gender and wealth
Wikman et al, 2011
PLoS One



Observational Epidemiology



Mental and physical health

- Levels of depression and distress are raised in people with chronic diseases
- Multimorbidity associated with higher levels of depression and distress
- Depression and distress can be both a predictor and a consequence of chronic disease

Depression and incident coronary heart disease

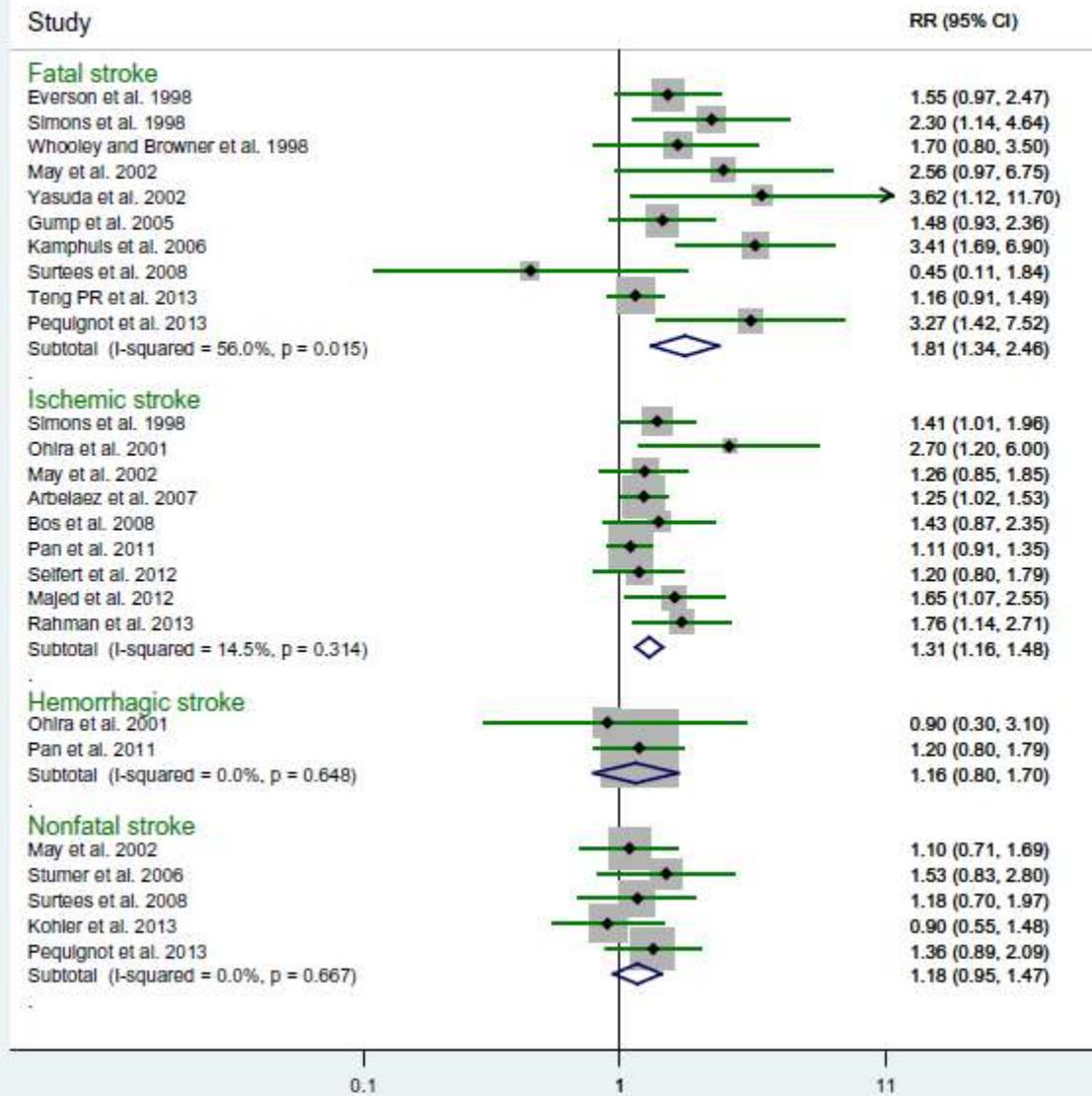
Table 1 | **Depression as a risk factor for incident CHD**

| Meta-analysis | Number of studies | Number of participants | Odds ratio or relative risk (95% CI) of CHD |
|---|-------------------|------------------------|--|
| Rugulies (2002) ³¹ | 11 | 36,549 | 1.64 (1.29–2.08) |
| Cuijpers & Smit (2002) ²⁹ | 25 | 106,628 | 1.81 (1.58–2.07) |
| Wulsin & Singal (2003) ³³ | 10 | NR | 1.64 (1.41–1.90) |
| Nicholson <i>et al.</i> (2006) ³⁰ | 21 | 124,509 | 1.81 (1.53–2.15) |
| | 11* | NR | <ul style="list-style-type: none"> • 2.08 (1.69–2.55) unadjusted • 1.90 (1.48–2.42) adjusted |
| Van der Kooy <i>et al.</i> (2007) ³² | 16 [‡] | 659,991 | 1.57 (1.36–1.81) |
| Gan <i>et al.</i> (2014) ³⁴ | 30 | 893,850 | 1.30 (1.22–1.40) |

CHD, coronary heart disease. *Studies that included unadjusted and adjusted analyses.

[‡]Includes only those studies of participants without CHD at baseline.

Depression and incident stroke



Mental and physical health

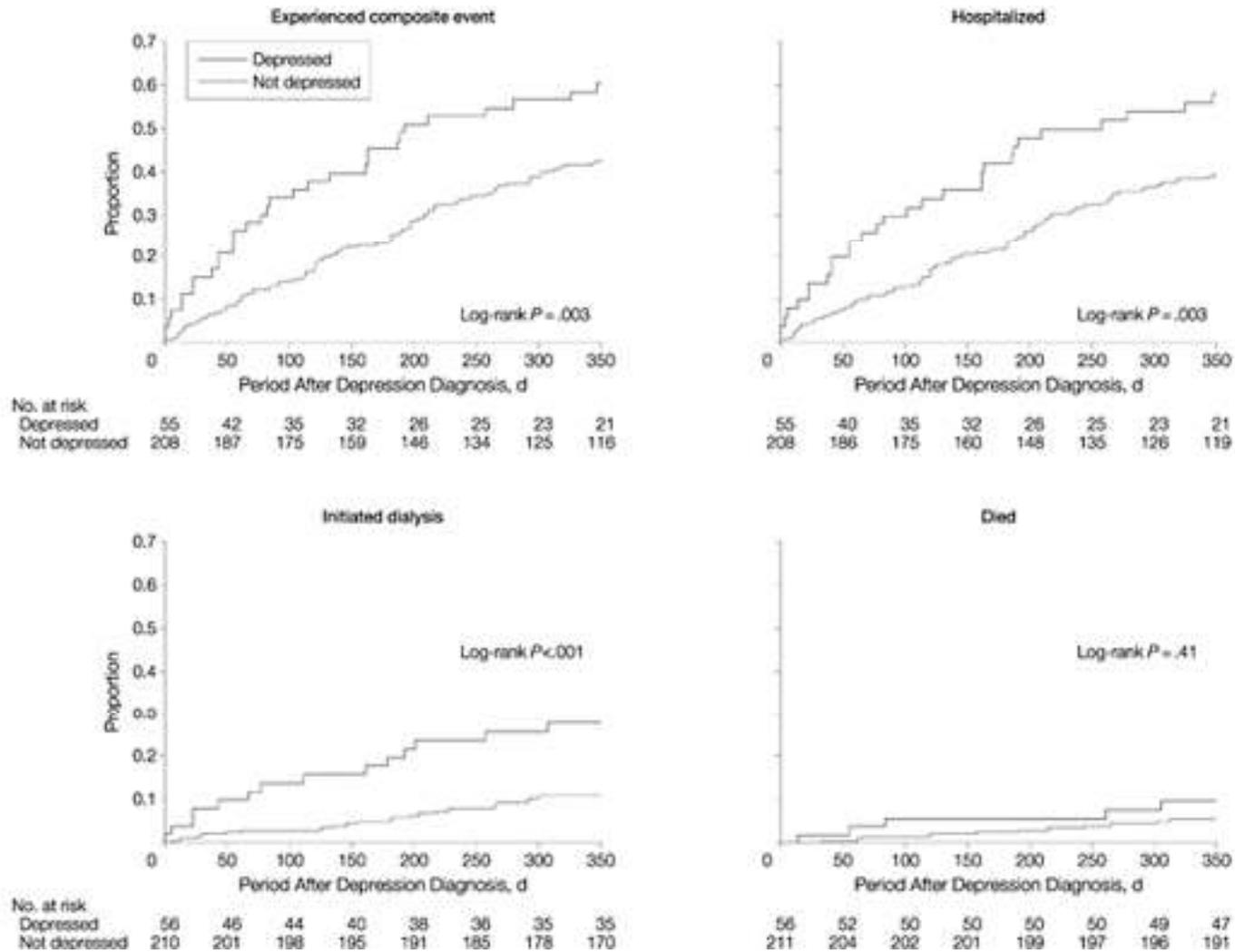
- Levels of depression and distress are raised in people with chronic diseases
- Multimorbidity associated with higher levels of depression and distress
- Depression and distress can be both a predictor and a consequence of chronic disease
- Depression and distress predict adverse outcomes in chronic diseases

Mental and physical health at older ages

Impact on:

- Psychological wellbeing
- Quality of life
- Health service utilisation
 - Emergency care
 - Outpatient visits
 - Medication costs

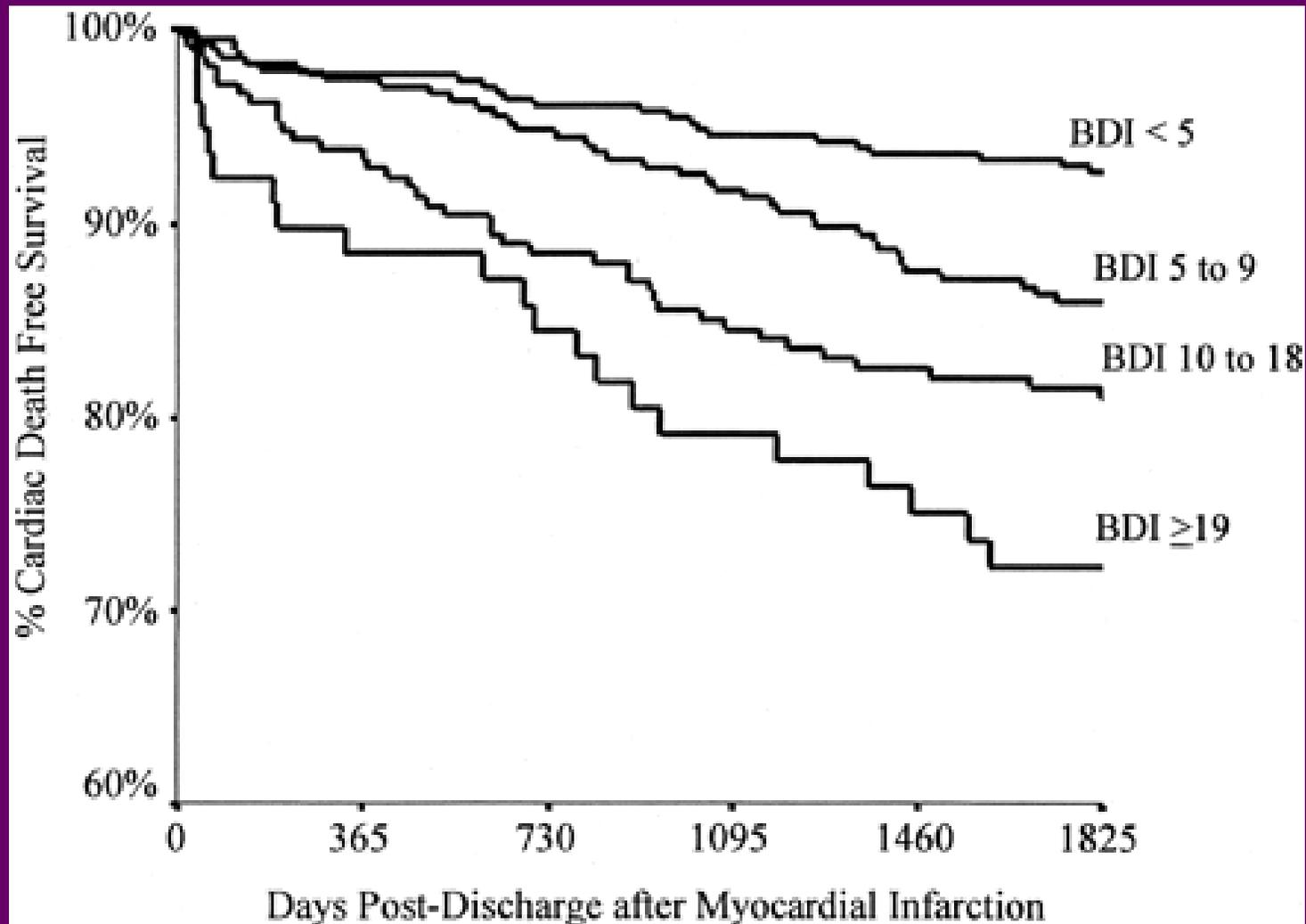
Depression and chronic kidney disease



Depression and mortality in chronic illness

| | N studies | Health condition | Hazard ratio / relative risk (95% CI) |
|------------------|------------------|-------------------------|--|
| Pinquart, 2010 | 76 | Cancer | 1.22 (1.14 – 1.30) |
| Atlantis, 2013 | 7 | COPD | 1.83 (1.00 – 3.36) |
| van Dooren, 2013 | 16 | Type 2 diabetes | 1.46 (1.29 – 1.66) |
| Sokoreli, 2016 | 26 | Heart failure | 1.40 (1.22 – 1.60) |
| Meijer, 2011 | 29 | Coronary heart disease | 2.25 (1.73 – 2.93) |
| Pan, 2011 | 8 | Stroke | 1.55 (1.25 – 1.93) |

Depression and prognosis after MI



Lespérance et al, Circulation, 2002

**Depressed
mood**



**Chronic
pain**

Prevalence of chronic pain

US Centers for Disease Control estimate:

- 20.4% of US adults (50 million) have chronic pain (pain on most days or every day for the past 6 months)
- 8% high impact chronic pain (limiting life and work on most days for the past 6 months)
 - More common among women, older people (45+), previously employed, people living in poverty, rural.

Depressed mood and risk of chronic low back pain

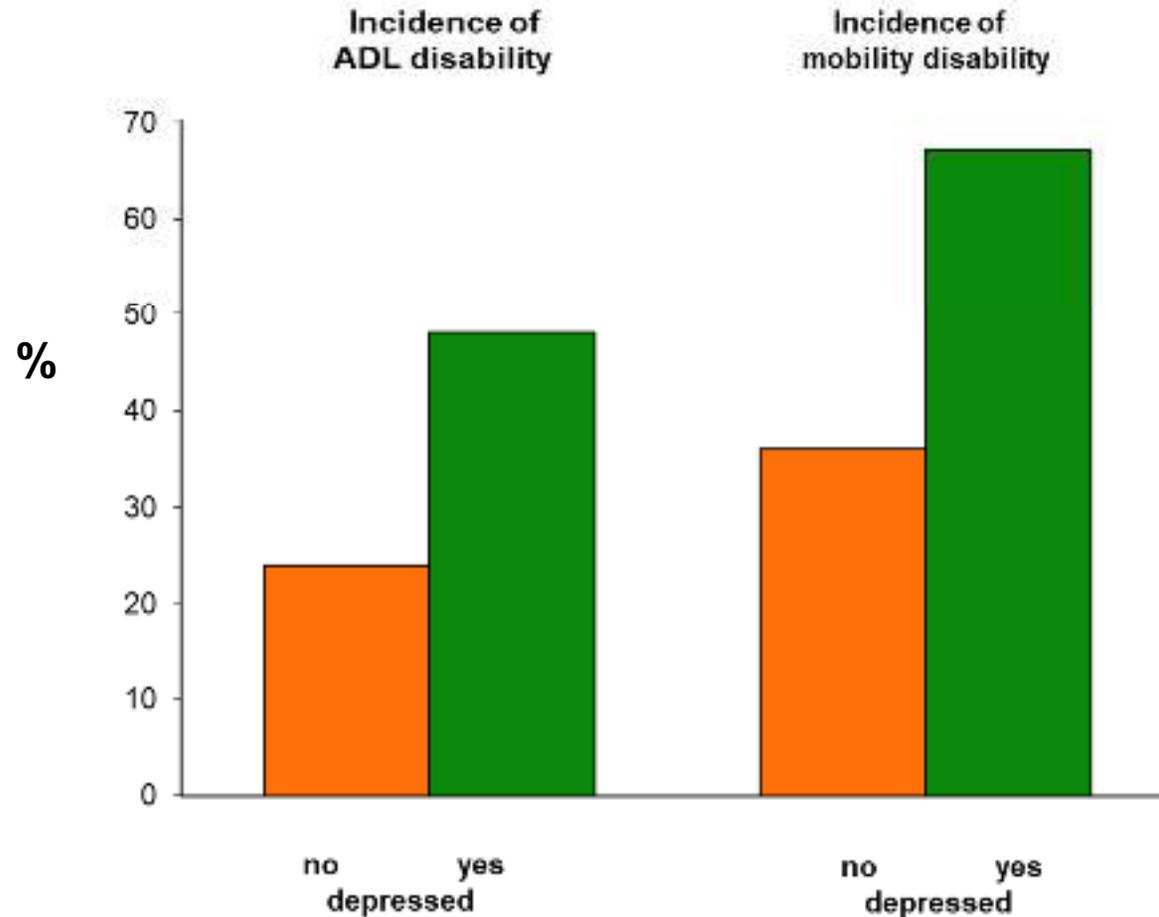
- 13 studies of people with acute non-specific low back pain (less than 12 weeks)
- Depressed mood at baseline predicts:
 - Poorer work-related outcomes (work status, time to return to work, full return)
 - Higher rates of compensation claims
 - Higher rates of sickness absence
 - Persistent pain
- Nothing on prognostic factors

Mental health as a risk factor

Risk factor for:

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- Long-term physical conditions
- Mortality among people with serious physical illness
- **Disability and sickness absence**

Depression and disability incidence



5 year incidence of disability among initially non-disabled people aged 65+, independently of age, gender, education, income, and medical conditions.

Fennink et al, 1999

Does depression increase risk of disability pension?

- Review of 15 studies longitudinal studies
- Research from Germany, Denmark, Norway, Sweden, Finland, USA and UK
- Sample sizes 1,230 – 5.5 million
- Follow-up periods of 2 – 16 years
- Adjustment for age, gender, education
- Risk ratio (depressed vs not depressed)
 - Men 1.82 (1.45 – 2.28)
 - Women 1.62 (1.31 – 2.02)

Return to work after depression-related absence

- Review of studies of return to work after an episode of depression-related work disability
- 36,000 people across 5 countries (NL, Finland, Canada, Denmark, Japan)
- Predictors of return to work

Return to work after depression-related absence

- Predictors of failure to return to work
 - Older age
 - Physical illness (comorbidity)
 - Other mental health problem
 - Severity of depression
 - Low conscientiousness
- No association with
 - Gender
 - Occupational status
 - Anxiety
 - Lifestyle (smoking, alcohol, physical activity)

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