



The Science and Psychology of Debt and Mental Health

Dr. Thomas Richardson

Principal Clinical Psychologist, Solent NHS Trust

**Visiting Academic, School of Psychology,
University of Southampton**

Aims

- Introduce to literature on health and socio-economic status
- Discuss recent research on debt and mental health
- Discuss my research in the area
- Thoughts on why there might be a relationship
- Directions for future research

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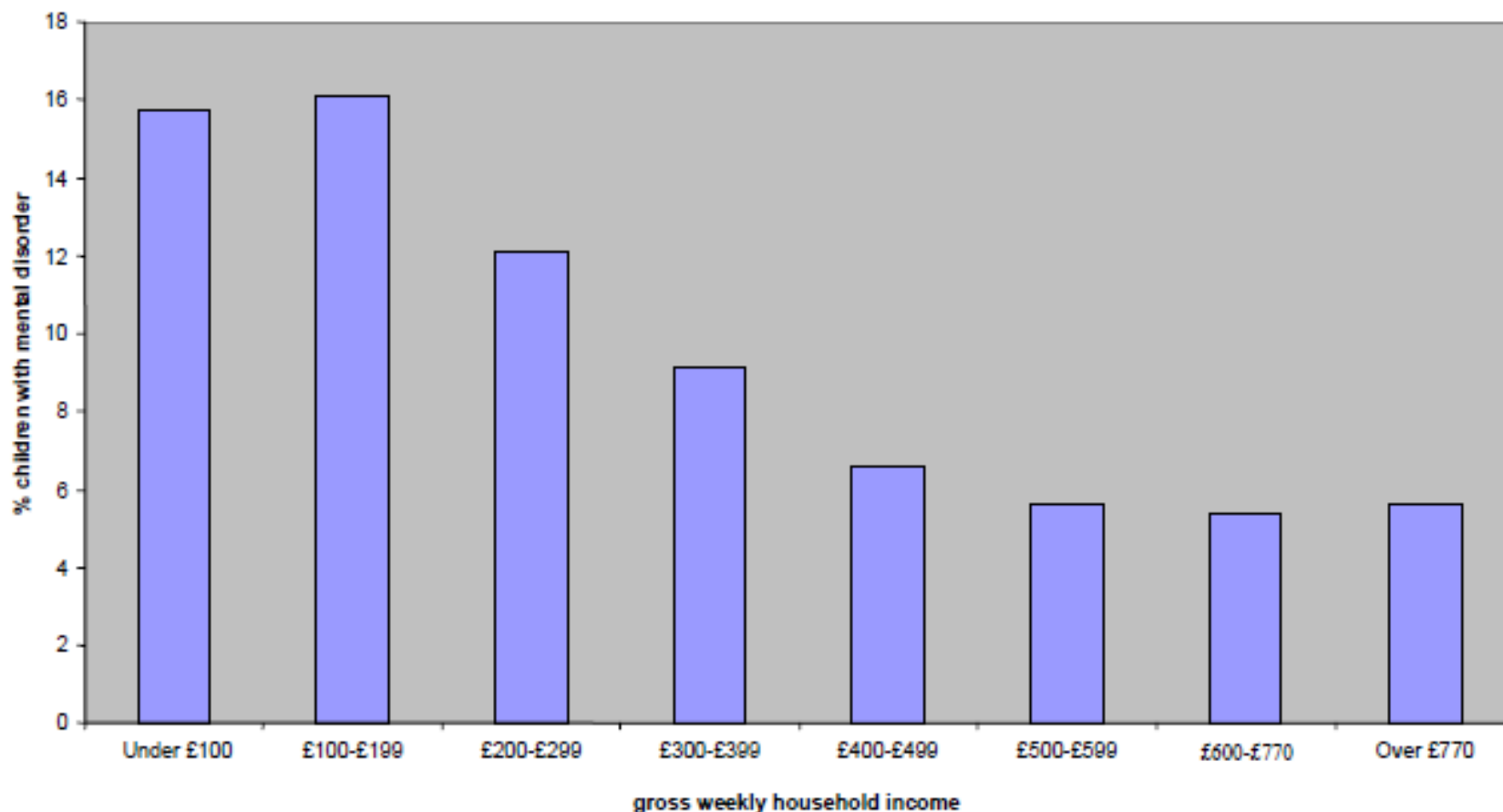
People

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Socioeconomic status

- Those of low socio-economic status (SES) appear to have an increased risk of
 - Poor mental health (Amone-P'Olak et al., 2009)
 - Depression (Lorant et al., 2003)
 - Poor physical health and even death (Bosma, Schrijvers, & Mackenbach, 1999; Mackenbach et al., 2008)
- Men in manual works twice as likely to die prematurely as men from professional background (Office for National Statistics 2009).
- In the UK, areas of higher socio-economic deprivation have higher levels of deliberate self-harm (Haw et al., 2001) and psychiatric hospital admissions (Koppel & McGuffin, 1999).

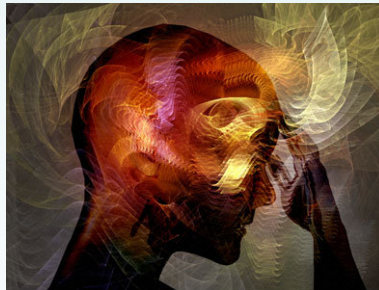
% Children age 5-15 with Mental disorder and Income



(Meltzer et al., 2000).

Socioeconomic Status: Psychosis

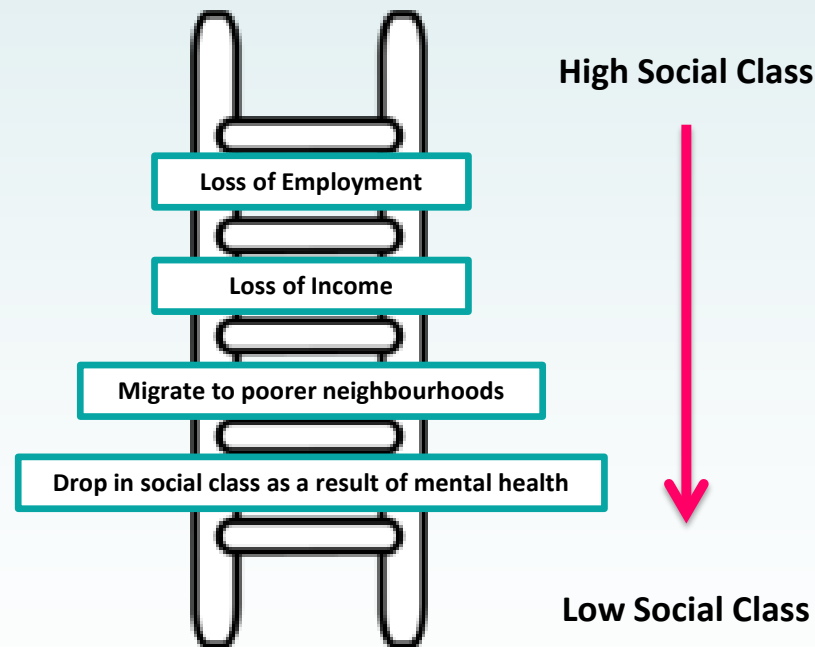
- Individuals with schizophrenia are likely to reside in areas with higher social deprivation and occupy lower socio-economic positions.
- SES is a risk factor for psychosis (after controlling for possible confounding variables) (Aleman, Kahn & Selten, 2003; Werner, Malaspina, & Rabinowitz, 2007).
- Those of lowest SES have eight times greater risk for schizophrenia (Harrison et al., 2001)



- **Selection-causation** issue – debate whether stress of being of a lower SES leads to increased risk, or if psychosis leads to less effective economic performance (Holzer et al., 1986)

Social Drift

- **Social Drift Theory** – is the argument that illness causes one to have a downward shift in social class (Hurst, 2007).



Social Causation Theory

- **Social Causation Theory** holds that social class position is causally related to the probability of developing a mental disorder.
- E.g. Unemployed= Extra Stress = Worse Mental Health

Socioeconomic Status

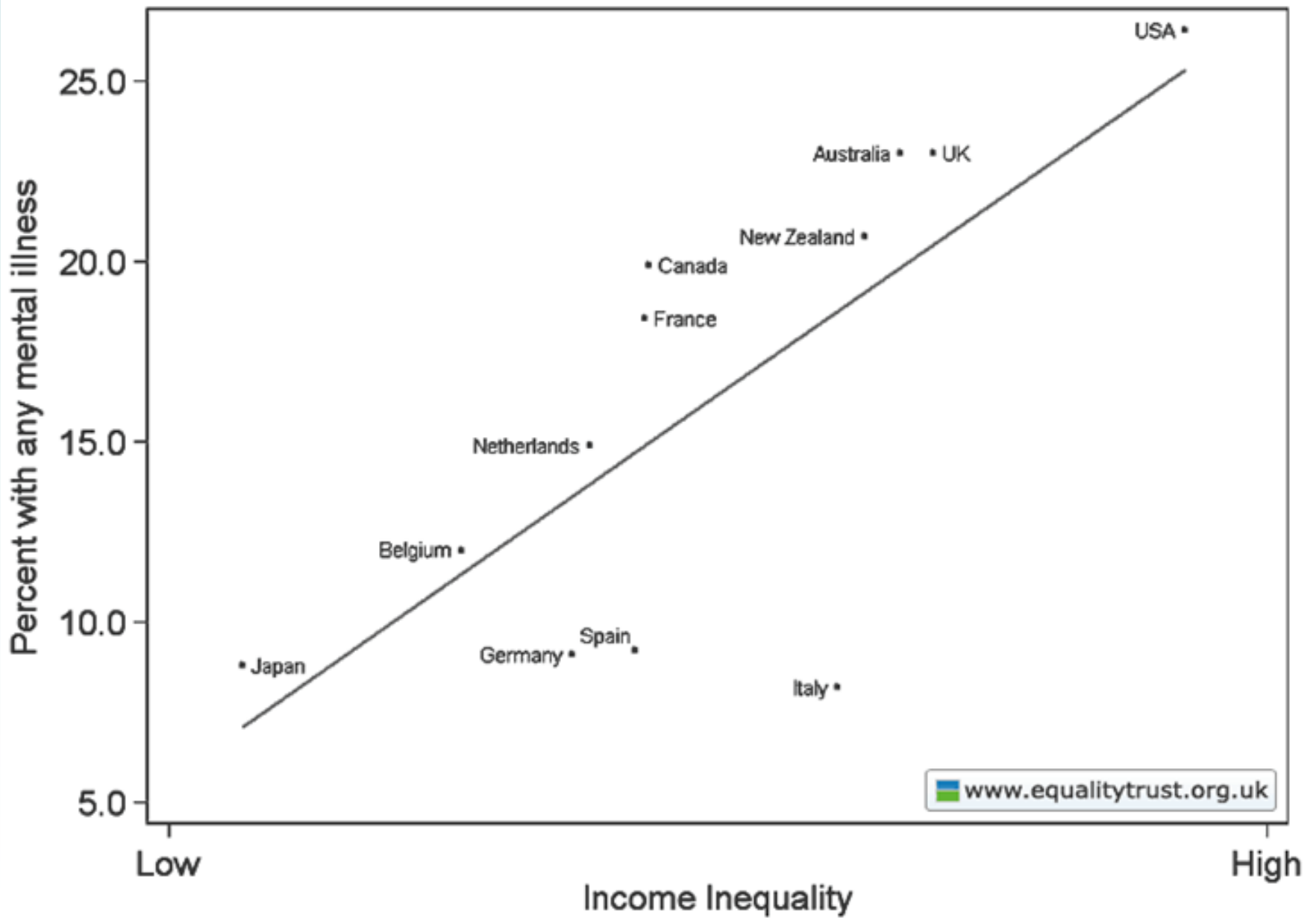


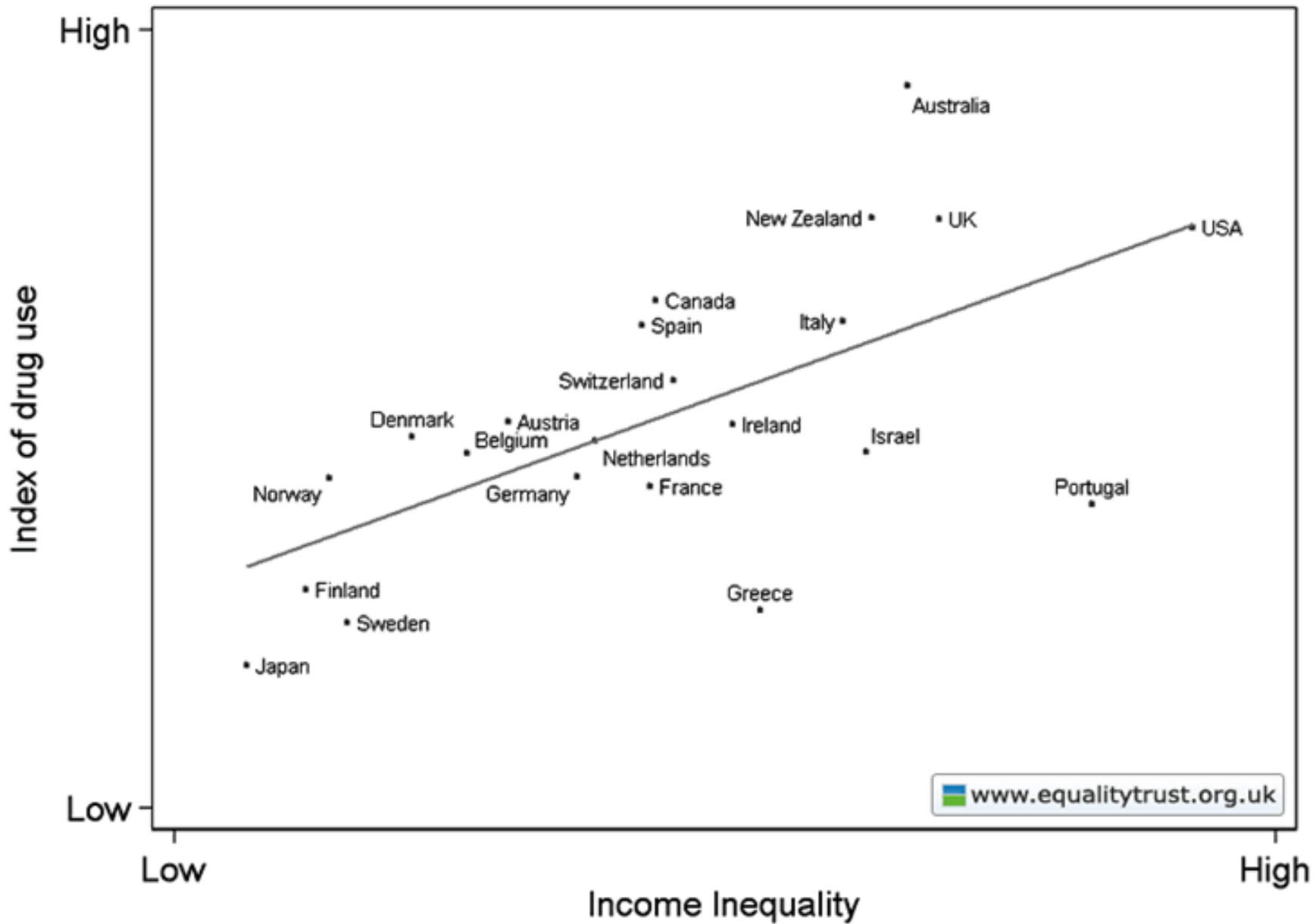
- A study of ten European countries demonstrated that socio-economic deprivation increases the risk of suicide (Lorant et al., 2005).
- A study of 65 countries by the World Health Organization found that rates of depression varied by levels of income equality (Cifuentes et al., 2008).
- As a result there is *“widespread albeit often implicit recognition of the importance of socio-economic factors for diverse health outcomes”* (Braveman et al., 2005, p.2879).
- Many studies either looking at the effects of SES on health directly, or controlling for it as a potential confounding variable (Braveman et al., 2005).



Socioeconomic Inequality

- A study of 65 countries by the World Health Organization found that rates of depression varied by levels of income equality (Cifuentes et al., 2008).





Socioeconomic status

Why is low SES linked to poor health?

- **Unemployment** linked to mental illness and suicide (Almasi et al., 2009; Amoran, Lawoyin, & Oni, 2005; Andersen et al., 2009; Corcoran & Arensman, 2011; Viinamäki et al., 2000; Qin, Agerbo, & Mortensen, 2003).
- **Income levels** related to psychological distress (Dzator, 2013), depression (Andersen et al., 2009; Wang, Schmitz, & Dewa, 2010) and suicide (Qin et al., 2003).
- **Wealth** is related to quality of health (Pollack et al., 2007).
- **Financial difficulties** being unable to pay the bills related to mental health (Butterworth, Rodgers, & Windsor, 2009; Husain, Creed, & Tomenson, 2000; Elina Laaksonen et al., 2007; Laaksonen et al., 2009; Lallukka et al., 2013; Starkey et al., 2013), **physical health** (Lallukka et al., 2013) and health behaviours such as smoking (Kendzor et al., 2010).
- **Financial hardship** might explain the relationship between SES and depression (Butterworth, Olesen & Leach., 2012)

Socioeconomic Status

- Traditional indicators of SES such as parental occupation, education and occupation class are often weakly related to mental health (Andersen et al., 2009; Laaksonen et al., 2005; Lahelma et al., 2006).
- Measures of SES are often not related to each other, for example correlations between education and income are moderate (Braveman et al., 2005).
- These variables may also change over time and be different in different populations (Shavers, 2007).

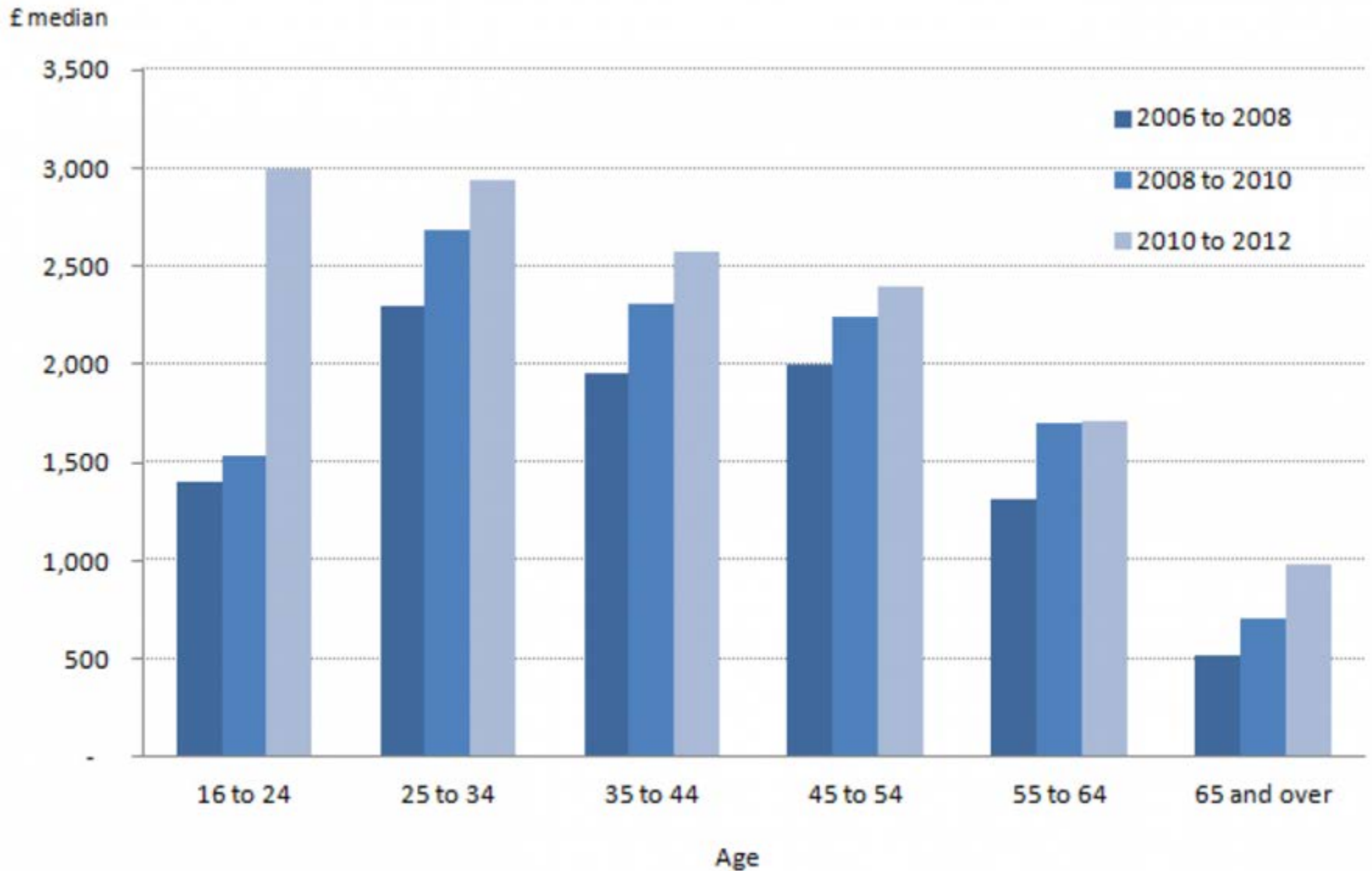
A role for debt?



- Could debt explain some of the relationship between SES and health?
 - Debt levels are greater in poorer families (Wagmiller, 2003).
 - Traditional measures of SES such as income and education levels are related to level of debt (Bridges & Disney, 2010).

Prevalence of Debt in the UK

- Levels of debt have increased dramatically in recent years (Credit Action, 2013).
- Currently the average UK family owes more than £16k in unsecured debt (AVIVA, 2014).
- Credit cards debts doubled over 6 months in 2014 (AVIVA, 2014).
- £239bn unsecured debt in UK: £20bn increase in a year (Price-WaterHouse-Coopers 2015).
- Seven year high in new debt, fastest increase in a decade



Debt and Mental Health

Richardson et al. (2013) meta-analysis:

- Those with depression more than twice as likely to be in debt
- 42% of those in debt have a mental disorder compared to 18% in no debt
- 25% of those with a mental disorder are in debt, compared to 9% in those who are healthy



Debt and Mental Health

Relationship between debt and suicide, psychosis, drug and alcohol problems

- Those who complete suicide are 7 times as likely to be in debt
- 31% of those with psychosis are in debt, compared to 11% in those who are healthy
- 38% of those with drug dependency are in debt, compared to 10% in those who are healthy
- 30% of those with alcohol problems are in debt, compared to 16.5% in those who are healthy.

Debt and Mental Health

- Studies have controlled for demographic variables such as gender, age, socio-economic status, education, employment and still found a relationship

Longitudinal studies

- Stress about debt more important than amount of debt (Bridges & Disney, 2010)
- Believing finances will get worse predicts poor mental health (Brown et al., 2005)
- Over time mental health worse at times of financial hardship (Kieley et al., 2015)
- Dose-response effect: more debts increase risk of depression further (Brown et al (2005)
- Short term unsecured debt related more strongly than longer term debt such as mortgages (Berger et al., 2015)

Debt and Mental Health

Psychological Autopsy Studies

- Four studies in Hong Kong have shown greater prevalence of debt in suicide completers (Chan et al., 2009; Chen et al., 2006; Wong et al., 2008; Wong et al., 2013).
- Holds after controlling for mental health problems and demographics
- Unmanageable debt estimated to be linked to 23% of suicides

Nationally Representative Surveys

- In UK 1.9-2.8 greater risk of common mental health problems (Clark et al., 2012; Meltzer et al., 2013).
- Greater number of debts=greater risk (Jenkins et al., 2008; Meltzer et al., 2013)
- Debt linked with suicidal ideation (Meltzer et al., 2011; Hintikka et al., 1998)

Debt and Mental Health

Health Service User Populations

- Debt linked to depression in those attending GP in India (Patel et al., 1998; Pothan et al., 2003)
- In UK those admitted to hospital for self-harm higher depression and suicidal intent if in debt (Hatcher, 1994)
- Pathological gamblers more suicidal ideation if in debt (Battersby et al., 2006)

Other Populations

- Worry about debt increases risk of post-natal depression (Reading & Reynolds, 2001)
- Debt linked with depression in older adults (Drentea & Reynolds, 2012; Kaji et al., 2010; Lee & Brown, 2007) farmers (Beseler & Stallones, 2008) and junior doctors (Hainer and Palesch, 1998)

Debt and Mental Health

Limitations with research at present

- Cross sectional
- Crude measures of mental health
- Debt defined and measures differently



What is the evidence in students?

A number of studies examining UK based students have shown that mental health problems are linked to

- Financial problems (Roberts et al, 1999, 2000; Andrews & Wilding, 2004),
- Concern about finances (Jessop et al., 2005),
- Level of debt (Carney et al., 2005),
- Concern about debt (Cooke et al., 2004).



What is the evidence in students?

- Mental health in students worsens over time if financial worries (Cooke et al., 2004; Andrews & Wilding, 2004),
- Higher levels of stress and drug use (Stuhldreher et al., 2007)
- Greater body dissatisfaction (Nelson et al., 2008)
- Debt leads to poor mental health via working longer hours and considering abandoning university (Roberts et al., 1999, 2000)

What is the evidence in the student population?

- **Richardson et al.** (submitted). Conducted **longitudinal study** to assess whether financial variables influence changes in mental health overtime in undergraduate students
- Greater financial stress (e.g. struggling to pay bills) had greater depression and stress
- Greater financial stress: global mental health, anxiety and alcohol problems worsened over time
- Greater anxiety and alcohol problems linked to more financial stress over time: i.e. Relationship worked both ways

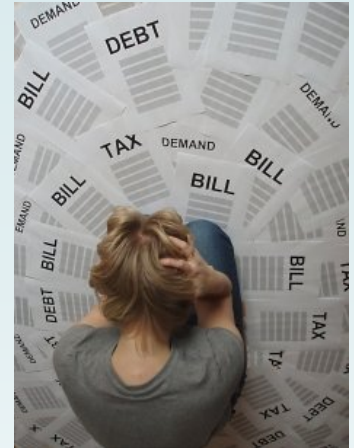
What is the evidence in the student population?

- Students who regarded their student loan as **debt they have to pay back** rather than as **extra tax** had lower scores on anxiety measures, but had higher scores on depression at 1 year later.
- Those students who considered **abandoning their studies due to financial reasons** as well as those who **considered not coming to university for financial reasons** predicted higher depression at 9 months later.



What is the evidence in the student population?

- Richardson et al (submitted) conducted a longitudinal study on the **predictors of psychosis risk** in 408 first year British undergraduate students.
- Students who had **higher financial stress** had **more psychotic symptoms** which involved answering questionnaire items such as 'Do you find yourself feeling mistrustful or suspicious of other people?'
- Those who **considered dropping out of university for financial reasoning** had **more distress** relating to psychotic experiences up to a year later, after controlling for initial distress.
- Similarly **psychotic symptoms and distress were higher** for those who had **considered abandoning university due to financial concerns** at 3-4 and 6-8 months later.



What is the evidence in the student population?



Richardson et al (2015):

Wanted to examine over time: see which comes first

- Gave undergraduate students questionnaire measures of:
- Financial difficulties (e.g. being unable to pay for heating)
- Measure of attitudes towards food and weight which suggest high risk for an eating disorder (e.g. I have the impulse to vomit after meals, I feel that food controls my life)

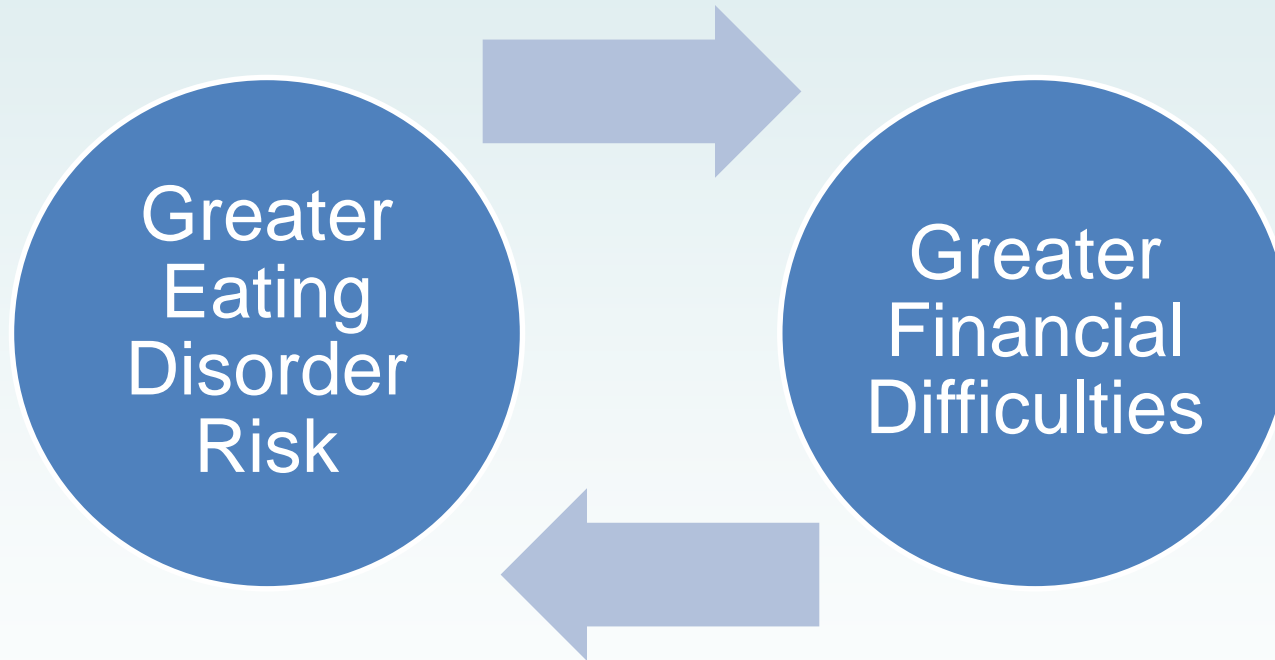
What is the evidence in the student population?

Richardson et al (2015):

- Financial difficulties increased eating disorder risk up to a year later, after accounting for initial risk
- Eating disorder risk also predicted greater financial difficulties 3 months later, after accounting for initial financial difficulties
- I.e. Relationship was bi-directional: worked both ways
- This was only for women, not men



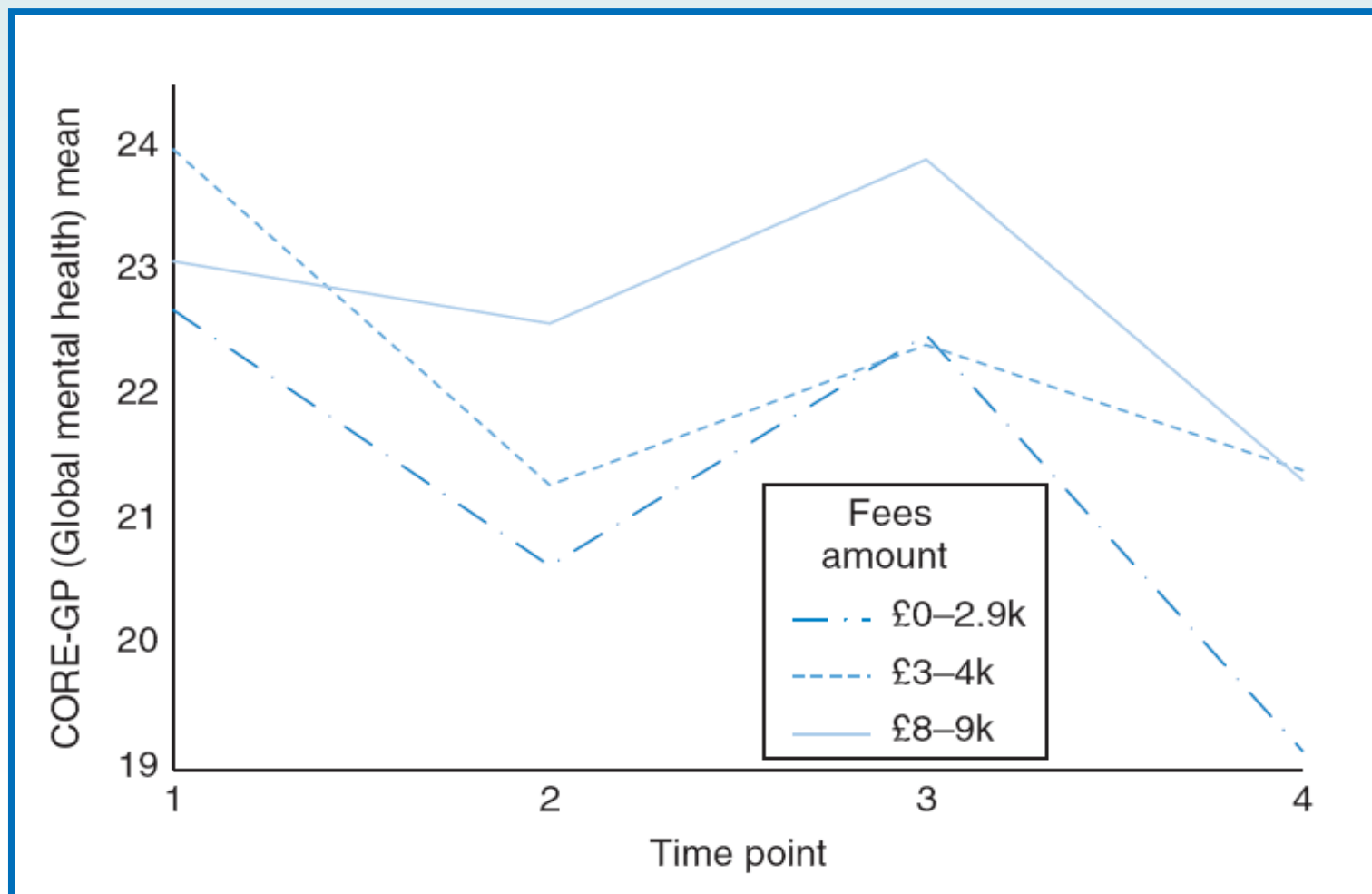
Vicious Cycle



What impact has the recent increase in tuition fees had?

- The government legislation passing in 2010 has meant that tuition fees for students from England and Wales increased from just over £3k a year in 2011 to £6-9k a year in 2012, with a predicted average annual fee of £8360.
- Most students will have these fees added to their loan rather than paid up front.
- As a result, debt upon graduation is predicted to double to £59k for English students starting in 2012.
- US study found that greater student loans linked to poor psychological health in wealthier, better mental health in poorer students (Walesman et al, 2015)

Richardson et al. (2015) study followed up 390 first-year British students who differed on their tuition fees (before and after fees increase) at 4 time points across their first 2 years at University.



So what can we conclude?

- Those charged higher fees are less likely to have an improvement in their mental health in their first year at university.
- However, the increase in fees has no lasting impact on mental health symptoms.
- Significant differences in mental health may appear at a much later stage, once the individual has actually left University. Perhaps, at a stage when the realisation of the overall increase in debt becomes apparent.
- In addition, economic analyses predict that nearly 3/4 students will never pay off their loan (Crawford & Jin, 2014) and therefore the long-term impact is unclear and needs to be carefully monitored.



What explains the link?

- Increased financial strain (Lange & Byrd, 1998; Selenko & Batinic, 2011)
- Worry and stress about debt more important than debt amount (Cooke et al., 2004; Drentea & Reynolds, 2012)
- Concern/hopelessness about debt (Meltzer et al., 2011; Cooke et al., 2004; Jessop et al., 2005)
- Locus of control over finances (Lange & Byrd, 1998)
- Psychological factors might be more important than amount of debt (Bridges & Disney, 2010; Reading & Reynolds, 2001), may mediate relationship between debt and health (Jessop et al., 2005; Meltzer et al., 2011).

What explains the link? – Psychological Factors

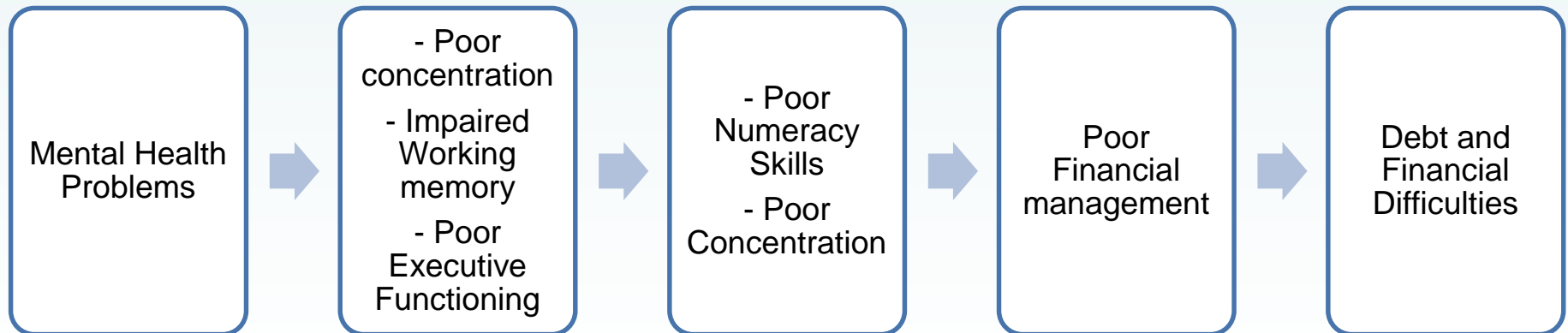
How might financial difficulties and debt increase risk of mental health problems?

- Additional stress and anxiety
- Rumination/worrying about finances
- Negative thoughts/catastrophising about debt
- Hopelessness/feel like no control over finances
- Criticising/blaming self for finances

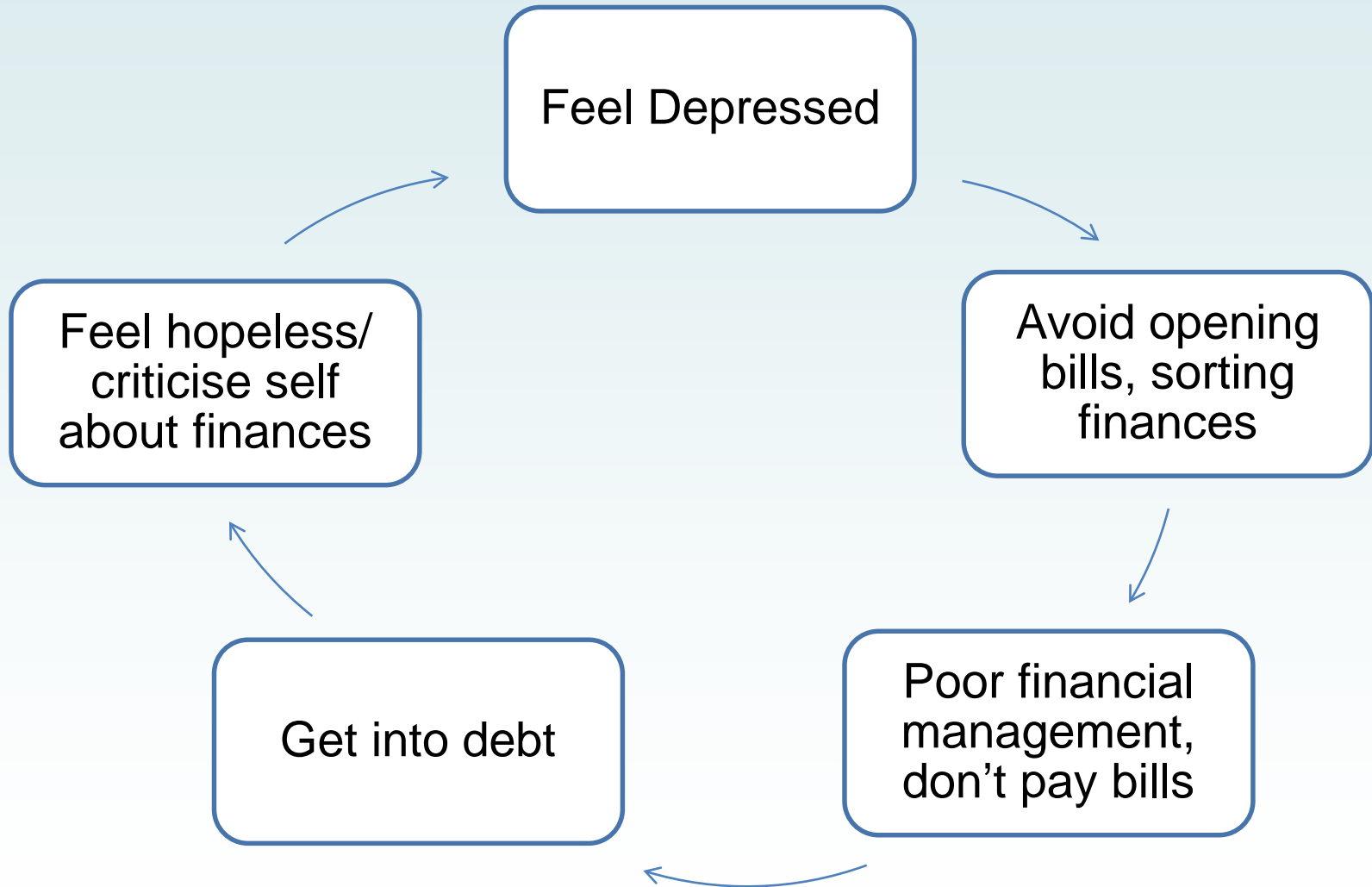
What explains the link?

How might mental health problems lead to financial difficulties?

- Impulsive/comfort spending/gambling
- Low employment
- Anxious avoidance: not opening/paying bills
- When depressed: not caring



Possible Vicious Cycle



Current Research: Bipolar Disorder

- Aim to recruit 140 participants: 70 with a primary diagnosis of recurrent depressive disorder or moderate/severe depressive episode; 70 with a primary diagnosis of bipolar disorder.
- Participants will complete a battery of questionnaires at 2 time points four months apart.
- Questionnaires on finances, mental health and psychological variables.

Mental Health → Debt

“Unable to seek employment due to being unwell. So have been reliant on benefits.”

“When I am manic, I am extremely impulsive, very generous to others and I can spend hours shopping online.”

“When my mood is elevated I feel the need to shower my wife and kids with gifts. During down periods, I essentially comfort spend.”

“Thinking I have a never ending source of income.”

“Depending on mood/anxiety avoid paying bills or opening mail leading to further debt. Lack of concentration required to manage finances.”



Debt → Mental Health

“It’s a vicious circle. I realise I’m spending and putting my family in financial stress and leads to larger depression. This then leads to comfort spending again.”

“Stressed about bailiffs and looming bankruptcy.”

“The stress of not being able to manage finances triggered off an episode of poor mental health then I was not able to work and the debt got worse.”

“When in debt, suicidal thoughts appear. I also have lack of sleep, stress and worry about finances.”

“Very reason I tried to commit suicide 3 years ago.”

“The pressure of being in debt leads to depression. These can be severe have been suicidal at least once over debts.”

Current Research: Bipolar Disorder

- Preliminary stats (n=33 people with Bipolar Disorder)

Higher Current Financial Difficulties correlated with:

- Current Manic Symptoms ($r=.48, p<.01$)
- Past Hypomanic Symptom Severity ($r=.38, p<.05$)

Poorer Current Perceived Financial Wellness correlated with:

- Current Depression ($r=-.38, p<.05$)
- Current Suicidal Ideation ($r=-.33, p<.05$)
- Current Anxiety: ($r=-.36, p<.05$)
- Current Stress ($r=-.58, p<.001$)
- Past Hypomanic Symptom Severity ($r=-.38, p<.05$)

Conclusions and Future Research

- There is a clear and strong link between financial difficulties, debt and mental health problems

However

- Very few longitudinal studies on the area: unclear what causes what
- Idea of a vicious cycle needs further research
- Need inter-disciplinary collaboration
- Need to explore mediating variables/psychological variables explaining the relationship
- This will help us understand the psychology better so can develop psychological interventions

Thankyou!

- Email thr1g10@soton.ac.uk/Thomas.Richardson@solent.nhs.uk
- Twitter @DrTomRichardson

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