

DEBT AND MENTAL HEALTH

WHAT DO WE KNOW? WHAT SHOULD WE DO?

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Part 1: Background

Introduction

The relationship between the economic downturn and health has become a subject of political, medical, and media debate in many countries.^{1,2} These debates have often focused on the impact of unemployment on morbidity and mortality,³ predicted consequences of ‘recession cuts’ for health services and staff,⁴ and the legacy of the economic downturn for existing health and social inequalities.⁵ However, consideration has only rarely been given to the health of individuals living with personal or household debt, including the relationship between indebtedness and mental health.

A significant gap

This is a significant gap for three reasons.

First, a large number of individuals are already living with debt. On average, 10% of European households surveyed in 2005 reported housing, utility or credit arrears during the last 12 months, ranging from 3% in Austria, through 6% in the UK, to 33% in Greece.⁶ In America, 7% of households in 2007 reported arrears of 60 days or more on at least one bill or payment.⁷ More households may also become indebted if predicted rises in unemployment result in unanticipated changes to income or other circumstances, as households may borrow money to cope or stop bill payments altogether.⁸

Second, indebtedness has been identified as an “important risk factor for mental disorder”.⁹ A small but influential group of commentators - including the UK Government’s Foresight Review of Mental Capital and Wellbeing¹⁰ – have all cited as evidence of such risk the same British research study that found debt mediated the association between mental disorder and low income. The same study presented prevalence estimates of nearly one-in-two adults with debt as also having a mental disorder.^{11,12}

Third, adults with debt and mental health problems present a sizeable challenge to the health, financial, and debt advice sectors. However, professional responsibilities and practice within sectors have been considered only infrequently (see Money Advice Liaison Group¹³ for example), whilst coordinated action across sectors is rare. This has implications for individual mental and financial wellbeing, and leaves

wider questions unresolved about interventions for people who are simultaneously ‘patients’, ‘customers’, and ‘advice clients’.

Work to date

A small number of organisations, however, have undertaken work on debt and mental health. Most have focused on campaigning reports (such as Mind¹⁴), but a minority have produced guidelines or tools for distinct professional groups. In the UK, these include voluntary guidelines primarily for creditors and money advisers on working with customers who have debt and mental health problems (with an accompanying aspiration for better collaborative links between the creditor, advice and health and social care sectors),¹³ a pocket-guide to debt and mental health for NHS professionals,¹⁵ and a tool to improve the quality of information to support creditor decision-making where an indebted customer nominates a health or social care professional to provide evidence about their mental health.^{16,17}

What this literature review adds

However, despite this, we currently have a limited understanding of how debt and mental health interact, making it difficult to design new educational and intervention programmes, or evaluate the efficacy of existing ones.

The Royal College of Psychiatrists and Rethink, funded by the Money Advice Trust and the Finance & Leasing Association, therefore conducted a review which considered three questions:

- First, what impact does debt have on mental health, and conversely mental health on debt?
- Second, does a relationship exist between indebtedness and self-harm or suicide?
- Third, what effect do debt and mental health problems have on individuals seeking and acting on help offered within the health, money advice, or creditor sectors?

This report represents – to our knowledge – the first review of the available international evidence on the relationship between debt and mental health.

Part 1: Background

Methodology

In consultation with researchers, money advisers, and creditors in the UK and USA, we developed 89 search terms covering mental health and debt keywords. Using both title and keyword searches, we searched 14 databases covering the medical, business, legal, and social science/policy fields for references in English between 1980 and 2008. These databases were: Medline, PsychInfo, British Nursing Index, Current Index to Nursing and Allied Health Literature, EMBASE, All Evidence Based Medicine Reviews, Emerald, EBSCO Business Source Complete, Westlaw Financial Journals Index, Westlaw Legal Journals Index, International Bibliography of the Social Sciences, Social Citation Index, Social Policy and Practice, and Applied Social Sciences Index and Abstracts. We also asked experts to nominate papers.

We included papers that made specific reference to a mental health and a financial keyword. Where papers did not make specific reference to a financial keyword, reviewers established whether the paper made an indirect reference to the concept of debt based on the definition:

“Debt - defined as owing money on either credit commitments or other bills. Someone is therefore in debt if they are repaying an unsecured personal loan/mortgage, owe money on a credit card or a utility bill, or have rent, housing or other arrears”.

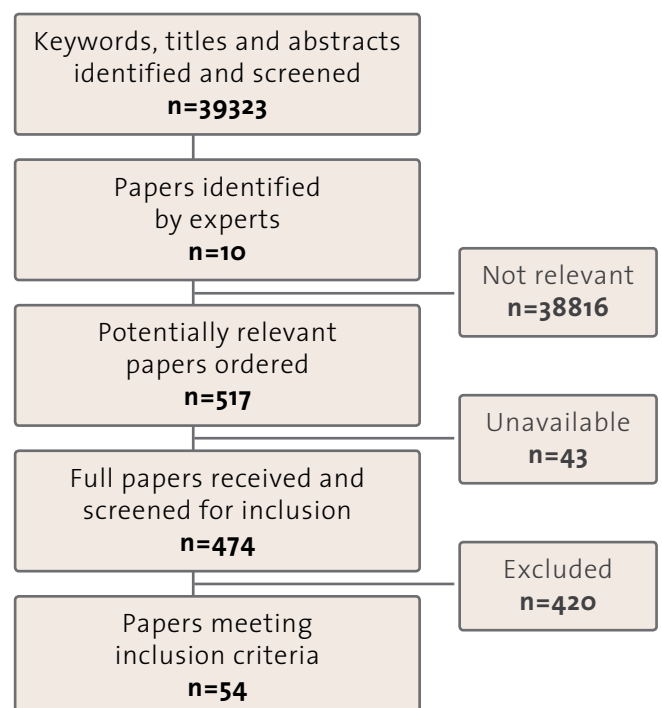
We excluded any paper that did not present primary empirical data (e.g. commentaries, editorials, news reports). Papers were also excluded which focused on gambling and indebtedness; discussed tools or potential tools for assessing general financial capacity (rather than explicitly debt); where measures of ‘financial strain’ or ‘financial difficulty’ or ‘financial skills’ were taken, but where debt was not differentiated in analyses; where ‘financial stress’ was discussed without a clear and explicit reference to mental health problems; and where papers considered programmes for generally managing the money of people with mental health problems, but where debt was not a specific theme of the article.

The keyword search returned 39,323 potential papers, with an additional ten being proposed by expert contacts (Figure 1). A review of paper

titles and abstracts resulted in 38,816 papers being excluded. The remaining 517 papers were ordered. These included papers which met the inclusion criteria and papers where it could not be established whether the inclusion criteria had been met from reading the title and abstract alone. Of these 517 papers, 43 could not be obtained, whilst a further 420 papers were excluded. A full structured review was made of the remaining 54 papers. Two researchers independently reviewed each paper using a structured appraisal/data-extraction sheet (developed by the research team), with full details of each paper recorded in the tool.

The 54 papers presented results from 52 separate studies: none employed a randomised controlled trial design, nine longitudinal studies, 34 cross-sectional, three qualitative, four descriptive (without comparison or control group), one case control, and one retrospective cohort (please refer to the Glossary for a definition of these terms). Although there were two papers on the same qualitative study^{35, 36}, and two papers focusing on the same cross-sectional survey^{11, 12}, these papers focused on different analyses and were therefore included.

Figure 1. Paper selection



Part 2: summary

What do we know?

What did the literature review tell us?

- There is evidence of a moderate *association* between debt and mental health problems. These include common mental health problems such as anxiety and depression.
- There is no conclusive evidence, however, of a causal relationship. Neither is there a detailed account of the processes or mechanisms through which debt and mental health interact. Further longitudinal research is needed.
- We should also note that there is little consistency in the conceptualisation and measurement of debt in the existing research literature. Over half of the papers reviewed did not differentiate between different types of debt, making it difficult to make strong claims about the impact of each.

- With these caveats in mind, we do know from the existing literature that studies have found that:
 - The more debts people have, the more likely they may be to have a mental disorder. Different types of debt (e.g. mortgage vs credit card, or 'problem' vs 'non-problem' debt) may also have a different impact on individuals' mental health but this requires further research and analysis.
 - An individual's worry or concern about their debt can have an equal or larger negative impact on mental health than the actual size or amount of that debt.
 - By definition, large economic recessions affect more people. This group will include those with little previous experience of coping with hardship, who may be at greater risk of mental health problems than others 'inured' to financial insecurity.
 - Debt may have indirect effects on household psychological wellbeing over time, as it impacts on feelings of economic pressure, parental depression, conflict-based family relationships, and potential mental health problems among children.
 - There is mixed evidence regarding the relationship between debt problems and health service usage – one study on student debt indicates no increase in usage, whilst another on the general population suggests some increase in GP service uptake.¹⁸
 - The human costs of debt can negatively impact on personal identity. Identity is often understood as a sense of who we 'are', and how we are similar or different from others. Debt can significantly change how people live their lives, induce feelings of uncertainty about what is going to happen next, as well as engendering feelings of stigma and shame.
 - Debt or repayment difficulties appear to be independently associated with thoughts about suicide, but – with the exception of one study - not with suicide attempts.
 - People with debt and mental health problems often do not seek help for financial difficulties.
 - Customers with debts often do not disclose a mental health problem to creditors due to concerns about being believed, a perception that it will not make a difference to their situation, fears of the information being used against them, or feelings of embarrassment.

Part 2: summary

What should we do?

What should the financial services sector do?

1. All UK financial sector codes of practice should – as a minimum – recognise the existence of customers with mental health problems. All codes should also define ‘best practice’ in working with such customers.

Why?: there is an association between debt and mental health; population surveys indicate that nearly one-in-two adults with debt may have a mental disorder, whilst one-in-four adults with mental disorders is in debt. This represents a considerable section of creditors’ customer base.

2. We suggest that creditors should ensure that their practices comply with the statutory requirements associated with disability discrimination legislation.

Why?: some research studies indicate that customers with debt and mental health problems have experienced difficulties with creditor organisations. Furthermore, creditors have a formal obligation to comply with relevant articles of law.

3. Low levels of customer disclosure of mental health problems may be an important obstacle to creditors taking appropriate account of customers’ mental health problems. Creditors could encourage customer disclosure by (i) explicitly explaining how health information could improve creditor decision-making; (ii) giving health information a limited ‘shelf-life’ after which it would automatically be updated/deleted (important given the fluctuating nature of mental health problems); (iii) placing health information in confidential ‘electronic files or records’ only accessible to designated staff. Money advice agencies should also update creditors (with a client’s consent) about any changes in that client’s circumstances.



Why?: some research studies indicate that customers with debt and mental health problems are reluctant to disclose their mental health condition to creditors.

What should money advisers do?

1. Money advisers should not be expected to become ‘mental health experts’, but in instances where a client discloses a mental health problem which they require, but are not receiving, therapeutic support, appropriate signposting information and/or referral services should be provided.

Why?: population surveys indicate that nearly one-in-two adults with debt may have a mental disorder.

What should health and social care professionals do?

1. All health and social care professionals should ask patients about financial difficulties in routine assessments and, to enable action to be taken, they should ensure good referral links exist with the money advice sector.

Why?: population surveys indicate that nearly one-in-four adults with mental disorders are in debt.

2. Where debt is reported, primary care professionals should routinely assess for depression and other common mental disorders.

Why?: population surveys indicate that nearly one-in-four adults with mental disorders are in debt.

3. These actions depend upon health and social care professionals having the time, knowledge, and confidence to ask about patient finance. This report therefore contends that professionals should receive basic ‘debt first aid’ training: knowing how to talk with patients about debt; knowing how to refer to, and support, debt advisers; but without being expected to become ‘debt experts’ themselves.

What activity is needed across the health, money advice, and financial sectors?

1. A renewed emphasis on co-ordinated ‘debt care pathways’ between local health and advice services

Part 2: summary

– that is, the routes by which individuals with debt and mental health problems gain access to the support they need – may be key. Health and advice services already work together well in some areas. However, this report contends that a national programme which coordinated, fostered and maintained links between advice and health services would help individuals receive well organised and complementary support, regardless of their entry point. These pathways would also recognise that different mental disorders may require different forms of response (e.g. individuals with advanced dementia compared to episodic depression).

Why?: research indicates a relationship between financial difficulty and poorer mental health. Whilst not supported by available research evidence, it is plausible to suggest that interventions that either address only one element of this relationship, or both aspects but in an uncoordinated manner, may not be as effective as interventions developed in partnership between the health and advice sectors.

2. A lack of co-ordinated activity across the health, money advice, and creditor sector is a significant weakness. The Money Advice Liaison Group (MALG) guidelines on debt and mental health¹³ currently provide the only published strategy to address this, and are incorporated or referenced in the major creditor codes of practice, including the Credit Services Association's Code of Practice, the Finance and Leasing Association's Lending Code and the Council of Mortgage Lenders' Industry guidance on arrears and possessions. However, the MALG guidelines have a limited profile in the health and social care sectors, and provide comparatively little guidance on suggested good practice in this area. Work is needed to involve the health and social care sector in developing content of such good practice guidelines, and will need to include service user and carer organisations in its development.

Why?: the publication of the English mental health strategy consultation document New Horizons¹⁹ marked the first major recognition by the Department of Health that the inter-relationship between debt and mental health represents a key public health challenge. There is now a need to build on this government acknowledgement and improve recognition among health and social care professionals. The final version of New Horizons will be published late in 2009/early 2010.

3. Organisations recovering debt often give inadequate consideration to information disclosed by customers about their mental health. This can result in inappropriate or mentally distressing action. Further, where customers consent to creditors requesting information from health professionals, there may be difficulties in communication such as: (i) variability in the type and amount of evidence requested; (ii) ambiguous instructions or unrealistic expectations concerning the information that professionals should provide; (iii) delays or refusals by creditors, or payment requests from professionals to provide evidence; and (iv) poor quality and irrelevant information for decision-making being returned. A standardised clinical information form has been developed – the Debt and Mental Health Evidence Form¹⁶ – to help health professionals provide clear and relevant information in such situations (with patients' consent). However, this form attempts to strike a balance between providing a minimum level of relevant personal information to inform creditor action (and potentially to benefit individuals' health and financial circumstances), and protecting the majority of non-relevant personal information from being unnecessarily shared across the health and financial sectors.

Why?: research conducted by Mind indicates a need for improved debt recovery action in relation to customers with debt and mental health problems, including issues relating to communication.

4. Opportunities have emerged to improve financial service practice. First, the Department for Business Innovation and Skills (BIS) has published a Consumer White Paper that includes specific reference to the issue of mental health. Secondly, the Office of Fair Trading has launched a consultation in relation to new guidelines on irresponsible lending, which also make repeated reference to the difficulties facing customers with mental health problems. Although these developments are to be welcomed, mental health organisations will now need to engage with policy outside their traditional portfolio to ensure this recognition is turned into practical action. This may be more effectively undertaken in partnership with money advice organisations.

Part 2: summary

What research is needed?

- Analyses of the cost of housing market recessions should factor in the economic and human costs of associated mental health problems.
- Although there has been a fair amount of research into the area of debt and mental health, there is little consistency in the conceptualisation and measurement of debt. In this paper, we have attempted to provide an overview of the research covering different types of debt (as they relate to various financial products such as mortgages and unsecured consumer credit). However, over half of the papers have not differentiated between different types of debt in their analyses, which makes it impossible to make strong claims about the impact of each. These papers operate on the assumption that debt of any type will have comparable impacts on mental health. However, a few papers that do distinguish between types of debt and their negative impact indicate that this assumption may not be correct. Studies where problem and non-problem debt have been combined may therefore underestimate the impact on mental health.
- A number of studies suggest that the impact of debt on mental health may be mediated by personal attitudes towards debt, or more specifically 'debt worry'.²⁰⁻²⁴ More investigation is needed into the mechanisms of this relationship. It is possible, for example, that participants' attitudes towards debt (as recorded in studies) also reflect other personal concerns or variables that may not be measured by a study (for example, current income, expected future income, family financial situation). Critically, where unmeasured, or not controlled for, these variables may also impact on measures of a person's mental health or psychological wellbeing. Similarly, anxiety about debt might reflect a person's general anxiety or psychological outlook. People who score higher on measures of anxiety or depression might be more likely to have a negative view of their finances.
- Although studies indicate a correlation between actual debts and debt worries, there is also evidence that the relationship between the two is more complex, and may additionally be affected by other factors.²⁵
- Although the studies identified indicate an association between debt and mental health outcomes, there is little evidence about causality. The longitudinal studies referred to in this paper were often based upon data collected on a small number of time points/short reference periods only, which makes it difficult to unravel the potentially complex interplay between factors (i.e. whether indebtedness leads to mental health, or mental health to indebtedness – see, for example, Skapinakis et al²⁶).
- The mental health outcomes used in these studies are overwhelmingly common mental disorders or psychological wellbeing. None of the studies have provided evidence of an association between debt and severe mental illness. Most of the studies do not record severity or chronicity of mental disorders. Though some studies have indicated a link between more debt and increased psychological distress, there is limited indication as to how this relates to diagnosable mental disorder.
- Overall, the evidence found suggests an association between 'problem' debt and increased psychological distress. The magnitude of the association varies considerably. There is some evidence that this association may be mediated by subjective attitudes or worry about debt.
- Evidence of a link between the presence or absence of debt and psychological distress is more mixed. This may indicate that debt can be used in positive ways to level out short-term differences in income and expenditure. Use of credit may allow borrowers to access goods and services which lead to an improvement in quality of life and wellbeing, as long as consumers are able to manage that debt. Some commentators will observe that this represents the difference between 'problem' and 'non-problem' debt.
- Kaplan and Damphousse²⁷ suggest that children with lower psychological wellbeing may be less likely to borrow as a young adult. This may reflect different opportunities for borrowing, for example loans for higher education and access to mortgages, which might be more available to those who are likely to score higher on psychological wellbeing. Debt per se, then, may be used in positive or negative ways and the impact on mental health may reflect this.
- Further research is needed to establish the effects of different types of debt and to further understand what makes some debt particularly problematic. Further longitudinal research is needed to understand the dynamics of the relationship between debt and mental health, and in particular to establish a direction of causality. Further research should also be conducted to look at the relationship between debt and non-common mental disorders (e.g. bipolar disorder and schizophrenia).

Part 3: supporting evidence

Detailed review of evidence

Of the 54 eligible papers, none employed a randomised controlled trial design. The 54 papers described results from 52 studies: nine longitudinal studies, 34 cross-sectional, three qualitative, four descriptive (without comparison or control group), one case control, and one retrospective cohort (please refer to the Glossary for a definition of these terms). Although there were two qualitative papers on the same study^{35, 36}, and two papers focusing on the same cross-sectional survey^{11, 12}, these provided different analyses and were therefore included.

In Section A below, we consider the 46 papers which primarily focused on the relationship between debt and mental health. There was considerable heterogeneity in the types of debt addressed by these papers. Data are therefore presented according to separate ‘debt types’: mortgage/housing; consumer; ‘mixed’; and non-specified debt. We also indicate with the ▲ symbol where a debt has been specifically defined as a ‘problem’ debt (i.e. where the authors identify that participants were in payment arrears, default or had difficulties in making payments; n=25). This contrasts with debts which were repaid and managed without difficulties (‘normative’ debt). We use the ● symbol to indicate where papers have not specified that a debt was either problematic or normative (‘unspecified’ debt; n=27). Where a study incorporates measures of problematic debt and non-specified debt, the ■ symbol is used (n=2). It should be noted, however, that due to the large number of papers with ‘unspecified’ debts, that it is not possible to draw conclusions about the impact of ‘problem’ debts compared to ‘normative’ debt.

Later, in Section B, we examine eight additional papers that address debt and the often popularly linked issues of self-harm or suicide.

Finally, in Section C, we present data from four papers (from the overall total of 54) that studied how individuals sought or made use of help offered within the health, money advice, or creditor sectors.

Part 3: supporting evidence

A. The relationship between debt and mental health

A1. Mortgage and housing debt

From 46 papers, seven focused exclusively on mortgage/housing debt, whilst five papers considered this alongside other debt types. Key findings included:

- Future policy and media analyses of the cost of housing market recessions should factor in the economic and human costs of associated mental health problems.
- Large-scale housing recessions affect more people, and can have a negative mental health impact for those with little previous experience of coping with hardship.
- Different types of debt may have distinct impacts on individuals' mental health.
- Lone mothers are particularly at-risk of psychiatric morbidity related to debt and financial strain, and debt management should be an important strategy for tackling this.
- Individuals with mortgage payment problems or arrears can experience mental health problems (with estimates between 35 to 80% of this group), including studies where income and other socio-economic variables are controlled for.
- The human costs of mortgage or housing debt include: a negative impact on personal identity, invoking uncertainty and impacting on a sense of self; heightened levels of uncertainty; and feelings of stigma, shame and biographical disruption.

Longitudinal studies

Three papers presented data from the longitudinal British Household Panel Survey (BHPS) about indebtedness and psychological wellbeing (measured using the General Household Questionnaire 12ⁱ). Firstly, Taylor *et al*²⁸ analysed 13 BHPS waves (1991-2003) covering 8158 household headsⁱⁱ▲. Among 5651 men, housing payment problems and arrears led to poorer mental health, with a larger effect where men entered into arrears in the last year. The effect on mental health was larger than that of unemployment or being



Part 3: supporting evidence

widowed/divorced. For 2534 women, recent entry into either arrears or payment problems had little impact on psychological wellbeing, but the longer-term impact did worsen psychological wellbeing. Taylor *et al* conclude by suggesting that such costs to mental health should be factored into assessments of how housing market recessions realistically impact on household wellbeing.

Secondly, Nettleton and Burrows¹⁸ analysed data from two BHPS waves (1991-1992, n=3700; and 1994-1995, n=3500) ⁱⁱⁱ. Controlling for variables including income, employment status, and physical health, they found that the onset of mortgage indebtedness led to poorer mental health in 1991-1992 among men and women (with a larger impact on women), whilst in 1994-1995 mortgage indebtedness only impacted upon women's mental health. Nettleton and Burrows¹⁸ observe that in 1991-1992 a larger number of people were experiencing mortgage indebtedness, impacting on people who had little previous experience of coping with such hardship.

Thirdly, Brown *et al*²⁹ studied 2193 household heads in two BHPS waves (1995 and 2000)^{iv}•, but found no statistically significant relationship between mortgage debt and poor mental health.

Housing debt and arrears

Three cross-sectional surveys addressed housing debt. Drawing on the 2000 Psychiatric Morbidity Survey (n=8580) and using the Clinical Interview Schedule-Revised (CISR-R), Cooper *et al*³⁰ found significant predictors of common mental disorders and depression for 590 lone mothers included being in debt, borrowing money, and owning a house with a mortgage (compared to owning it outright) ^v. For a smaller number of 73 lone fathers, owning a house with a mortgage and being in debt were significant predictors of common mental disorders. The authors conclude that lone mothers are particularly at-risk of psychiatric morbidity related to debt and financial strain, and that debt management should be an important strategy for tackling this. A descriptive analysis of 1534 adults in the Bristol Poverty Survey,³¹ reported nearly four-fifths of those owing money on their mortgages in the past year were experiencing depression (measured using GHQ-

12) [▲]. Mind¹⁴ conducted a survey with 1804 adults in England and Wales reporting debt and mental health problems [▲]. From the 924 participants indicating they had 'problem debt' (defined as being two or more consecutive months behind on a debt or bill in the last 12 months), 35% had rent or mortgage arrears.

Simply having a mortgage

Three additional surveys considered participants holding mortgages, but where mortgage arrears or payment difficulties were not the focus. Cairney and Boyle³², in a survey of 8016 Canadian adults, found that people with mortgages experienced higher distress than those who owned without a mortgage, but lower distress than those who rented [■]. However, much of this difference was explained by the age, gender, education and marital status of participants^{vi}. Viinamäki *et al*³³ undertook a survey of 1557 Finnish adults, reporting an association between higher home loans and poorer psychological wellbeing ^{■vii}. Also in Finland, Hintiika *et al*³⁴ found that, among 4868 adults, minor mental disorder was more common among those with larger housing loans (above 200000 FIM)^{viii} [▲].

Qualitative research

Finally, Nettleton³⁵ and Nettleton and Burrows³⁶ describe qualitative interviews with 30 families with children who had experienced mortgage repossession [▲]. Although not clinically screened, families reported stress and anxiety following repossession, with this heightened by their experience of contact with institutions such as lenders, courts, local authorities, and advice agencies. Interviewees also identified repossession as a process that impacted on their personal identity and sense of self, and that was characterised by high levels of uncertainty and stigma. In a qualitative study, Crane and Warnes³⁷ interviewed 45 homeless people in three UK cities, aiming to identify risk factors leading to payment default, eviction, and entry to homelessness [▲]. Although ten participants described an increasing severity of mental health problems as preceding eviction, this was not identified as a key risk factor for homelessness.

Part 3: supporting evidence

A2. Consumer debt

From 46 papers, 11 focused on ‘consumer debt’ and mental health (covering credit cards or non-secured loans), and two considered consumer debt alongside other debt types. From these 13 papers, five addressed debt and ‘compulsive buying’. Key findings included:

- An individual’s worry or concern about their debt can have a larger negative impact on mental health than the actual size or amount of that debt.
- Compulsive buyers may be more likely to be within \$500-\$100 of their maximum credit limit (compared to non-compulsive buyers).

Longitudinal studies

Drawing on British Household Panel Survey data, Brown *et al*²⁹ reported that household heads with consumer debt had lower average levels of psychological wellbeing, compared to households without consumer debt^{ix}•.

Debt stress or worry

The first of seven cross-sectional surveys reviewed here, Drentea’s³⁸ analysis of 1037 US participants addressed age, credit card debt and anxiety[▲]•. Drentea defines anxiety as a general “state of psychological discomfort characterised by feeling tense, worried, anxious, and restless” experienced in the last seven days. Drentea reports that simply having credit card debt did not predict anxiety. Rather, participants’ perceived worry and stress about their overall debt situation – including other, non-consumer, debts - did. It is important to note that stress is defined by Drentea as a participant’s subjective perception of worry, stress, and concern about their debt. Drentea observes that a higher level of such stress is positively related to anxiety with moderate effect, with this stress explaining away the effect on anxiety of participants’ debt-to-income ratio or skipping minimum card payments.

This observation that individual worry about debt (a subjective measure) may be an important explanatory factor or mechanism is repeated by Ross *et al*.³⁹ Studying 334 UK medical under-graduates (of whom 79% reported student loans, 54% overdrafts, 22% credit card debts, and 16% bank loans),

Ross *et al* found students with poorer mental health had lower amounts of debt^{xi}•. Ross *et al* suggest individual worry may explain this association. However, they do not mention exactly how much lower the debt is, nor do they consider other influences or confounders.

Student debt

Three cross-sectional surveys among students were reviewed. Norvilitis *et al*⁴⁰ surveyed 448 US College students using the Depression, Anxiety and Stress Scale•. They found higher debt levels related to higher stress, with debt representing 30% of an average student’s yearly income^{xii}. Contrastingly, Norvilitis *et al*⁴¹ reported no relationship between a debt-to-income ratio measure and stress among 227 US College students•. Meanwhile Adams and Moore⁴² reported that among 40,209 US College students, men and women with higher risk credit behaviour were more likely to self-report depression (this analysis controlled for other factors)[▲].

Other groups

Spinella *et al*⁴³, in a study of a different population (127 adults from the community), reported that impairment of ‘executive functioning’ (i.e. reasoning, planning and decision-making) in the brain predicted higher levels of credit card debt^{xiii}•. Mind¹⁴ conducted a descriptive survey with 1804 participants reporting debt and mental health problems[▲]. Of the 924 participants indicating they had been in problem debt (defined as being two or more consecutive months behind on a debt or bill in the last 12 months), almost one-in-two (47%) had arrears on credit/store cards, one-in-three (36%) on loan repayments, and one-in-five on goods bought on hire purchase or mail-order (21%).

Compulsive buying

Five papers considered compulsive buying and debt. Koran *et al*⁴⁴ conducted a cross-sectional survey with 2513 US adults. With 6% of participants screening as compulsive buyers (using the Compulsive Buying Scale), they found that compulsive buyers did not hold more credit cards than other people. However, compulsive

Part 3: supporting evidence

buyers were more likely to be within \$500-\$100 of their maximum credit limit, and to make minimum credit card repayments (58% vs 13%)^{xiv}▲. In a survey of 386 self-identified compulsive buyers recruited via a US self-help group, O'Guinn and Faber⁴⁵ found that compulsive buyers held more credit cards than a non-matched control group, paid fewer of these cards off in full each month, and had more credit cards within \$100 of their credit limit^{xv}●. They also found that 46% of compulsive buyers' take-home-pay went towards debt repayment, compared to the non-matched control group's 22%. Schlosser *et al*⁴⁶ studied 46 US compulsive shoppers, with 60% screening positive for at least one concurrent mental disorder●.



Park and Burns⁴⁷ studied 267 South Korean women, finding that the use of credit cards was significantly more likely to increase compulsive buying^{xvi}●. In a UK study, Elliott *et al*⁴⁸ interviewed 50 compulsive buyers, reporting that 22 had debt that caused them worry and hardship, and that shopping was used to escape depressive mood states, or to focus feelings of anger or betrayal at a controlling partner. The authors conclude that consumer behaviour is both a social and an economic process▲.

A3. 'Mixed debt'

- Debt is significantly associated with an increased occurrence of major depression, but not anxiety disorder.
- Debt may sometimes have a dual effect: creating a potentially negative impact on psychological wellbeing due to the debt itself on the one hand, but also capable of boosting such wellbeing via consumer purchases on credit on the other.
- The more debts people hold, the more likely they may be to have some form of mental disorder.

Ten papers considered a combination of different debt types. Four papers have been described in previous sections on mortgage or consumer debt^{14,29,30,31} whilst one study on debt advice and health services is considered later.⁴⁹ This section therefore reports on five papers that specified and then amalgamated different types of debt into a single 'mixed' measure.

Longitudinal studies

Skapinakis *et al*²⁶ drew on a data-set of 2406 participants who were surveyed during the Psychiatric Morbidity Survey ('baseline') and 18 months later ('follow-up'). Skapinakis *et al* found that 'financial difficulties' (a compound measure of data on a range of different debts) was significantly associated with an increased occurrence of major depression, but not anxiety disorder or the wider category of non-specific mental disorders (all analyses adjusted for baseline psychiatric symptoms)^{xvii}▲. Among individuals with depression at baseline, the odds of depression at follow-up were four times higher for those with financial difficulty than those with no difficulty. For individuals not depressed at baseline, the comparative odds of depression were twice as great for those with financial difficulties.

Dew²⁰ considered the effects over two time points of assets and debts on the mental health outcomes of 3731 married participants. Dew found debt reduced depression among participants, but contributed to perceived economic pressure, which then informed higher levels of depression^{xviii}▲. Dew concludes that while the provision of credit can boost wellbeing via consumer purchases, debt can also have a negative impact on psychological wellbeing.

Part 3: supporting evidence

Debt also strains marital relationships where it requires time and money to repay, particularly when originally accrued without a partner's knowledge.²⁰

Other studies

Balmer *et al*,⁵⁰ in a cross-sectional survey of 5611 adults, did not find a statistically significant relationship between mental health and debt problems, although general long-term illness or disability was significantly associated with long-term debt problems^{xix}▲. Jenkins *et al*¹¹ also used Psychiatry Morbidity Survey data, and analysed a cross-sectional sample of 8580 adults▲. Jenkins *et al* report that the more debts people had, the more likely they were to have some form of mental disorder. This relationship held, even after the effect of income and other sociodemographic variables were taken into account. People with two separate debts had an almost three-fold increase in mental disorder, those with three debts a five-fold increase, and those with six or more separate debts a six-fold increase after adjustment for income.¹¹ Jenkins *et al* report that whilst low income was associated with mental illness, the effect of this appears to be mediated largely by debt. An article by Jenkins *et al*¹² on the same data-set concludes that compared to other members of the general public, participants reporting debt had two to three times the rate of depression; three times the rate of psychosis; double the rate of alcohol dependence; and four times the rate of drug dependency▲.

A4. Non-defined debt

From 46 papers, 18 did not define what type of debt was being assessed, frequently making reference instead to 'general debt'. Key findings included:

- Worrying about debt is significantly associated with depression. However, there is no evidence of a causal relationship.
- Debt may have indirect effects on household psychological wellbeing over time, as it impacts on feelings of economic pressure, parental depression, conflict-based family relationships, and potential mental health problems among children.
- Among students, it has been proposed that rising debt can cause individuals to drop out (with a negative impact on mental health), or can result in increased hours worked outside of university (with a negative impact on mental health).

Postnatal depression

Reading and Reynolds²⁴ used the Edinburgh Postnatal Depression Scale to assess 209 families with a child aged less than one year at baseline (T1) and follow-up six months later (T2). Reading and Reynolds found owing money was significantly associated with postnatal depression at T2, whilst worrying about debt was associated with depression at both T1 and T2^{xx}●. However, debt worries at baseline *did not* predict the development of depression at T2, if the presence of existing depression at T1 was taken into account.



Part 3: supporting evidence

Families and debt

Conger *et al*⁵¹ studied 378 US families with children aged 12-13 over a three year period^{xxi}•. Whilst not reporting a direct relationship between debt and adolescent mental health, Conger *et al* developed a model where, over time, 'economic conditions' (including debt-to-asset ratios, per capita income, unstable work, and income loss) negatively impact on the economic pressure felt by a family. This in turn, impacts on parental depression levels, marital conflict, and parental/child conflict, subsequently manifesting in adolescent depression and anxiety. Similar findings are reported in linked papers by Ge *et al*²¹• and Conger *et al*²²•, ⁵²•, and provide one useful schema for thinking about the process through which debt impacts on families.



In a longitudinal survey, Kaplan and Damphousse²⁷ interviewed 4397 US participants at ages 13 and 26 about key life events and resulting psychological distress (authors' own instrument). Kaplan and Damphousse report that participants with greater levels of psychological distress at age 13 were less likely to borrow money aged 26, whilst participants aged 26 who had borrowed money were less likely to have experienced psychological distress than those who had not borrowed, independent of any history of psychological distress aged 13^{xxii}•. Using a debt-to-asset ratio measure, Zimmerman and Katon⁵³ undertook a cross-sectional analysis of a cohort of 8489 participants from the US National Longitudinal Survey of Youth•. From a sample of US adults aged about 30, assessed using the (Center for Epidemiologic Studies Depression Scale (CES-D), participants' debt-to-asset ratio scores were not consistently associated with greater levels of depression across gender or income groups.

Armstrong and Schulman²³, in a survey of 549 North Carolina Farm owners, did not find a statistically significant association between a debt-to-asset measure and depression•. Armstrong and Schulman contended that perceived economic hardship mediated this relationship, presenting a model where this increases depression, in turn decreasing feelings of personal control, and leading to an increase in depression. Patel *et al*⁵⁴ conducted a survey of 303 adults attending two primary care clinics in India. They found those reporting debt were almost three times more likely to have a common mental disorder when controlling for age, gender, and clinic, but not when other socio-demographic and economic variables were controlled for^{xxiii}•.

Student debt

Cross-sectional surveys on non-defined debt have been conducted with UK and US students. Cooke *et al*⁵⁵ surveyed 1,391 UK undergraduates over three university years. Third-year students were asked about worries concerning debt and anticipated debt at the end of their course. Students with higher debts had worse mental health scores. No correlation was found between third year students' levels of anticipated debt and mental health scores^{xxiv}•.

Roberts *et al*⁵⁶ reported that, among 482 UK university students, poorer mental health was associated with difficulties paying bills^{xxv}•. As

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with Roberts *et al*'s⁵⁷ analysis of 360 UK students, the authors propose two models to explain this relationship between debt and mental health: (1) where rising debt causes students to consider dropping out with a negative impact on mental health; and (2) where rising debt leads to increased hours worked outside of university with a negative impact on mental health.

Jessop *et al*'s²⁵ studied 187 British and Finnish students and reported a statistically significant association between debt worries and student mental health, but not actual levels of debt^{xxvi}•.

Lange and Byrd⁵⁸ surveyed a convenience sample of 237 first year psychology students in New Zealand. Lange reported that students' estimates of their current level of debt were significantly associated with higher perceptions of financial stress, which in turn impacted on other factors including greater feelings of depression. Meanwhile, higher estimates of future debt and higher financial strain were associated with higher financial chronic strain, which in turn could impact on other factors including higher anxiety and higher depression^{xxvii}•. However, such models must be treated with care, and only provide suggested relationships between variables – other alternative explanations may exist.

Other groups

Bagley *et al*'s⁵⁹ surveyed the 'burden of debt' among 600 Filipino domestic workers living in Hong Kong using a combined version

of standardised instruments•. Bagley *et al* identified women experiencing 'bad' mental health, including those with high debt burdens (such as those handing over their passport to a money-lender). However, debt did not feature as a statistically significant predictor of poor mental health in a regression analysis. Pleasence and Balmer⁶⁰, in a study comparing survey data from England and Wales (n=2628 adults) and New Zealand (n=7,200 people aged 15 or over), found that individuals reporting a mental illness were significantly more likely to report legal rights problems in both countries, including issues concerning money or debt^{xxviii}•.

Compulsive buyers

Research undertaken in the USA by McElroy *et al*'⁶¹ aimed to provide data with which to characterise compulsive buying disorder and to establish a basis for preliminary operational diagnostic criteria. Based on a non-comparative descriptive study with 20 compulsive shoppers, McElroy *et al* report that 60% of the sample perceived their debt to be due to compulsive buying, and 85% indicated they were unable to control their compulsive buying•. All 20 participants also met diagnostic criteria for two or more lifetime diagnoses for psychiatric disorders, and 65% met the criteria for four or more disorders. Meanwhile, Miltenberger *et al*'⁶² found participants' debts ranging up to \$30,000•.

B. Relationship between debt and self-harm or suicide

From 54 papers, six addressed issues of suicide and two of self-harm. Key findings included:

- In studies conducted in Finland and Australia, debt or repayment difficulties were independently associated with thoughts about suicide, but not with suicide attempts.
- In studies conducted in Hong Kong, unmanageable debt was one of a small number of predictors of suicide, particularly where gambling debts were concerned.
- In the small number of papers focusing on self-harm there were mixed findings. One study found no significant difference between debt and

non-debt groups in the proportion of participants who were identified as clinical cases for depression. Another study found that those with debts scored significantly higher on a measure of suicidal intent and related psychological wellbeing scales. Of those who had self-harmed, only a minority thought money worry had contributed to their self-harm.

Suicidal thoughts

In a Finnish survey of 4868 people, Hintikka *et al*'⁶⁴ investigated whether difficulty repaying debts was associated with suicidal ideation (thinking about suicide) and suicide attempts in the general population. Asking about difficulties in the last 12

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months in repaying housing loans or other debts, those experiencing debt repayment difficulties were more likely to have a probable mental health problem than those who were not (37% vs 16%). Thinking about suicide was also independently associated with difficulties repaying debt, although debt repayments were not independently associated with suicide attempts^{xxxix}▲. Hintikka *et al* conclude that individuals who experience debt repayment problems may “*need psychiatric evaluation because of their common mental symptoms and increased risk of suicidality, as well as having a need for socio-economic counselling*”.

Taylor *et al*⁶³ conducted an analysis based on a survey data-set of 5037 participants (aged 16 plus) from the South Australian Monitoring and Surveillance System. Defining debt as “spending more money than getting”, Taylor *et al* found that people with debt had a greater likelihood of reporting suicidal thoughts than those without debt, even when other variables and influences were controlled for. Other significant factors included psychological distress, and the number of times a mental health service was used in the last four weeks^{xxx}▲.

Suicide in Hong Kong

Wong *et al*⁶⁴ considered a recent surge in suicide rates among middle-aged people (30-49) in Hong Kong, using 85 cases with matched controls to identify risk factors for suicide. Wong *et al* found that unmanageable debt was one of five independent predictors of suicide^{xxxi}▲. Wong *et al* suggest suicide represents a complex interaction of socioeconomic, social and psychiatric factors, with particular links to the Chinese importance of work and wealth to self-worth and identity.

Chen *et al*⁶⁵, in a non-comparative descriptive study of information about 148 people in Hong Kong who committed suicide, found that people in debt who committed suicide were significantly more likely to have planned the suicide, rather than acting spontaneously (43.6% v 19.4% respectively). Chen *et al*⁶⁶ undertook a case-control study of 150 ethnic Chinese people in Hong Kong (aged 15-50) who committed suicide (via interviews with next of kin), and 150 who had not. Using the measure of “*unmanageable debt*”, Chen *et al* found that the presence of unmanageable debts was one of six key risk factors. Furthermore, controlling for mood disorders among suicide cases, unmanageable debt remained one of four independent predictors of suicide^{xxxii}▲.

Yip *et al*⁶⁷ analysed 1088 suicides taking place in Hong Kong in 2002, comparing those with and without debt problems. Of those individuals with debt problems, 34% were attributed to gambling, 11% to business difficulties, 7.6% to over-consumption of goods and services, 7.2% to rent, and 4.1% to mortgage over-commitment. Yip *et al* identified four significant risk factors for suicide, highlighting the relationship between indebtedness and gambling tendencies, psychiatric problems, employment status and place of birth^{xxxiii}●. They conclude that gambling tendencies play the prominent role in debt-related suicide.

Debt and self-harm

Only two identified studies looked at the association between self-harm and debt. Taylor⁶⁸ considered the comparative rate of debt between people who self-harmed, and those who attended a fracture clinic group. This study used a case-control study design (53 individuals who self-harmed, and 53 who attended the fracture clinic). The study asked participants whether they had “*any significant worries with debt that you cannot repay?*”, and measured participants’ mental health using the Hospital Anxiety and Depression Scale. Taylor found that in the self-harm group, there was no significant difference in the proportion that were ‘cases’ for depression between debt and non-debt groups (37% and 44%, non-significant). However, among the control group this difference was significant (43% and 2%)^{xxxiv}▲.

Hatcher⁶⁹ undertook a cross-sectional survey with 147 patients referred from Leeds general hospital to a psychiatric liaison service due to self-poisoning▲. These patients were surveyed, including measures of problem debt, related legal difficulty, and the perceived extent that money worry related to self-harm. Hatcher found that those with debts scored significantly higher on a measure of suicidal intent, and related psychological wellbeing scales. Of those who had self-harmed, only a minority thought money worry had contributed to their self-harm. The authors observe that this is not surprising as self-harm is multi-factorial, and financial worries may make individuals more vulnerable to other stressors.

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C. Impact on individuals seeking, accessing or acting on help

From fifty-four papers, two addressed the relationship between individual mental health and seeking, accessing or acting on help from debt advisers or creditors. Key findings included:

- Of the 62% of Citizen Advice clients surveyed in 2001 who reported stress, anxiety or depression, almost one-half of this number had already sought treatment of this from a GP.
- A survey by Mind found that one in three respondents with mental health and problem debts had not sought help for their financial difficulties.
- In the same Mind survey, fewer than one in three people had informed the organisation they owed money that they had a mental health problem (31%).



Help-seeking behaviour

The Citizens Advice⁴⁹ report is based upon a cross-sectional survey of new debt clients seen in 2001▲. These clients were recruited from a random sample of 10% of Bureaus in England and Wales (n=63 Bureaus), with information on 924 clients being used in the analysis. In addition, further data on 374 clients was obtained through an extended questionnaire. The research found that 62% of new debt clients completing the extended questionnaire reported they were suffering from stress,

anxiety or depression. Forty-three percent of those reporting the above conditions also reported they had already sought treatment or counselling through their General Practitioner for these problems. These clients had slightly higher average total debts (£11,636 compared to £11,354 for other clients) and lower than average monthly household incomes (£793 compared to £860). Nearly half of those who had been to their General Practitioner for help had been receiving treatment for more than a year. However, the report contends that clients' mental health problems were often 'caused' by other issues in their lives, as over half of these clients were already receiving treatment from their GP before the onset of their debt problems.

In Mind's report,¹⁴ participants were asked whether they had sought any advice or support for any issues relating to their financial difficulties in the last 12 months▲. Two thirds of respondents with problem debts confirmed that they had (66%). The most common forms of support were from free advice services or the Citizens Advice Bureau (63%), friends and family (47%), or the organization they owed money to for support (41%).

Of those respondents not seeking advice or support, the most common reasons were embarrassment (62%), not knowing who to ask (45%), or thinking that no one would be able to help (47%). This indicates that more needs to be done around raising the awareness of the availability of support services.

Creditor support

In the same study, whilst people often turned to a creditor for help or support, less than one in three people with problem debts in Mind's research informed the organisation they owed money that they had a mental health problem (31%). People stated they didn't like telling people about their mental health problems (57%), that they would not be understood (63%), or that it would not make a difference to how the organisation handled the debt (59%). Further, almost half thought they would not be believed (47%; 438/924).

Part 3: supporting evidence

The people who had informed creditor organisations of their mental health problems rated their experience against a number of statements. Despite informing creditor staff about their situation, 64% reported not being asked questions about how their mental health problems were affecting their financial situation. Participants also felt that they weren't treated sympathetically and sensitively (74%), that they weren't told how information about their mental health problems would be used (80%), and that their mental health problems were not taken into account when decisions were made (79%).

Impact on individuals seeking, accessing and using health services

We identified four papers in the literature review which provided empirical data on seeking, accessing or acting on help from health services. Key findings included:

- There is mixed evidence on the relationship between debt problems and health service usage – one study on student debt indicates no increase in usage, whilst another on the general population suggests some increase in GP service uptake.

Roberts *et al*⁵⁶ reported in a cross-sectional survey of 482 medical undergraduates that poorer mental health (GHQ score) was associated with difficulties paying bills, and whilst the self reported amount of debt was not related to whether a GP had been seen in the last two weeks, those with larger debts reported greater dissatisfaction with their most recent visit^{xxxv}●.

Nettleton and Burrows¹⁸ report in their analysis of the British Household Panel Survey that the onset of mortgage problems in 1991-1992 led to a statistically significant increase in men visiting their general practitioner, but in 1994-1995 a similar increase was not statistically significant^{xxxvi}▲. Citizens Advice⁴⁹ report that from 374 client surveys, 62% of new debt clients were suffering from stress, anxiety or depression, and 43% of this number had already sought treatment or counselling through their General Practitioner for these problems. Nearly half of those who had been to their General Practitioner for help had been receiving treatment for more than a year▲. Mind¹⁴ found that although a large number of people with problem debts had used mental health services in the previous two years (60%), only 23% had spoken to a mental health service or psychiatric nurse about their financial difficulties▲.

D. Links between advice and health services

We identified no published papers and no unpublished reports in the literature review that provided empirical data on the linkages, referral mechanisms, and pathways between advice and health organisations where an individual has debt and mental health problems.

Part 4: conclusion

This report has considered the published evidence on the relationship between debt and mental health problems. Currently, there is no conclusive evidence of a strictly causal relationship. However, there is plausible evidence from longitudinal research studies that indebtedness is often subsequently followed by mental health problems, whilst cross-sectional surveys indicate that the greater the number of debts a person has, the higher their risk of also having a mental disorder.

Whilst it is important that new research is commissioned and undertaken to improve the evidence base, this is not a reason to delay action and intervention. Critically, as people with debt and mental health problems can be ‘patients’, ‘advice clients’ and ‘bank customers’ at the same time, this action needs to be both informed by appropriate knowledge and skills, and also well co-ordinated across the relevant sectors.

This report therefore recommends that:

- All UK financial sector codes of practice should – as a minimum – recognise the existence of customers with mental health problems. All codes should also define ‘best practice’ in working with such customers.
- Creditors should ensure that their practices comply with the statutory requirements associated with disability discrimination legislation.
- Low levels of customer disclosure of mental health problems may be an important obstacle to creditors taking appropriate account of customers’ mental health problems. Creditors should work to encourage customer disclosure. Money advice agencies should also update creditors (with a client’s consent) about any changes in that client’s circumstances.
- Money advisers should not be expected to become ‘mental health experts’, but in instances where a client discloses a mental health problem which they require, but are not receiving, therapeutic support, appropriate signposting information and/or referral services should be provided.
- All health and social care professionals should ask patients about financial difficulties in routine assessments and, to enable action to be taken, they should ensure good referral links exist with the money advice sector.
- Where debt is reported, primary care professionals should routinely assess for depression and other common mental disorders.
- These actions depend upon health and social care professionals having the time, knowledge, and confidence to ask about patient finance. This report therefore contends that professionals should receive basic ‘debt first aid’ training: knowing how to talk with patients about debt; knowing how to refer to, and support, debt advisers; but without being expected to become ‘debt experts’ themselves.

Part 4: conclusion

- A renewed emphasis on co-ordinated ‘debt care pathways’ between local health and advice services – that is, the routes by which individuals with debt and mental health problems gain access to the support they need – may be key. Health and advice services already work together well in some areas. However, this report contends that a national programme which coordinated, fostered and maintained links between advice and health services would help individuals receive well organised and complementary support, regardless of their entry point.
- A lack of co-ordinated activity across the health, money advice, and creditor sector is a significant weakness. The Money Advice Liaison Group (MALG) guidelines on debt and mental health¹³ currently provide the only published strategy to address this, and are incorporated or referenced in the major creditor codes of practice, including the Credit Services Association’s Code of Practice, the Finance and Leasing Association’s Lending Code and the Council of Mortgage Lenders’ Industry guidance on arrears and possessions.
- The MALG guidelines have a limited profile in the health and social care sectors, and provide comparatively little guidance on suggested good practice in this area. Work is needed to involve the health and social care sector in developing content of such good practice guidelines, and will need to include service user and carer organisations in its development.
- Further research is needed to establish the effects of different types of debt and to further understand what makes some debt particularly problematic. Further longitudinal research is needed to understand the dynamics of the relationship between debt and mental health, and in particular to establish a direction of causality. Further research should also be done to look at the relationship between debt and non-common mental disorders (e.g. bipolar disorder and schizophrenia).
- Research analyses of the cost of housing market recessions should factor in the economic and human costs of associated mental health problems.
- Although there has been a fair amount of research into the area of debt and mental health, there is little consistency in the conceptualisation and measurement of debt – this needs to be addressed in future research.
- A number of studies suggest that the impact of debt on mental health may be mediated by personal attitudes towards debt, or more specifically ‘debt worry’.²⁰⁻²⁴ More investigation is needed into the mechanisms of this relationship.
- Although studies indicate a correlation between actual debts and debt worries, there is also evidence that the relationship between the two is more complex, and may additionally be affected by other factors.²⁵

Glossary

Qualitative study

Research where the predominant focus is on exploring and understanding the meanings, values, insights and experiences of participants or groups of participants in considerable detail, rather than attempting to collect a more limited set of data which can be more easily quantified (and potentially used to extrapolate or generalise from a smaller sample to a larger population).

Descriptive study (non-comparative)

Research – either qualitative or quantitative, and typically explorative – which focuses on either an individual or a small number of individuals, usually in some detail. No comparison or control group is used.

Cross-sectional survey

At one point in time the subjects are assessed to determine whether they were exposed to the relevant agent and whether they have the outcome of interest. Some of the subjects will not have been exposed nor have the outcome of interest. This clearly distinguishes this type of study from other observational studies (cohort and case controlled) where reference to either exposure and/or outcome is made.

Randomised controlled trial

This is a study where people are allocated randomly to receive a particular intervention or not (this could be two different treatments or one treatment and a placebo). This is the best type of study design to determine whether a treatment is effective.

Longitudinal study

The essence of this is the presence of a periodic measurement process on some group or individual at different time points.

Retrospective cohort

These use data already collected for other purposes. The cohort is “followed up” retrospectively. The study period may be many years but the time to complete the study is only as long as it takes to collate and analyse the data.

Case-control

Case-control studies are usually retrospective. People with the outcome of interest are matched with a control group without the outcome. Retrospectively the researcher determines which individuals were exposed to the agent or treatment or the prevalence of a variable in each of the study groups. Where the outcome is rare, case-control studies may be the only feasible approach.

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Please note that the '◇' indicates where a paper has been included in the full literature review, as opposed to background material in either the introduction or recommendations pages.

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Notes

- ⁱ The GHQ-12 comprises twelve questions, each of which can be scored 0, 1, 2 or 3. The GHQ-12 can be scored in two ways – it can be summed to provide a score between 0 and 36, or the response to each question is deemed positive if it is greater than one and the number of positives provides the score (resulting in a score between 0 and 12 for each individual). Different research studies use different cutpoints between 2 and 4 to define a case of common mental disorder.
- ⁱⁱ Taylor *et al* employed regression models controlling for general financial hardship. They found that any housing payment problems and arrears led to poorer mental health by 1.9 GHQ units ($p < 0.01$), rising to 2.4 GHQ units where men entered into arrears in the last year ($p < 0.01$). This compares to unemployment (1.6 units) and widowed/divorced (1.2 units). For 2534 women, the longer-term impact of both increased GHQ scores by two units ($p < 0.05$).
- ⁱⁱⁱ Nettleton and Burrows used multiple regression models (controlling for variables including income, employment status, and physical health). The onset of mortgage indebtedness led to poorer mental health in 1991-1992 (increase of 1.6 GHQ units for men, $p < 0.001$; 2.4 for women; $p < 0.001$), whilst in 1994-1995 mortgage indebtedness was only statistically significant for women (1.2 GHQ units; $p < 0.05$).
- ^{iv} Brown *et al* reported a statistically significant difference in GHQ-12 scores between households/individuals with no debt and debt, but this only applied to households with non-mortgage debt ($p < 0.001$).
- ^v Cooper *et al* found significant predictors for lone mothers in a regression model of common mental disorders and depression included being in debt (OR 1.6, $p < 0.001$ – CMD only), borrowing money (OR 2.1, $p < 0.001$; 2.9, $p < 0.001$), and owning a house with a mortgage (compared to owning it outright – OR 0.6, $p < 0.01$; OR 2.8, $p < 0.01$). For 73 lone fathers, owning a house with a mortgage and being in debt were significant predictors of common mental disorders (OR 2.8, $p < 0.05$; OR 2.1, $p < 0.001$).
- ^{vi} Cairney and Boyle found that people with mortgages experienced higher distress than those who owned without a mortgage, but lower distress than those who rented ($p < 0.001$). However, much of this difference was explained by the age, gender, education and marital status of participants.
- ^{vii} Viinamäki *et al* report an association between higher home loans and poorer psychological wellbeing (using the GHQ-12).
- ^{viii} Hintikka *et al* found that among 4868 adults minor mental disorder (GHQ score > 2) was more common among those with larger housing loans (above 200000 FIM; $p < 0.001$).
- ^{ix} This was statistically significant at .001. Brown *et al* also observe that the presence of individual debt reduces the probability of achieving a maximum GHQ-12 score by six percent ($p < 0.001$), and household debt by five percent ($p < 0.001$). However, the practical significance of these reductions is debatable.
- ^x Drentea's regression analysis found that a higher level of stress is positively related to anxiety with moderate effect (beta=0.36; $p < 0.01$), with this stress explaining away the effect on anxiety of participants' debt-to-income ratio or skipping minimum card payments.
- ^{xi} Ross *et al* found students with poorer mental health (scoring above 3 on the GHQ-12) had lower amounts of debt ($p = 0.04$). Ross suggests individual worry may explain this association, although this is only just statistically significant.
- ^{xii} Norvilitis *et al* found higher debt levels related to higher stress (beta=.11; $p < 0.001$), with debt representing 30% of an average student's yearly income.
- ^{xiii} Spinella *et al* report that impairment of 'executive functioning' in the brain predicted higher levels of credit card debt (beta=0.35; $p < 0.001$), although the strength of this was low to moderate.
- ^{xiv} Compulsive buyers were more likely to be within \$500-\$100 of their maximum credit limit ($p < 0.001$), and to make minimum credit card repayments (58.3% vs 12.9%; $p < 0.001$).
- ^{xv} O'Guinn and Faber found compulsive buyers held more credit cards than a non-matched control group ($p < 0.001$), paid fewer of these cards off in full each month ($p < 0.001$), and had more credit cards within \$100 of their credit limit ($p < 0.001$).
- ^{xvi} Park and Burns found that the use of credit cards was significantly more likely to increase compulsive buying ($p < 0.001$).
- ^{xvii} Levels of statistical significance do not appear to be reported in this paper, but are assumed to be < 0.05 .
- ^{xviii} Dew developed a structural equation model to consider the effects over two time points of assets and debts on the mental health outcomes of married participants. Using the Center for Epidemiologic Studies Depression Scale, Dew found debt reduced depression among participants (beta=-0.14; $p < 0.001$), but contributed to perceived economic pressure (beta=0.38; $p < 0.001$), which then informed higher levels of depression (beta=0.47; $p < 0.001$).

Notes

- ^{xix} Balmer *et al* found that general long-term illness or disability was significantly associated with long-term debt problems ($p=0.003$).
- ^{xx} Reading and Reynolds used the Edinburgh Postnatal Depression Scale. They found owing money was associated with post-natal depression at T2 ($p<0.001$), whilst worrying about debt was associated with depression at both T1 and T2 ($p<0.001$).
- ^{xxi} Conger *et al* used structural equation models to undertake their analysis.
- ^{xxii} Kaplan and Damphousse report that participants with greater levels of psychological distress at age 13 were less likely to borrow money aged 26 ($p<0.05$), whilst participants aged 26 who had borrowed money were less likely to have experienced psychological distress than those who had not borrowed ($p<0.05$; independent of any history of psychological distress aged 13).
- ^{xxiii} Using the CIS-R, Patel *et al* found those reporting debt were almost three times more likely to have a common mental disorder when controlling for age, gender, and clinic (AOR 2.8; $p<0.001$), but not when other socio-demographic and economic variables were controlled for (OR = 2.1, ns).
- ^{xxiv} Cooke *et al* found that students with higher debts had worse mental health scores (0.28; $P<0.001$; assessed using GP-CORE instrument), although the effect size was small and reverse causality cannot be ruled out. No correlation was found between third year students' levels of anticipated debt and mental health scores (0.03, ns).
- ^{xxv} Roberts *et al* reported that poorer mental health (GHQ score) was associated with difficulties paying bills ($\beta=0.21$; $p<0.0005$).
- ^{xxvi} Jessop *et al* used the Short Form Survey Instrument (SF-36), and reported a significant association between debt worries and student mental health ($p<0.001$).
- ^{xxvii} Lange and Byrd employed the Hopkins Symptom Checklist and path-analysis techniques. They found students' estimates of their current level of debt were significantly associated with higher perceptions of financial stress (.422). Higher estimates of future debt and higher financial strain were associated with higher financial chronic strain (.691).
- ^{xxviii} Pleasence and Balmer found individuals reporting a mental illness were significantly more likely to report legal rights problems in both countries, including issues concerning money/debt ($p<0.005$).
- ^{xxix} Hintikka *et al* found that those experiencing debt repayment difficulties were more likely to have a probable mental health problem than those who were not (37% vs 16%; $p<0.001$; GHQ >2). Thinking about suicide was also independently associated with difficulties repaying debt (OR 2.8; 95% CI, 1.9-4.2).
- ^{xxx} Taylor *et al* found that people with debt had a greater likelihood of reporting suicidal thoughts than those without debt, even when other variables/influences were controlled for (OR=2.24, 95%CI = 1.4-3.6, $P=0.001$). Other significant factors included psychological distress (OR=14.23, 95% CI = 10.39-19.49, $P<0.001$).
- ^{xxxi} Wong *et al* found that unmanageable debt was one of five independent predictors of suicide in a regression analysis (OR=9.42; 95% CI=2.18-40.83; $p<0.001$), albeit with wide confidence intervals.
- ^{xxxii} Chen found that the presence of unmanageable debts was one of six key risk factors (OR=10.08, 95% CI, 2.31-44.04; $P<0.01$). Furthermore, controlling for mood disorders among suicide cases, unmanageable debt remained one of four independent predictors of suicide (OR 7.88, 95% CI, 3.39-18.31; $p<0.001$).
- ^{xxxiii} Yip *et al* identified four significant risk factors for suicide, highlighting the relationship between indebtedness and gambling tendencies (AOR 9.17, 4.76-17.86; $p=0.00$), psychiatric problems (AOR 0.25; 0.13-0.47; $p=0.00$), employment status and place of birth.
- ^{xxxiv} Taylor found that in the self-harm group, there was no significant difference in the proportion that were 'cases' for depression between debt and non-debt groups (37% + 44%, non-significant). However, among the control group this difference was significant (43% and 2%; $p=0.006$).
- ^{xxxv} Roberts *et al* reported that poorer mental health (GHQ score) was associated with difficulties paying bills ($\beta=0.21$; $p<0.0005$), and whilst the self reported amount of debt was not related to whether a GP had been seen in the last two weeks, those with larger debts reported greater dissatisfaction with their most recent visit ($\beta=0.1$; $p=0.4$).
- ^{xxxvi} Nettleton and Burrows report in their analysis of the British Household Panel Survey that the onset of mortgage problems in 1991-1992 led to a statistically significant increase in men visiting their general practitioner ($p<0.001$), but in 1994-1995 a similarly increase was not statistically significant.