The Impact of Household Overindebtedness on Physical and Mental Health

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June 4, 2015
Outline

1. Introduction
   - Overview
   - Literature Review

2. Data

3. Tables and Figures

4. Conclusion
Project

Design: 5 Credit Unions

Eligible participants selected (n=499)

Discussion forum (1/3)

Financial capability (1/3)

Current CU default (1/3)

Outcome 1

Outcome 2

Outcome 3

Initial assessment
Baseline data:
• Financial assessment
• Characteristics

Randomisation – stratified by CU, sex and length of arrears

Final (T=24) assessment
Overview

- We analyse data collected from a survey of Northern Irish households experiencing varying degrees of financial hardship and examine whether debt affects physical health, mental health and health-related behaviours.

- We find that neither the size of the debt, the type of debt nor the number of different lenders used affect health.

- Instead, the subjective experience of feeling financially stressed has a robust relationship with most aspects of health including ability to self-care, problems performing usual activities, pain problems and psychological health.

- This is important as cuts to social care spending in the UK government are already exacerbating indebtedness in low-income households and putting strain on the healthcare system.
Does debt affect health?

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- Not much research on household debt & physical health (*Drentea & Lavraks, 2000; Lenton & Mosley, 2008; Sweet et al, 2013; Keese & Schmitz, 2014)*.
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- The recent financial crisis has caused a decline in health status (Clayton et al, 2015).
- Not much research on household debt & physical health (Drentea & Lavraks, 2000; Lenton & Mosley, 2008; Sweet et. al, 2013; Keese & Schmitz, 2014)
- Generally there is a lack of consideration of endogeneity of debt & data on debt and health limited.
Figure 1: Links between debt and health

- Personality traits: e.g., confidence, literacy, materialism, money-management skills
- Constitutional factors: e.g., resilience, optimism
- Labour Market Status
- Lifecycle planning
- Social capital
- Financial shocks
- Debt
- FINANCIAL STRESS
- HEALTH: Mental & Physical
- Other health factors
Modelling strategy

\[ h_j = \beta' X_j + \gamma d_j + \epsilon_j \]  \hspace{1cm} (1)

where \( h_j \) health for individual \( j \), \( X_j \) controls, \( d_j \) debt and \( \epsilon_j \) error. Controls are household demographic variables.

Allowing for the potential endogeneity of debt results in the following model:

\[ h_j = \beta' X_j + \gamma d_j + \epsilon_j \]  \hspace{1cm} (2)

\[ d_j^* = \delta' W_j + u_j \]
Data collection

- Cloughfern, Court, Newington, Newry and Ormeau credit unions.
- 1,091 members with either loans in arrears for greater than 9 weeks or loans that had been rescheduled. Only one participant per household was interviewed.
- January to April 2014.
- Face-to-face lasting one hour approx.
- 499 completed surveys.
Credit Union Locations
Credit Union Locations
Survey

- Household demographics, employment, income and benefits, expenditure, savings & assets and health.
- Consumer credit, unsecured debt and mortgage debt.
  - Current balance, arrears and APR estimate.
  - Partner debt.
  - Arrears on a list of typical household bills.
- Subjective financial well-being
  - 'Trouble with debts..', 'Money over...', 'Not managing financially...'
- Health
  - EQ5D (mobility, self-care, usual activities, pain/discomfort, anxiety/depression)
  - Smoking, alcohol, drugs, physical activity, nutrition, access to healthcare
Table 1: Descriptive statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sample</th>
<th>NI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High GHQ12 score</td>
<td>0.28</td>
<td>0.19</td>
</tr>
<tr>
<td>Not enough to eat</td>
<td>0.14</td>
<td>0.02</td>
</tr>
<tr>
<td>Fruit &amp; veg (5+ a day)</td>
<td>0.19</td>
<td>0.33</td>
</tr>
<tr>
<td>Eat fast food</td>
<td>0.57</td>
<td></td>
</tr>
<tr>
<td>Currently Smoke</td>
<td>0.41</td>
<td>0.24</td>
</tr>
<tr>
<td>Drink alcohol</td>
<td>0.58</td>
<td>0.81</td>
</tr>
<tr>
<td>Illegal drugs (aged &lt;60)</td>
<td>0.07</td>
<td>0.05</td>
</tr>
<tr>
<td>Physically active</td>
<td>0.72</td>
<td>0.60</td>
</tr>
<tr>
<td>Seen GP last 2 weeks</td>
<td>0.35</td>
<td>0.23</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td></td>
<td>499</td>
</tr>
</tbody>
</table>

Notes: Source for NI data is Health Survey Northern Ireland 2013/14 (Standardised). Except Illegal drugs 2010/11 Northern Ireland Drug Prevalence Survey (Unstandardised).
Table 3: Instrumental variables estimates of the impact of debt on the EQ-5D health index score

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LIML</td>
<td>LIML</td>
<td>LIML</td>
<td>Wooldridge</td>
<td>ML</td>
</tr>
<tr>
<td></td>
<td>coef./s.e.</td>
<td>coef./s.e.</td>
<td>coef./s.e.</td>
<td>coef./s.e.</td>
<td>coef./s.e.</td>
</tr>
<tr>
<td>Unsecured debt</td>
<td>0.018 (0.022)</td>
<td>-0.001 (0.015)</td>
<td>0.007 (0.018)</td>
<td>-0.007 (0.013)</td>
<td>-0.011 (0.012)</td>
</tr>
<tr>
<td>Secured debt</td>
<td>0.016 (0.015)</td>
<td>0.002 (0.010)</td>
<td>0.008 (0.012)</td>
<td>-0.003 (0.008)</td>
<td>-0.009 (0.007)</td>
</tr>
<tr>
<td>Financial stress</td>
<td>-0.937*** (0.262)</td>
<td>-0.487** (0.161)</td>
<td>-0.686*** (0.198)</td>
<td>-0.353*** (0.075)</td>
<td>-0.301*** (0.050)</td>
</tr>
<tr>
<td>N</td>
<td>470</td>
<td>470</td>
<td>470</td>
<td>470</td>
<td>470</td>
</tr>
</tbody>
</table>

Notes: All models include controls - household demographic variables (age, gender, female, respondent has partner, homeowner, household income and the number of children under five), educational qualifications and employment status. * p < 0.05, ** p < 0.01, *** p < 0.001
### Table 4: Maximum likelihood estimates of the impact of debt on dimensions of the EQ-5D health questionnaire (marginal effects)

<table>
<thead>
<tr>
<th></th>
<th>Mobility problems</th>
<th>Self-care problems</th>
<th>Usual activities problems</th>
<th>Pain problems</th>
<th>Anxiety/depression problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsecured debt</td>
<td>-0.001 (0.013)</td>
<td>-0.001 (0.006)</td>
<td>-0.004 (0.012)</td>
<td>0.028 (0.017)</td>
<td>0.032 (0.017)</td>
</tr>
<tr>
<td>Secured debt</td>
<td>-0.001 (0.010)</td>
<td>0.006 (0.005)</td>
<td>0.000 (0.009)</td>
<td>0.006 (0.011)</td>
<td>-0.003 (0.011)</td>
</tr>
<tr>
<td>Financial stress</td>
<td>0.158 (0.127)</td>
<td>0.183*** (0.040)</td>
<td>0.281* (0.110)</td>
<td>0.376*** (0.109)</td>
<td>0.578*** (0.057)</td>
</tr>
<tr>
<td>Log-likelihood</td>
<td>-373.6</td>
<td>-322.3</td>
<td>-376.5</td>
<td>-437.3</td>
<td>-451.7</td>
</tr>
<tr>
<td>N</td>
<td>471</td>
<td>471</td>
<td>471</td>
<td>471</td>
<td>471</td>
</tr>
</tbody>
</table>

*Notes: All models include controls as before. *p < 0.05, **p < 0.01, ***p < 0.001*
Table 5: Maximum likelihood estimates of the impact of debt on health behaviours

<table>
<thead>
<tr>
<th></th>
<th>GP</th>
<th>Cigs.</th>
<th>Drink</th>
<th>Active</th>
<th>Fast food</th>
<th>Fruit &amp; veg</th>
<th>Drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>coef./s.e.</td>
<td>coef./s.e.</td>
<td>coef./s.e.</td>
<td>coef./s.e.</td>
<td>coef./s.e.</td>
<td>coef./s.e.</td>
<td>coef./s.e.</td>
</tr>
<tr>
<td>Unsec. debt</td>
<td>0.087</td>
<td>-2.507</td>
<td>-0.041</td>
<td>0.121*</td>
<td>-0.011</td>
<td>0.063*</td>
<td>-0.057</td>
</tr>
<tr>
<td></td>
<td>(0.049)</td>
<td>(2.497)</td>
<td>(0.043)</td>
<td>(0.052)</td>
<td>(0.053)</td>
<td>(0.031)</td>
<td>(0.050)</td>
</tr>
<tr>
<td>Sec. debt</td>
<td>0.023</td>
<td>-1.165</td>
<td>-0.029</td>
<td>-0.054</td>
<td>-0.036</td>
<td>-0.022</td>
<td>-0.027</td>
</tr>
<tr>
<td></td>
<td>(0.032)</td>
<td>(1.770)</td>
<td>(0.030)</td>
<td>(0.037)</td>
<td>(0.036)</td>
<td>(0.021)</td>
<td>(0.040)</td>
</tr>
<tr>
<td>Fin. stress</td>
<td>0.965**</td>
<td>42.608*</td>
<td>0.518</td>
<td>-1.072***</td>
<td>0.550</td>
<td>-1.421***</td>
<td>1.447***</td>
</tr>
<tr>
<td></td>
<td>(0.299)</td>
<td>(17.893)</td>
<td>(0.387)</td>
<td>(0.322)</td>
<td>(0.436)</td>
<td>(0.150)</td>
<td>(0.200)</td>
</tr>
<tr>
<td>N</td>
<td>499</td>
<td>471</td>
<td>499</td>
<td>499</td>
<td>499</td>
<td>499</td>
<td>499</td>
</tr>
</tbody>
</table>

Notes: GP - Have you consulted your GP or other health professional in the past two weeks? Cigs. - Cigarettes smoked per week. Drink - How often have you had an alcoholic drink of any kind during the last 12 months? Response on scale 1-8. Active - Achieving NI Chief Medical Officer’s recommended levels of physical activity. Fast food - Can you tell me how often do you visit fast-food outlets? Fruit & veg - How many portions of fruit and vegetables do you eat each day? Drugs - During the last 4 weeks have you taken any non-prescription substances? (i.e. illegal drugs)
There have been few studies relating debt levels to physical health and even fewer at household level.
Summary

- There have been few studies relating debt levels to physical health and even fewer at household level.
- Our conclusions are that the level of financial stress matters for physical health, mental health and health-related behaviours.
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- There have been few studies relating debt levels to physical health and even fewer at household level.
- Our conclusions are that the level of financial stress matters for physical health, mental health and health-related behaviours.
- The adverse effect of financial difficulties on health is mediated through worse diets, lower levels of physical activity and increased consumption of cigarettes and drugs.
- Rising levels of indebtedness will lead to resource issues for the healthcare system.