



Paying the price: Financial hardship and its association with psychological distress among different population groups in the midst of Great Britain's cost-of-living crisis

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ABSTRACT

Background: Great Britain has been experiencing a cost-of-living crisis since late 2021, with the cost of everyday essentials rising more quickly than the average household income. This study provides up-to-date information on levels of subjective and objective financial hardship during this crisis, differences across population subgroups, and associations with psychological distress.

Methods: We used data from a representative cross-sectional survey of adults (≥ 16 y) in Great Britain ($n = 7,027$) conducted January–March 2023. Subjective financial hardship was defined as reporting finding it quite/very difficult to manage financially these days and objective financial hardship as reporting having been in rent/mortgage arrears in the past 12 months. Past-30-day psychological distress was assessed with the K6 and categorised as no/low (scores ≤ 4), moderate (5–12), and severe distress (≥ 13). Covariates included sociodemographic characteristics, mental health history, smoking status, and alcohol consumption.

Results: Overall, 12.9% [95%CI = 12.0–13.8%] reported subjective financial hardship and 6.5% [5.8–7.2%] objective financial hardship. Groups experiencing more hardship included non-binary people, ethnic minority groups, less advantaged social grades, those living in private rented or social housing, those unemployed and seeking work or not in paid work for other reasons, those with more children in the household, those with a history of ≥ 1 mental health conditions, those who currently smoked and those who drank not at all or at very high levels. Subjective/objective financial hardship was associated with greater odds of experiencing moderate ($OR_{adj} = 1.96$ [1.59–2.42]/ $OR_{adj} = 1.86$ [1.40–2.47]) or severe psychological distress ($OR_{adj} = 4.11$ [3.07–5.50]/ $OR_{adj} = 2.23$ [1.52–3.29]). These associations between financial hardship and psychological distress were similar across all sociodemographic, mental health, smoking, and alcohol characteristics.

Conclusions: In the first quarter of 2023, around one in eight adults in Great Britain reported finding it difficult to manage financially and one in fifteen reported having been in rent or mortgage arrears in the past 12 months, with higher rates of financial hardship among disadvantaged groups. However, disadvantage did not appear to compound the psychological impact of financial hardship: people experiencing financial hardship were substantially more likely to report moderate or severe psychological distress regardless of their sociodemographic characteristics.

1. Introduction

It is estimated that around one in five people live in poverty in Great Britain (Joseph Rowntree Foundation, 2024). Poverty has been

exacerbated and household expenditure has risen since late 2021 as Great Britain – in common with many countries around the world – has experienced high rates of inflation, widely referred to as the ‘cost-of-living crisis’ (The Institute for Government, 2022). The cost of

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everyday essentials like food and utility bills has increased more quickly than the average household income, putting pressure on household budgets (Joseph Rowntree Foundation, 2024; Office for National Statistics, 2023). Over the same period, there has been a serious shortage of mental health service provision and a substantial rise in the proportion of adults reporting severe psychological distress (Jackson et al., 2023; Daly and Robinson, 2021; Office for National Statistics, 2022a,b) and long waits for treatment (Royal College and of Psychiatrists). Understanding the extent to which adults in Great Britain are experiencing financial hardship amid the ongoing cost-of-living crisis, its association with psychological distress, and which groups are experiencing the greatest burden is important for planning and targeting support.

According to national surveys, the vast majority (89%) of adults in Great Britain report that their cost of living has increased recently and many (57% of those reporting an increase) report having had to cut back on non-essential spending as a result (Office for National Statistics, 2022a). However, a substantial proportion do not have the financial means to cope with rising costs: in July 2022, more than a third (35%) of adults reported cutting back on food and other essentials (Office for National Statistics 2022a) and in July–October 2023, 40% of adults reported struggling to afford their rent or mortgage payments (Office for National Statistics, 2023). Evidence shows specific groups have been less able than others to cope financially, including those living in deprived areas or on lower incomes, ethnic minority groups, families and individuals in living in rented accommodation, and those with dependent children (Office for National Statistics, 2023; Office for National Statistics 2022a). Tobacco and alcohol may also play an important role by contributing significantly to spending in low-income households while also being consumed in response to psychological distress (Nyakutsikwa et al., 2021).

Financial hardship is known to be associated with psychological distress and poor mental health (Frankham et al., 2020), even for those without pre-existing mental health conditions (Bridges and Disney, 2010; Gleib et al., 2018; Kang et al., 2022), and recent data suggest population levels of psychological distress have been particularly high since the start of the cost-of-living crisis (Jackson et al., 2023). In the UK, there was a sharp rise in psychological distress and symptoms of poor mental health at the start of the Covid-19 pandemic in 2020 (Pierce et al., 2020; Kwong et al., 2021; Daly et al., 2022; Niedzwiedz et al., 2021; Kromydas et al., 2022; Fancourt et al., 2021). Although these changes occurred across most population subgroups studied, many studies (Daly and Robinson, 2021, 2022; Pierce et al., 2020; Kwong et al., 2021; Fancourt et al., 2021; Ellwardt and Präg, 2021) observed greater rises in distress among groups that experienced greater financial impacts early in the pandemic (Birditt et al., 2020; Adams-Prassl et al., 2020; Landivar et al., 2020; Blundell et al., 2020), including younger adults, women, those with greater socioeconomic disadvantage (e.g., lower paid jobs), and those with children in the home. Levels of any distress fell after social distancing restrictions were lifted (Jackson et al., 2023; Daly and Robinson, 2021), but rose again from mid-2021 (Jackson et al., 2023) as the UK began to be affected by a cost-of-living crisis (The Institute for Government, 2022). As a result, the proportion of adults in England reporting any moderate/severe psychological distress was similar in December 2022 (32.0%) to levels at the start of the pandemic in April 2020 (34.5%) (Jackson et al., 2023). The proportion reporting severe distress increased steadily, from an elevated baseline, between the start of the Covid-19 pandemic in April 2020 and throughout the cost-of-living crisis up to December 2022 (from 5.7% to 8.3%) (Jackson et al., 2023). This increase in severe distress occurred across different population groups (i.e., by age, gender, occupational social grade, children in the household, smoking status, and high-risk drinking status), but was most pronounced at younger ages, with the proportion reporting severe distress increasing from 11.1% to 20.2% among 18–24 year-olds (Jackson et al., 2023). The timing of the cost-of-living crisis has coincided with (i) the decline in the proportion of adults experiencing any psychological distress reversing and (ii) the continued

increase in the proportion experiencing severe distress. However, to our knowledge, no studies have examined the association between experiencing financial hardship during the cost-of-living crisis and levels of psychological distress, nor explored differences in the experience of financial hardship and its association with psychological distress across population subgroups. It is important for public health researchers to study these relationships at the current time, when both financial hardship and psychological distress are elevated in the population, as there is substantial evidence that financial crises impact on public health (Stuckler et al., 2009). Therefore, the nature of the association between financial hardship and psychological distress may differ from that observed in different economic and social contexts.

Using data from a nationally representative survey of adults in Great Britain in 2023, this study aimed to provide up-to-date information on levels of financial hardship during the ongoing cost-of-living crisis, associations with psychological distress, and differences across population subgroups. Previous studies have shown that subjective measures of economic distress (e.g., perceived control, financial security) can differ from objective measures (e.g., income, assets) (Gleib et al., 2018); both have implications for psychological wellbeing, although some studies suggest the subjective experience of hardship may potentially be more strongly associated with distress (Bridges and Disney, 2010; Kang et al., 2022). We therefore assessed both subjective and objective financial hardship.

Specifically, we aimed to address the following research questions (RQs):

1. What proportion of adults in Great Britain report currently finding things difficult financially (subjective financial hardship)?
2. What proportion report having been in rent or mortgage arrears in the last 12 months (objective financial hardship)?
3. How well do subjective and objective measures of financial hardship align?
4. To what extent are experiencing subjective and objective financial hardship associated with experiencing (a) moderate and (b) severe past-30-day psychological distress?
5. How do the proportions reporting subjective and objective financial hardship, and the association between financial hardship and psychological distress, differ by age, gender, ethnicity, occupational social grade, housing tenure, working status, children in the household, history of mental health conditions, smoking status, and level of alcohol consumption?

2. Methods

2.1. Pre-registration

The study protocol and analysis plan were pre-registered on Open Science Framework (<https://osf.io/86nfw/>). We made one amendment, which was to analyse psychological distress as a binary rather than three-level variable for interactions. The rationale for this change is described in the *Statistical analysis* section.

2.2. Design

Data were from the ongoing Smoking and Alcohol Toolkit Study, a monthly cross-sectional survey of a representative sample of adults in Great Britain (Fidler et al., 2011; Kock et al., 2021). The study uses a hybrid of random probability and simple quota sampling to select a new sample of approximately 2,450 adults aged ≥ 16 years each month. Data are collected via computer-assisted telephone interviews. Comparisons with other national surveys and sales data indicate that key variables such as sociodemographic characteristics, smoking prevalence, and cigarette consumption are nationally representative (Fidler et al., 2011; Jackson et al., 2019).

Between January and March 2023, questions on financial hardship

were added to the survey. The present study analysed data from participants surveyed in these waves.

2.3. Measures

2.3.1. Financial hardship

Subjective financial hardship was assessed with the question: ‘How well would you say you yourself are managing financially these days? Would you say you are ...’

- a) Living comfortably
- b) Doing alright
- c) Just about getting by
- d) Finding it quite difficult
- e) Finding it very difficult

This question has been used to assess people’s subjective financial situation in other British household surveys (Downward et al., 2020). We analysed the proportion reporting finding things quite or very difficult (responses d and e, coded 1) versus all other responses (coded 0). Sensitivity analyses looked at the proportion reporting finding things very difficult (response e) versus all other responses.

Objective financial hardship was assessed with the question: ‘In the last 12 months, have you been in rent or mortgage arrears?’ We analysed the proportion who responded ‘yes’ (coded 1) versus those who responded ‘no’ (coded 0). Those who responded ‘don’t know’ or ‘prefer not to say’ were treated as missing.

2.3.2. Psychological distress

Psychological distress was assessed using the Kessler Psychological Distress Scale (K6), which measures non-specific psychological distress in the past month (Kessler et al., 2002, 2010). It uses six questions: ‘During the past 30 days, about how often, if at all, did you feel:

- a) nervous;
- b) hopeless;
- c) restless or fidgety;
- d) so depressed that nothing could cheer you up;
- e) that everything was an effort;
- f) worthless?’

Responses were a 5-point scale, from 0 (none of the time) to 4 (all of the time) and summed across items to produce a total score ranging from 0 to 24. The scale had good internal consistency (Cronbach’s $\alpha = 0.86$); correlations between items are provided in Table S1. Scores between 0 and 4 were coded ‘no or low distress’, 5 to 12 as ‘moderate distress’, and 13 to 24 as ‘severe distress’ (Kessler et al., 2002; Prochaska et al., 2012). This variable was collected among all participants in England and ~50% of participants in Wales and Scotland due to availability of funding.

2.3.3. Participant characteristics

We included a range of variables capturing participants’ socio-demographic characteristics, history of mental health conditions, and substance use. These were selected based on previous studies linking these to psychological distress and financial hardship (Office for National Statistics, 2023; Daly and Robinson, 2021; Office for National Statistics; Pierce et al., 2020; Kwong et al., 2021; Fancourt et al., 2021; Daly and Robinson, 2022; Ellwardt and Präg, 2021).

Age was analysed as a continuous variable.

Gender was categorised as identifying as a man, woman, or in another way. Those who identified in another way were excluded from regression analyses due to low numbers.

Ethnicity was categorised as belonging to an ethnic minority group (binary: yes/no).

Occupational social grade was categorised according to the National

Readership Survey classification (National Readership Survey, 2007) as AB (higher and intermediate managerial, administrative, and professional); C1 (supervisory, clerical and junior managerial, administrative, and professional); C2 (skilled manual workers); D (semi-skilled and unskilled manual workers); or E (receiving only the state pension, casual and lowest grade workers, unemployed with state benefits only).

Housing tenure was categorised as homes owned outright, bought on a mortgage, rented from private landlord, social housing (homes belonging to a housing association or rented from local authority), or other.

Working status was categorised as full-time employment, part-time employment, self-employed, student (full-time student or still at school), unemployed and seeking work, retired, or not in paid employment (because of long-term illness or disability, housewife/husband, or other reason). For regression analyses, we collapsed these categories to distinguish between those in full-time employment/self-employed, part-time employment, unemployed and seeking work, or other.

Children in the household was categorised as 0, 1, 2, or ≥ 3 .

History of mental health conditions was based on self-reported diagnosis of at least one mental or behavioural disorder (e.g., depression, anxiety, post-traumatic stress disorder) since the age of 16 (yes/no). This variable was assessed among all participants in England and ~50% of participants in Wales and Scotland due to availability of funding.

Smoking status was categorised as current, former, or never smoking.

Level of alcohol consumption was assessed with the Alcohol Use Disorders Identification Test—consumption (AUDIT-C), with possible scores ranging from 0 to 12. As a general guide, scores ≥ 5 indicate drinking at increasing or higher-risk levels (i.e., levels that increase someone’s risk of harm) (Rumpf et al., 2002).

2.4. Statistical analysis

Data were analysed in R v.4.2.1. Missing cases (including non-response and cases where variables were not assessed (i.e., the ~50% of those surveyed in Wales and Scotland not asked questions on mental health conditions)) were excluded on a per-analysis basis. We did not undertake any alternative analyses of missing cases given the proportion missing was consistently $< 5\%$ among participants who were asked any given question (Table S2). The Smoking and Alcohol Toolkit Study uses raking to weight the sample to match the population of Great Britain in terms of a number of demographics (gender, working status, children in the household, age, social grade and region) (Fidler et al., 2011). Separate weights are available for analyses of psychological distress and mental health conditions, to account for this variable not being assessed among all participants in Wales and Scotland. All analyses used weighted data.

We reported the proportions of participants reporting (i) subjective financial hardship (i.e., currently finding things difficult) and (ii) objective financial hardship (i.e., having been in rent or mortgage arrears in the past year), among all adults, by each participant characteristic and with 95% confidence intervals [CI]. Age and AUDIT-C score were modelled non-linearly using restricted cubic splines (with three knots placed at the 5, 50, and 95% quantiles for age and at scores of 0, 6, and 12 for AUDIT-C) to allow for flexible associations without arbitrary categorisation. Estimates were predicted from unadjusted logistic regression models that tested associations of age and AUDIT-C score with subjective/objective financial hardship. We reported estimates for selected years of age (16, 25, 35, 45, 55, and 65) and AUDIT-C scores (0, 3, 6, 9, and 12).

We presented cross-tabulations for the subjective and objective measures of financial hardship, to assess the degree of correspondence across the two measures.

We used multinomial logistic regression to test associations of (i) subjective and (ii) objective financial hardship with psychological distress (no/low distress [reference category], moderate distress, severe

distress), adjusted for age, gender, ethnicity, occupational social grade, housing tenure, working status, children in the household, history of mental health conditions, smoking status, and level of alcohol consumption. As an unplanned sensitivity analysis, we repeated these models without adjustment for history of mental health conditions, smoking status, and level of alcohol consumption as these could potentially be a consequence of psychological distress related to financial hardship.

We then tested interactions between subjective/objective financial hardship and each participant characteristic on distress. We had planned to repeat the adjusted multinomial models with the addition of interaction terms (with each interaction tested in a separate model). However, given (i) our primary models showed a similar pattern of results for moderate and severe distress and (ii) the complexity of interpreting interactions in multinomial models, we instead collapsed the distress variable to no/low distress [reference category] and moderate/severe distress and analysed interactions using binary logistic regression for easier interpretation. Each interaction was tested in a separate model with adjustment for covariates as listed above.

In an unplanned analysis, we repeated the adjusted multinomial logistic regression models stratified by occupational social grade, to explore the strength of associations between subjective/objective financial hardship and psychological distress (no/low distress [reference category], moderate distress, severe distress) across the socioeconomic spectrum.

3. Results

A total of 7,027 adults aged ≥ 16 years in Great Britain responded to the survey between January and March 2023. The sample had a weighted mean age of 47.9 years (range 16–95 years), 50.6% were women, and 85.4% were white. Table S2 provides a summary of the sample characteristics and missing data on each variable.

3.1. Prevalence of financial hardship

Table 1 shows the weighted prevalence of subjective and objective financial hardship, overall and within subgroups. Overall, 12.9% of participants reported subjective financial hardship (finding it difficult; 4.5% reported finding it very difficult) and 6.5% reported objective financial hardship (rent/mortgage arrears). Groups more likely to report both subjective and objective financial hardship included non-binary people, ethnic minority groups, those from less advantaged social grades, those living in private rented or social housing, those who were unemployed and seeking work or not in paid work for other reasons, those with more children in the household, those with a history of ≥ 1 mental health conditions, those who currently smoked, and those who drank not at all (i.e., AUDIT-C score of 0) or at very high levels (e.g., AUDIT-C score of 12). Objective financial hardship was also higher at younger ages and among students, although subjective financial hardship was highest among those who were middle-aged (e.g., 35–45 years).

3.2. Correspondence between subjective and objective measures of financial hardship

Measures of subjective and objective financial hardship were correlated (Table 2). The proportion who reported having been in rent or mortgage arrears in the past 12 months increased with every one-level increase in subjective financial hardship, from 2.6% among those who reported living comfortably to 26.7% among those who reported finding it very difficult. However, just 40.1% of those who reported having been in rent or mortgage arrears reported currently finding it quite or very difficult to manage financially; 20.1% said they were doing alright and 10.8% said they were living comfortably.

Table 1
Weighted prevalence of financial hardship among adults in Great Britain.

	Prevalence, % [95%CI]		
	Subjective financial hardship		Objective financial hardship
	Finding it difficult ^a	Finding it very difficult ^b	Mortgage/rent arrears ^c
All adults	12.9 [12.0–13.8]	4.5 [3.9–5.1]	6.5 [5.8–7.2]
Age (years) ^d			
16	12.2 [9.9–14.9]	2.6 [1.6–4.1]	12.1 [9.5–15.3]
25	14.4 [12.7–16.3]	3.9 [3.0–5.2]	11.2 [9.6–12.9]
35	16.5 [15.2–18.0]	5.8 [4.9–6.8]	9.8 [8.6–11.2]
45	17.2 [15.7–18.8]	6.9 [5.8–8.1]	7.7 [6.5–9.0]
55	15.1 [13.8–16.6]	5.8 [4.9–6.9]	4.8 [4.1–5.7]
65	11.0 [9.8–12.2]	3.4 [2.7–4.2]	2.4 [1.8–3.1]
Gender			
Men	12.1 [10.8–13.4]	4.4 [3.6–5.2]	5.9 [4.9–6.9]
Women	13.3 [12.0–14.6]	4.5 [3.7–5.3]	7.1 [6.1–8.1]
Non-binary	36.0 [22.2–49.8]	14.0 [4.0–24.0]	12.0 [2.7–21.3]
Ethnic minority group			
No	11.7 [10.8–12.7]	4.1 [3.5–4.8]	5.2 [4.5–5.9]
Yes	19.0 [16.2–21.8]	6.0 [4.3–7.7]	13.8 [11.3–16.3]
Occupational social grade			
AB (most advantaged)	5.1 [4.0–6.3]	1.0 [0.5–1.6]	2.9 [2.0–3.8]
C1	11.1 [9.8–12.3]	3.3 [2.6–4.0]	6.3 [5.3–7.2]
C2	14.9 [12.6–17.3]	5.0 [3.6–6.4]	8.2 [6.3–10.1]
D	17.0 [13.6–20.4]	7.2 [4.9–9.5]	10.0 [7.3–12.8]
E (least advantaged)	30.1 [26.3–34.0]	13.1 [10.2–16.0]	8.7 [6.3–11.1]
Housing tenure			
Owned outright	6.1 [5.0–7.2]	1.8 [1.2–2.4]	0.9 [0.4–1.3]
Bought on a mortgage	9.8 [8.3–11.2]	2.9 [2.0–3.7]	5.2 [4.1–6.3]
Rented from private landlord	20.7 [17.8–23.6]	7.5 [5.7–9.4]	12.3 [9.9–14.6]
Social housing	25.9 [22.7–29.1]	10.0 [7.8–12.2]	16.2 [13.4–19.0]
Other	16.1 [9.5–22.8]	6.9 [2.2–11.6]	9.2 [3.8–14.6]
Working status			
Full-time employment	10.3 [9.0–11.6]	3.0 [2.3–3.7]	6.2 [5.2–7.3]
Part-time employment	15.0 [11.7–18.3]	5.4 [3.3–7.5]	8.6 [5.9–11.4]
Self-employed	12.4 [9.4–15.3]	4.1 [2.4–5.9]	7.0 [4.6–9.4]
Student	10.8 [7.4–14.2]	2.2 [0.5–3.9]	11.6 [8.0–15.3]
Unemployed and seeking work	40.3 [32.6–47.9]	19.2 [13.0–25.4]	15.5 [9.6–21.5]
Retired	6.4 [5.1–7.8]	1.9 [1.2–2.7]	1.4 [0.8–2.0]
Not in paid employment for other reasons	30.2 [25.8–34.7]	13.0 [9.6–16.3]	11.6 [8.4–14.9]
Children in the household			
0	12.0 [11.0–13.1]	4.1 [3.5–4.8]	5.7 [4.9–6.5]
1	14.7 [12.1–17.3]	5.7 [3.9–7.4]	7.7 [5.7–9.7]
2	13.4 [10.6–16.2]	4.9 [3.2–6.6]	8.2 [5.8–10.6]

(continued on next page)

Table 1 (continued)

	Prevalence, % [95%CI]		
	Subjective financial hardship		Objective financial hardship
	Finding it difficult ^a	Finding it very difficult ^b	Mortgage/rent arrears ^c
≥3	19.9 [14.5–25.2]	5.6 [2.6–8.5]	11.9 [7.7–16.2]
History of ≥1 mental health conditions			
No	9.3 [8.4–10.3]	3.1 [2.5–3.7]	4.8 [4.1–5.5]
Yes	20.7 [18.7–22.7]	7.5 [6.2–8.9]	10.0 [8.5–11.6]
Smoking status			
Never	10.2 [9.1–11.3]	3.2 [2.6–3.8]	5.7 [4.8–6.6]
Former	12.6 [10.7–14.4]	4.2 [3.1–5.4]	5.0 [3.8–6.3]
Current	22.9 [20.0–25.7]	9.2 [7.2–11.3]	11.8 [9.5–14.1]
Level of alcohol consumption (AUDIT-C) ^d			
0 (lowest)	18.8 [17.0–20.8]	7.1 [5.9–8.5]	8.2 [7.0–9.7]
3	11.2 [10.1–12.3]	3.1 [2.5–3.8]	5.7 [5.0–6.6]
6	8.7 [7.6–10.0]	2.2 [1.7–2.9]	4.8 [3.9–5.9]
9	11.3 [9.3–13.5]	3.4 [2.4–4.9]	5.6 [4.2–7.3]
12 (highest)	19.1 [13.0–27.1]	8.5 [4.0–17.1]	7.7 [4.3–13.5]

CI, confidence interval.

^a Defined as responding ‘finding it quite difficult’ or ‘finding it very difficult’ to the question ‘How well would you say you yourself are managing financially these days?’

^b Defined as responding ‘finding it very difficult’ to the question ‘How well would you say you yourself are managing financially these days?’

^c Defined as responding ‘yes’ to the question ‘In the last 12 months, have you been in rent or mortgage arrears?’

^d Predicted estimates from a logistic regression model with age modelled using restricted cubic splines. Note that the model used to derive these estimates included data from participants of all ages, not only those who were aged exactly 16, 25, 35, 45, 55, or 65 years.

^e Predicted estimates from a logistic regression model with AUDIT-C score modelled using restricted cubic splines. Note that the model used to derive these estimates included data from all participants who provided data on AUDIT-C, not only those who scored exactly 0, 3, 6, 9, or 12.

Table 2

Correspondence between reports of subjective and objective financial hardship.

	In the last 12 months, have you been in rent or mortgage arrears?			
	No		Yes	
	Row % [95%CI]	Column % [95%CI]	Row % [95%CI]	Column % [95%CI]
How well would you say you yourself are managing financially these days?				
Living comfortably	97.4 [96.6–98.3]	28.5 [27.3–29.7]	2.6 [1.7–3.4]	10.8 [7.3–14.2]
Doing alright	96.0 [95.0–97.0]	33.7 [32.4–35.0]	4.0 [3.0–5.0]	20.1 [15.6–24.6]
Just about getting by	92.9 [91.5–94.3]	26.8 [25.6–28.1]	7.1 [5.7–8.5]	29.1 [24.0–34.2]
Finding it quite difficult	83.1 [79.5–86.7]	7.4 [6.7–8.2]	16.9 [13.3–20.5]	21.6 [17.0–26.1]
Finding it very difficult	73.3 [67.3–79.3]	3.5 [3.0–4.1]	26.7 [20.7–32.7]	18.5 [14.1–22.9]

CI, confidence interval.

3.3. Associations of financial hardship with psychological distress

Overall, 26.8% [25.5–28.0%] reported moderate psychological distress and a further 8.4% [7.6–9.2%] reported severe distress. Those who reported experiencing financial hardship were more likely to report moderate or severe distress than those who did not report financial hardship (Fig. 1). After adjustment for other characteristics, those who reported finding it difficult to manage financially had 96% higher odds of reporting moderate distress and 311% higher odds of reporting severe distress and those who reported finding it very difficult had 106% and 479% higher odds, respectively (Table 3). Similarly, those who reported past-12-month rent/mortgage arrears had 86% higher odds of reporting moderate distress and 123% higher odds of reporting severe distress (Table 3). The pattern of results was very similar without adjustment for history of mental health conditions, smoking status, and level of alcohol consumption (Table S3).

Associations between financial hardship and psychological distress did not differ significantly by age, gender, ethnicity, occupational social grade, housing tenure, working status, children in the household, history of mental health conditions, smoking status, or level of alcohol consumption (Table S4). Stratified analyses indicated associations between financial hardship and psychological distress were observed across the socioeconomic spectrum, although 95% CIs were relatively wide and overlapped 1 for some analyses (Table S5).

4. Discussion

In January–March 2023, around one in eight adults in Great Britain reported finding it difficult to manage financially (subjective financial hardship) and one in fifteen reported having been in rent or mortgage arrears in the past 12 months (objective financial hardship). Levels of financial hardship varied across population subgroups, with greater hardship among more disadvantaged groups, and particularly high levels among those not in paid work. While subjective and objective measures of financial hardship were correlated, they were not perfectly aligned. People experiencing financial hardship were substantially more likely to report moderate or severe psychological distress. These associations were observed across population subgroups.

Our results showed a considerable proportion of the population were experiencing financial hardship amid the cost-of-living crisis. Based on the most recent mid-year population estimates for Great Britain (Office for National Statistics, 2024), we estimate that 6.9 million adults were finding it difficult to manage financially (53.7 million adults ≥16 y (Office for National Statistics, 2024) * 12.9%) and 3.5 million had been in rent or mortgage arrears in the past 12 months (53.7 million adults ≥16 y (Office for National Statistics, 2024) * 6.5%). There was substantial variation across subgroups, ranging from 5% finding it difficult to manage financially and 3% in rent or mortgage arrears among the most advantaged occupational social grades to 40% and 19% respectively among those who were unemployed and looking for work. In line with previous data (Office for National Statistics, 2023; Office for National Statistics), we found levels of subjective and objective financial hardship were consistently higher among groups with greater socio-economic disadvantage, ethnic minorities, and people with more children in the household. We also saw higher levels among people with a history of mental health conditions, non-binary people, those who smoked, and those who either drank not at all or at very high levels. Interestingly, there were different patterns by age, with younger adults and students more likely than older adults to report being in rent or mortgage arrears but those who were middle-aged more likely than younger adults to report finding it difficult to manage financially. It is possible this reflects the older group having more outgoings and others financially dependent on them and, because of these other commitments, potentially being more likely to cut back on other outgoings to avoid falling behind on rent or mortgage payments (Bratley, 2023). Middle-aged and older adults will also be more likely than younger

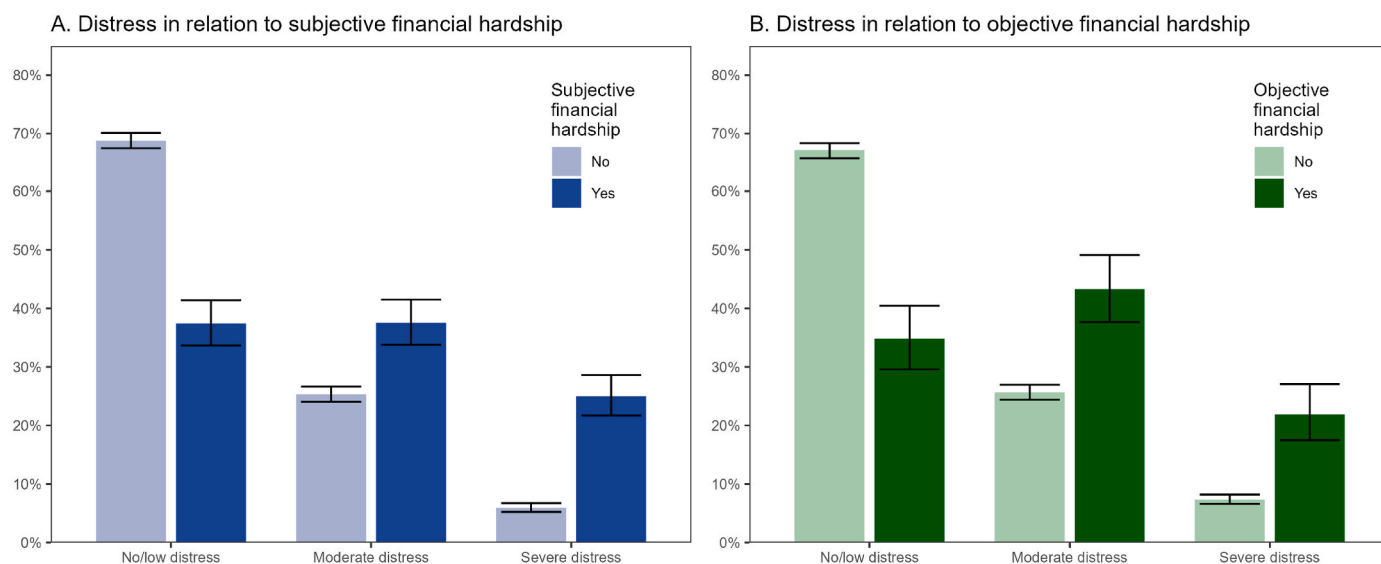


Fig. 1. Associations of financial hardship with psychological distress. Bars show the weighted proportions of adults in Great Britain reporting no/low distress, moderate distress, and severe distress, according to whether or not they reported experiencing (A) subjective financial hardship (defined as responding ‘finding it quite difficult’ or ‘finding it very difficult’ to the question ‘How well would you say you yourself are managing financially these days?’) and (B) objective financial hardship (defined as responding ‘yes’ to the question ‘In the last 12 months, have you been in rent or mortgage arrears?’). Error bars represent 95% confidence intervals.

Table 3

Associations of financial hardship with past-month psychological distress.

	OR _{adj} [95%CI] ^a	
	Moderate distress	Severe distress
Subjective financial hardship^b		
Finding it quite/very difficult	1.96 [1.59–2.42]	4.11 [3.07–5.50]
Finding it very difficult	2.06 [1.42–3.00]	5.79 [3.73–8.99]
Objective financial hardship^c		
Rent/mortgage arrears	1.86 [1.40–2.47]	2.23 [1.52–3.29]

CI, confidence interval. OR_{adj}, adjusted odds ratio.

^a Estimates from multinomial logistic regression (reference category: no/low distress) adjusted for age, gender, ethnicity, occupational social grade, housing tenure, working status, children in the household, history of ≥ 1 mental health conditions, smoking status, and level of alcohol consumption.

^b Assessed with the question ‘How well would you say you yourself are managing financially these days?’

^c Assessed with the question ‘In the last 12 months, have you been in rent or mortgage arrears?’

adults to have paid off their mortgage or only have a small amount left, meaning their monthly payments are less affected by changes in interest rates and offering them the flexibility to extend their mortgage term to mitigate financial pressures. It is also plausible that as housing is becoming increasingly unaffordable for younger people (Brader, 2024), being in rent or mortgage arrears is becoming more normalised (Dunstan, 2024).

We used both subjective and objective measures to assess experiences of financial hardship. Participants who reported subjective hardship were more likely to report objective hardship and vice versa, but the two variables were not entirely consistent with one another. Just two out of every five participants who had been in mortgage or rent arrears said they were currently finding it difficult to manage financially. Some of this discrepancy may be linked to the temporality of the two measures: the objective variable asked about mortgage or rent arrears in the past 12 months while the subjective variable asked how participants were managing financially *these days*. It is plausible that some participants may have been in mortgage or rent arrears within the past year but that their financial pressures had since eased and they were now living more comfortably. There are also a wide variety of other economic stressors

besides being in rent or mortgage arrears that were not captured by our objective measure of financial hardship, such as other short- and long-term debt or use of food banks. There may also be social, cognitive, or emotional factors that might explain why some people perceive themselves to be in financial hardship when this is not borne out by the objective evidence. For example, if people compare their situations to people around them (or on social media) who are in a better financial position, this may lead them to perceive themselves to be living less comfortably (Brown and Gray, 2016). Likewise, people’s emotional state may influence their perception of their financial wellbeing. The discordance between the objective and subjective measures may suggest that, at least for some people, being in arrears is common and so they do not regard it as difficult – or that they adopt a stoic attitude towards their financial situation and report managing ok despite struggling to cover their housing costs.

As previous studies have shown (Frankham et al., 2020), financial hardship was associated with increased odds of experiencing moderate or severe psychological distress in the past 30 days. We found the association was largest between subjective financial hardship and severe distress: those who reported finding it difficult to manage financially had four times higher odds of reporting severe distress than those who said they were just about making ends meet, doing alright, or living comfortably. By contrast, the odds of severe distress were around twice as high among those who reported having been in rent or mortgage arrears in the past 12 months than among those who had not. This disparity in the size of the association may be because the measure of objective financial hardship was not relevant to all participants (i.e., those who did not pay rent or a mortgage) or may reflect people cutting back on other outgoings in order not to fall behind on rent/mortgage payments. Other national surveys in Great Britain suggest more than one in two adults has had to reduce the amount they are spending on non-essential goods since the cost-of-living crisis began and more than one in three has had to cut back on food and other essential items (Office for National Statistics, 2022a).

We had anticipated that associations between financial hardship and psychological distress might be stronger among groups with an intersecting disadvantage (e.g., those from less advantaged social grades) or greater vulnerability to distress (e.g., those with a history of mental health conditions), given recent studies have documented greater

increases in distress since the pandemic among groups that experienced greater financial impacts (Birditt et al., 2020; Adams-Prassl et al., 2020; Landivar et al., 2020; Blundell et al., 2020). However, we did not find clear evidence of this, with results showing a broadly consistent pattern across subgroups.

Our findings have implications for research, policy, and practice. In particular, in the context of the ongoing cost-of-living crisis, it is critical that mental health services are adequately funded and accessible to groups experiencing greater financial stress. However, just putting more money into health services may be insufficient or inadequate. In addition, health professionals and researchers in mental health should consider the role of financial hardship, including subjective perceptions, as a possible contributing factor to psychological distress, particularly among those from disadvantaged groups. It is important not only to understand and document the impact of financial crises on people's mental health but to identify ways in which it could be mitigated, rather than just treated. The analyses presented here were opportunistic and exploratory and could be developed in future studies. For example, it would be interesting to know whether financial hardship contributes differently to internalising and externalising symptoms of psychological distress.

There are many causes of poor mental health, and a range of levels of explanation and theories to explain and understand why some people are more susceptible. The strong associations between objective and subjective hardship and greater odds of experiencing moderate and especially severe distress are consistent with a broad social determinants of health perspective. This emphasises the role of both material and psychosocial factors within a wider system of influences upon an individual's health (Williams et al., 2008; Marmot et al., 2005). It also emphasises that responses should go beyond addressing the proximal causes of ill-health (e.g., behaviours) and instead incorporate a broader set of economic and social policies and politics to improve population health (Elliott, 2016).

Strengths of this study include the nationally representative sample, validated measure of psychological wellbeing, and detailed information on participants' sociodemographic characteristics. Another strength is our analysis of both subjective and objective measures of financial hardship, which showed a similar pattern of results. There were also limitations. Although the sample was weighted to match the population in Great Britain on a number of demographic characteristics, there are others that were not directly accounted for (e.g., ethnicity) so there may be some residual bias in the weighted estimates. Objective financial hardship was assessed with a single question and there are other variables that could have provided insight into whether people were experiencing this (e.g., whether people were accruing debt or delaying payment of bills). The cross-sectional design precluded us from determining whether associations between financial hardship and psychological wellbeing were causal. While we adjusted for a range of potential confounders, there may have been residual confounding by unmeasured variables (e.g., poor physical health or having others in the household (besides children) who may need care, e.g., partners, parents). There may also be an element of reverse causation, if distress affects people's ability to earn a living or causes them to perceive their ability to manage financially as lower. The measure of objective financial hardship may not have been relevant to all participants (e.g., those not living independently or who had paid off their mortgage) and it is likely that alternative measures would produce higher estimates of the proportion of adults experiencing hardship. Sample sizes were small for some subgroups, limiting statistical power to detect differences. As a result, there may be subgroup differences that we did not detect. Finally, as a household survey, we did not capture the experiences of other populations that may have particularly high levels of financial hardship or distress (e.g., inclusion health groups).

In conclusion, in the first quarter of 2023, around one in eight adults in Great Britain reported finding it difficult to manage financially and one in fifteen reported having been in rent or mortgage arrears in the

past 12 months. These numbers were much higher among people from less advantaged population subgroups. However, disadvantage did not appear to compound the psychological impact of financial hardship: people experiencing financial hardship were substantially more likely to report moderate or severe psychological distress regardless of their sociodemographic characteristics.

CRediT authorship contribution statement

Sarah E. Jackson: Writing – review & editing, Writing – original draft, Visualization, Methodology, Investigation, Formal analysis, Conceptualization. **Sharon Cox:** Writing – review & editing, Methodology, Investigation, Conceptualization. **John Holmes:** Writing – review & editing, Methodology, Investigation, Funding acquisition. **Colin Angus:** Writing – review & editing, Visualization, Methodology, Investigation, Funding acquisition. **Deborah Robson:** Writing – review & editing, Methodology, Investigation. **Leonie Brose:** Writing – review & editing, Methodology, Investigation, Funding acquisition. **Jamie Brown:** Writing – review & editing, Supervision, Methodology, Investigation, Funding acquisition, Data curation, Conceptualization.

Ethics approval

Ethical approval for the STS was granted originally by the UCL Ethics Committee (ID 0498/001). The data are not collected by UCL and are anonymised when received by UCL.

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Declaration of competing interest

JB has received unrestricted research funding from Pfizer and J&J, who manufacture smoking cessation medications.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.socscimed.2024.117561>.

Data availability

Data will be made available on request.

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