Title

COVID-19, Economic Downturn, and Long-Term Trajectories of Population Mental Health: Evidence from Two Nationally Representative British Birth Cohorts at the Intersection of Gender and Socioeconomic Position

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Declaration of Interest

No competing interests to declare.

Abstract

We examined long-term trajectories of mental (ill-)health in two British generations ('Baby boomers' and 'Generation X') across the life-course, including the COVID-19 lockdowns and the following cost-of-living increases. We analysed inequalities by generation, gender, socioeconomic position (SEP), and their intersections, and explored the relationship between inflation and mental (ill-)health post-lockdown. We used data from the National Child Development Study (NCDS/1958, n=8,215) and the 1970 British Cohort Study (BCS/1970, n=7,789), with repeated measures of psychological distress (Malaise Inventory) between ages 23-64.5 (NCDS/58) and 26-52.5 (BCS/70). We used multilevel growth curve models to study long-term trajectories, and negative binomial regression models to analyse associations with inflation/cost-of-living in the 2021-2023 period. Distress increased during the pandemic but declined post-lockdown (second quadratic spline: $B_{NCDS/58}$=-0.12 [-0.17, -0.08], p<0.001; $B_{BCS/70}$=-0.16 [-0.21, -0.11], p<0.001). Women and individuals from disadvantaged childhood SEPs started their trajectories with significantly (p<0.001) higher distress levels in both cohorts (women: $B_{NCDS/58}$=0.72 [0.62, 0.82], $B_{BCS/70}$=0.73 [0.62, 0.83]; manual-class background: $B_{NCDS/58}$=0.24 [0.14, 0.35], $B_{BCS/70}$=0.23 [0.12, 0.35]; rented housing: $B_{NCDS/58}$=0.34 [0.22, 0.46], $B_{BCS/70}$=0.30 [0.15, 0.45]). Inequalities were larger for women from disadvantaged SEPs born in 1958, indicating intersectional effects. None of these inequalities significantly reduced in the long term. Inflation/cost-of-living was significantly associated with distress, but effects did not vary by gender, concurrent SEP, or their intersection. Despite post-pandemic improvements, persistent inequalities by gender and childhood SEP remain. Considering the high levels of socioeconomic adversity in the UK, action is needed to reduce these inequalities and prevent their transmission across generations.

Introduction

The global COVID-19 pandemic came with a deterioration in population mental health, with disproportionate impacts among disadvantaged groups (1, 2). In the UK context, this global shock disrupted the long-term trajectories of mental health, widening pre-existing inequalities such as those by gender (3-5). In many countries, this period was followed by a rapid increase in the cost of living, with global consumer prices reaching levels unseen since the 2008 financial crisis (6). In the UK, similar inflation levels had not been seen since 1990, with the Consumer Prices Index including owner occupiers' housing costs (CPIH) reaching a peak of 9.6% in October 2022 (7). However, there is no population-based, longitudinal evidence on how long-term trajectories of mental (ill-)health have developed after the COVID-19 lockdowns, a period largely coinciding with large cost-of-living increases, and whether some of the inequalities that widened during the lockdown period have changed.

Economic shocks can impact population mental health, particularly among those socioeconomically disadvantaged (8-10). From a long-term perspective, socioeconomic adversity plays a fundamental and complex role on mental (ill-)health across the life course and even across life courses (e.g., through intergenerational transmission) (11, 12). Even early life socioeconomic disadvantage, over which people have little to no agency, can impact mental health later in life and lead to further socioeconomic adversity (13). Despite being one of the wealthiest economies globally, levels of poverty have remained consistently high in the UK (14). This has led some scholars to propose that 'poverty pandemic' may be a more accurate term than the widely used 'cost-of-living crisis' (15), as the situation seems "endemic, not a short-term crisis to weather" (16). Studying the trajectories of mental (ill-)health in the population from a life-course perspective can help to understand the potential role of the cost-of-living increases both in the context of other recent (e.g., COVID-19 pandemic) and longer-term (e.g., early life socioeconomic disadvantage) phenomena.

When studying how population mental health levels may have changed after the lockdown period, there are additional sources of complexity to consider. First, understanding whether and how the large (and, during the pandemic, widening (4, 5)) gender inequalities in mental (ill-)health have changed is key to grasp the extent of the action needed to close them. Importantly, the systems of oppression that underlie the gender and socioeconomic gaps in mental health (including sexism, the material impacts of socioeconomic deprivation, and classism) are complex and interlocked, rather than independent from each other. This idea is central to intersectionality theories (17, 18). Importantly, inequalities at specific intersections will remain undetected unless explicitly acknowledged when quantitatively analysing social inequalities (19). Second, there is compelling evidence of a deterioration in multiple health outcomes across generations in the UK, or a 'generational health drift' (20, 21).

This includes mental (ill-)health outcomes, with younger generations (particularly those born in 1970s and onwards) experiencing worse mental health levels than older generations at similar or same ages (4, 22-24). People from different generations have lived through different socio-historical contexts in which power and privilege are differently distributed (25). For example, the percentage of women aged 25-54 in paid employment (including self-employment) went from 57% in 1975 to 78% in 2017 (26). And, although it is far from being resolved, the percentual gender pay gap among all employees has slowly reduced over time, from 27.5% in 1997 to 14.4% in 2022 (27). The Equal Pay Act, a key milestone for the legal basis of gender pay equality, was introduced in 1970, with amendments and further legislation being introduced in the 80s, 90s, and most recently consolidated in the Equality Act 2010 (28). By taking place at different times in their lifespan, societal conditions and events like these can have different implications for, in this example, women and men of different generations.

Considering all the above, studying the long-term trajectories of mental (ill-)health from a life-course, cross-generational, and intersectional perspective has multiple advantages. First, it can inform whether the observed increasing trends in psychological distress observed during the COVID-19 pandemic have continued, stopped, or reversed as populations exited the lockdown periods. Second, it can inform how social inequalities observed during the COVID-19 pandemic (e.g., widening gender inequalities) have evolved in the post-lockdown era. Third, it can provide further insights into how the generational decline (or 'generational health drift' (20)) in mental health is evolving. And fourth, when coupling this cross-generational approach with a focus on early life determinants of long-term trajectories, it can serve as a measure of societal progress, by informing whether certain social inequalities have meaningfully reduced across generations and in the long term.

Therefore, the two primary aims of this study were #1) to understand how long-term trajectories of mental (ill-)health developed in post-lockdown Britain, a period largely coinciding with cost-of-living increases; and #2) to examine differences in those long-term trajectories by generation, gender, childhood socioeconomic position, and their intersections. As a secondary aim, we also aimed #3) to examine the relationship between inflation and population mental (ill-)health, and whether this relationship varied by gender, socioeconomic position, and their intersections.

Methods

Sample

We used data from two British birth cohorts: the 1958 National Child Development Study (NCDS/58) (29) and the 1970 British Cohort Study (BCS/70) (30). These are two nationally representative birth cohort studies following up the lives of people born in

Britain in a single week in 1958 and 1970, respectively. Data on the cohort members have been collected since their birth and throughout their life courses. The most recent main survey data collections (*sweeps*) took place between February 2019-April 2024 in NCDS/58 and between January 2020-January 2024. As such, they started before the COVID-19 pandemic, were interrupted during the lockdown period, and resumed after the lockdowns. However, data collection continued during the pandemic as part of the COVID-19 Surveys (31), which collected data from members of these and other cohorts at three time-points during the COVID-19 pandemic: May 2020 (during first national lockdown), September-October 2020 (before second national lockdown), and February-March 2021 (during third national lockdown) (32). A total of 8,215 (NCDS/58) and 7,789 (BCS/70) people took part in the pilots, dress rehearsals, main stage, or mop-up web surveys in the most recent data collection, corresponding to response rates of 73.3% and 65.3%, respectively. The target population for the present study were adults born in Britain in 1958 or 1970, still alive and residing in the UK during the most recent main survey sweep. All procedures involving human subjects/patients were approved by the National Health Service (NHS) Research ethics Committee. All participants provided oral informed consent.

Measures

Main outcome: psychological distress

Psychological distress (a measure of mental ill-health including depressive and anxiety symptomatology) was the main outcome in both the within-person long-term trajectory and between-person post-lockdown analyses. It was measured with the nine-item version of the Malaise Inventory (33). This questionnaire explores whether the respondent 'often' experiences a series of general mental ill-health experiences, with "yes/no" response options. Hence, the sum-score ranges between 0 (lowest psychological distress) and 9 (highest psychological distress) at any time-point. The questionnaire was administered at ages 23, 33, 42, 50, 62, 62.5, 63, and 64.5 in NCDS/58 and at ages 26, 29, 34, 42, 46, 50, 50.5, 51, and 52.5 in BCS/70. Previous studies have provided evidence on the appropriateness of a sum-score approach and on the invariance of the resulting measure across time-points, genders, and cohorts (4, 34, 35). Due to the aims of this study and the use of additional newly collected data, we extended this previous evidence by including the most recent data collection time-points and by analysing the measurement invariance at the intersection of gender and socioeconomic position, both within and across cohorts (an often overlooked aspects in quantitative research on intersectional inequalities (36)). Additional details on this approach are available in **eAppendix 1 (Supplementary Material)**.

Social identities and positions

We used an inter-categorical approach to intersectional complexity (37), provisionally adopting categorical variables as proxies of the systems of oppression that may lead to inequities in the outcomes under study.

We used sex assigned at birth as a proxy for gender, as information on gender identity was not consistently available from participants. We, however, refer to gender rather than sex inequalities throughout as our position is that differences between women and men in the outcome under study will be more likely due to differences in power and privilege than due to inherent biological characteristics.

We used two alternative childhood socioeconomic position indicators as proxies for social class and classism, harmonised across NCDS/58 and BCS/70: parental social class and childhood housing tenure. A six-category harmonised variable representing the cohort member's father's social class at ages 11 (NCDS/58) or 10 (BCS/70) was obtained from the UK Data Service (UKDS) based on the work by Dodgeon et al. (38). This was further dichotomised into manual (including the skilled manual, partly skilled, and unskilled categories) and non-manual (including the skilled non-manual, managerial and technical, and professional categories) for the purposes of this study. A three-category harmonised variable capturing whether the cohort member lived in an accommodation that was rented, owned at one time-point, or owned at both time-points at ages 7&11 (NCDS/58) or 5&10 (BCS/70) was obtained from the UKDS based on the work by Wood et al. (39).

Confounders

As 'time' was the main exposure in the long-term trajectory analyses, and it may be considered unconfounded in on itself (although related to multiple other processes that unfold with time which may explain changes in the outcome under study), no confounders were adjusted for in these analyses.

Statistical analysis

Within-person long-term trajectory analyses

Multilevel growth curve models (40, 41) were used to understand the change in psychological distress over time, including the period with large cost-of-living increases (aim #1), and differences in these changes by generation, gender, childhood socioeconomic groups, and their intersections (aim #2).

Cohort members whose participation in the most recent main survey sweep took place before the COVID-19 pandemic (1,662 in NCDS/58 and 116 in BCS/70) or within the period spanning the COVID-19 Surveys data collection (44 participants from BCS/70 whose interviews took place between 11 September 2020 and 7 October 2020) were not included in these analyses. Age at the most recent sweep was set at the median weighted age among included cohort members, which was 64.5 in NCDS/58 and 52.5 in

BCS/70 (roughly corresponding to the second half of 2022). Therefore, the resulting repeated measures of psychological distress spanned ages 23, 33, 42, 50, 62, 62.5, 63, and 64.5 in NCDS/58 and ages 26, 29, 34, 42, 46, 50, 50.5, 51, and 52.5 in BCS/70.

Models with different growth parameters and random effects (to accommodate individual variation in the included growth parameters) were tested and selected upon the best model fit according to Akaike's Information Criteria (AIC) and Bayesian Information Criteria (BIC), with lower AIC and BIC indicating better fit. Candidate models were selected based upon the descriptive analysis and visualisation of imputed and weighted life-course data. The selected models were then estimated in each cohort, first overall, then by gender and by each of the childhood socioeconomic position indicators, and finally by the intersection of gender and each of the childhood socioeconomic position indicators, by including the appropriate interaction terms between the growth parameters and the group variables. To aid with the interpretation of the results, marginal predicted levels at each of the time-points (and for each of the groups in the analyses by gender, childhood socioeconomic position, and their intersection) were obtained and visualised.

As a check of the sensitivity of the results to model specification and sample selection, a set of additional overall models were estimated where continuous age was included instead of median age as the main time variable at the latest sweep. These analyses included all participants regardless of whether their most recent main survey sweep interview had taken place before/during the COVID-19 pandemic.

To more specifically characterise any potential change in the gender, socioeconomic, and intersectional gaps over time and across cohorts, an additional set of analyses were conducted comparing the psychological distress levels in the most recent sweep (roughly, as abovementioned, the second half of 2022) with three relevant previous time-points: 1) the earliest time-point in the long-term trajectory (age 23 in NCDS/58 or 26 in BCS/70; 1981 and 1996, respectively), 2) the most recent pre-pandemic assessment (age 50 in NCDS/58 and 46 in BCS/70; 2008 and 2016, respectively), and 3) the point of highest psychological distress during the COVID-19 pandemic (age 62.5 in NCDS/58 or 50.5 in BCS/70; September/October 2020). These analyses were conducted separately for each cohort and, then, pooling together the data from the two cohorts, adding cohort as a main and interaction variable with the existing terms to explore any cohort differences in the change across time-points, gaps, and their potential change over time.

Between-person post-lockdown analyses

To provide further insights on the potential shorter-term relationship between inflation and mental (ill-)health both in general and by pre-existing sources of disadvantage (aim #3), a separate group of analyses were conducted focusing on the post-lockdown

period and leveraging the time variability in the data collection. Additional details on the rationale for these analyses, as well as the measurement and analytical approach used, are available in **eAppendix 2** (**Supplementary Material**).

Missing data

Inverse probability weighting (IPW) and multiple imputation by chained equations (MICE) were used to deal with missing data, both under the assumption that data were missing at random (MAR) after conditioning on observed variables (42).

Non-response weights were derived and used to help restore sample representativeness to the target population (i.e., people born in Britain 1958 or 1970, still alive and residing in the UK at the time of the most recent sweep), using relevant predictors of non-response from across the individuals' life-courses (43). Full details on the derivation of the weights and their effectiveness to restore representativeness to the target population are available in the cohort studies' user guides (44, 45).

Multiple Imputation by Chained Equations (MICE) was used to flexibly deal with item-missingness (46). To increase the plausibility of the MAR assumption, we used cohort members' prior life-course data which has been found to be related to attrition and/or to the missing values themselves as auxiliary variables, in line with previous research (47) and with the Centre for Longitudinal Studies (CLS) missing data strategy (43). The complete list of auxiliary variables included in the imputation models is available in **eAppendix 3 (Supplementary Material)**. Fifty imputed datasets were created, discarding the first 10 iterations of each chain. The analytical models were then conducted over the imputed datasets using Rubin's rules to pool the estimates and standard errors (42).

All data used in this study are freely available to *bona* fide researchers at the UK Data Service (https://doi.org/10.5255/UKDA-Series-200001 and https://doi.org/10.5255/UKDA-Series-2000032). All code used for the data management, imputation, and analysis is available [redacted for anonymised peer review].

We followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist **(eAppendix 5, Supplementary Material)**.

All analyses were conducted in Stata MP 19.5 (48), except measurement invariance testing, which was conducted in Mplus 8.9 (49).

Results

The overall sample for this study included 6,553 participants from the NCDS/58 cohort (n=3,277, 50.0% women) and 7,629 participants from the BCS/70 cohort (n=4,015,

52.6% women), after excluding cohort members whose latest main survey sweep took place before the COVID-19 pandemic onset (n=1,662 in NCDS/58 and n=116 in BCS/70) or within the period spanning the COVID-19 Surveys data collection (n=44 in BCS/70, interviewed between September-October 2020). Included participants contributed a median and interquartile range of 7 (5, 8) repeated observations in both cohorts ($M_{obs,NCDS/58}$=6.34, $M_{obs,BCS/70}$=6.56). The percentage of participants in a disadvantaged childhood socioeconomic position was, overall, smaller in BCS/70 (21.9% rented at both time points, 47.4% manual parental social class) compared to NCDS/58 (36.9% and 51.8%, respectively). Similar percentages of missing data were found in the socioeconomic position indicators across both cohorts, although this was slightly higher for the outcome variables in BCS/70 than in NCDS/58. Further descriptive details of the analytical samples, along with the percentage of missing data for the key variables of interest, are available in **Table 1**, and an extended table including a comparison with the overall samples of each cohort study is available in **eAppendix 6** (**Supplementary Material**).

313 **Table 1. Descriptive information from the analytical samples.**

	NCDS/58, N = 6,553			BCS/70, N = 7,629	
Gender, N (%)					
Women	3,277	50.0%		4,015	52.6%
Men	3,276	50.0%		3,614	47.4%
Childhood SEP, N (%)					
Parental social class					
Manual	3,394	51.8%		3,618	47.4%
Non-manual	2,116	32.3%		2,864	37.5%
Missing	*1,043*	*15.9%*		*1,147*	*15.0%*
Childhood housing tenure					
Owned at both time points	2,250	34.3%		3,418	44.8%
Owned at one time point	414	6.3%		565	7.4%
Rented at both time points	2,419	36.9%		1,667	21.9%
Missing	*1,470*	*22.4%*		*1,979*	*25.9%*
Gender and childhood SEP, N (%)					
Gender * parental social class					
Women * Manual	1,699	25.9%		1,898	24.9%
Women * Non-manual	1,048	16.0%		1,529	20.0%
*Women * missing*	*530*	*8.1%*		*588*	*7.7%*
Men * Manual	1,695	25.9%		1,720	22.5%
Men * Non-manual	1,068	16.3%		1,335	17.5%
*Men * missing*	*513*	*7.8%*		*559*	*7.3%*
Gender * childhood housing tenure					
Women * owned at both time points	1,093	16.7%		1,819	23.8%
Women * owned at one time point	218	3.3%		312	4.1%
Women * rented at both time points	1,239	18.9%		883	11.6%
*Women * missing*	*727*	*11.1%*		*1,001*	*13.1%*
Men * owned at both time points	1,157	17.7%		1,599	21.0%
Men * owned at one time point	196	3.0%		253	3.3%
Men * rented at both time points	1,180	18.0%		784	10.3%
*Men * missing*	*743*	*11.3%*		*978*	*12.8%*
Malaise inventory, M (SD)					
Age 23	1.11	1.45	*Age 26*	1.69	1.71
Age 33	0.90	1.42	*Age 29*	1.45	1.66
Age 42	1.42	1.68	*Age 34*	1.59	1.84
Age 50	1.40	1.87	*Age 42*	1.77	1.93
Age 62	1.22	1.69	*Age 46*	1.69	2.06
Age 62.5	1.50	1.88	*Age 50*	1.63	1.93
Age 63	1.43	1.85	*Age 50.5*	1.97	2.10
Age 64.5	1.38	1.78	*Age 51*	1.86	2.06
			Age 52.5	1.66	2.00
Malaise inventory missingness, N (%)					
Age 23	*624*	*10.2%*	*Age 26*	*2,512*	*32.0%*

Age 33	*478*	*7.8%*	*Age 29*	*1,252*	*15.9%*
Age 42	*142*	*2.3%*	*Age 34*	*1,632*	*20.8%*
Age 50	*272*	*4.4%*	*Age 42*	*1,696*	*21.6%*
Age 62	*2,783*	*45.3%*	*Age 46*	*1,596*	*20.3%*
Age 62.5	*1,797*	*29.3%*	*Age 50*	*4,511*	*57.4%*
Age 63	*1,463*	*23.8%*	*Age 50.5*	*3,507*	*44.6%*
Age 64.5	*22*	*0.4%*	*Age 51*	*3,143*	*40.0%*
			Age 52.5	*819*	*10.4%*

Note. BCS/70: 1970 British Cohort Study; M: mean; N: frequency; NCDS/58: 1958 National Child Development Study; SD: standard deviation; SEP: socioeconomic position. Results based on unweighted data. Analytical samples exclude participants who took part in the latest main survey sweep prior to the COVID-19 pandemic onset (n=1,662 in NCDS/58 and n=116 in BCS/70) or within the period spanning the COVID-19 Surveys data collection (n=44 in BCS/70, interviewed between September-October 2020).

Long-term trajectory analyses

Evidence supporting the measurement invariance of the nine-item Malaise Inventory was found at the level needed to ensure valid comparisons of the psychological distress levels across time-points, genders, childhood socioeconomic position groups, and their intersections, as well as across birth cohorts. Further details on the approach and its results are available in **eAppendix 1 (Supplementary Material)**.

The model comparison strategy supported the use of a piecewise model with a cubic spline and a quadratic spline, with a knot at the latest pre-pandemic assessment, as well as random intercepts and slopes for the linear terms within each of the splines. Further details on the model selection approach and its results are available in **eAppendix 7 (Supplementary Material)**.

The overall long-term trajectory models in both birth cohorts showed that, after an initial increase in distress during the pandemic (mid-2020 to mid-2021) ($B_{spline2\_linear\_NCDS/58}$=0.33 [0.21, 0.44], p<0.001; $B_{spline2\_linear\_BCS/70}$=0.37 [0.24, 0.50], p<0.001), levels decreased towards the post-lockdown period (towards the second half of 2022) ($B_{spline2\_quadratic\_NCDS/58}$=-0.12 [-0.17, -0.08], p<0.001; $B_{spline2\_quadratic\_BCS/70}$=-0.16 [-0.21, -0.11], p<0.001), suggesting a bounce back to pre-pandemic levels (**Figure 1**). Similar results were found in the models with interaction terms. We found large inequalities at the first time-point in the long-term trajectory (age 23 in NCDS/58, age 26 in BCS/70), with women having significantly higher levels of distress than men ($B_{women\_NCDS/58}$=0.72 [0.62, 0.82], p<0.001; $B_{women\_BCS/70}$=0.73 [0.62, 0.83], p<0.001) (**Figure 2**), and those with parents from a non-manual social class ($B_{non\text{-}manual\_NCDS/58}$=-0.24 [-0.35, -0.14], p<0.001; $B_{non\text{-}manual\_BCS/70}$=-0.23 [-0.35, -0.12], p<0.001) (**Figure 3**) or living in an owned property during childhood ($B_{owned7\&11\_NCDS/58}$=-0.34 [-0.46, -0.22], p<0.001; $B_{owned5\&10\_BCS/70}$=-0.30 [-0.45, -0.15], p<0.001) (**Figure 4**) having significantly lower levels of distress than those with parents from a manual social class or living in a rented property at ages 7&11 (NCDS/58) or 5&10 (BCS/70).

In NCDS/58, inequalities in the starting points were also found at the intersection of gender and childhood housing tenure ($B_{women*owned7\&11\_NCDS/58}$=-0.27 [-0.49, -0.05], p=0.014) (**Figure 5**) and, to a lesser extent, at the intersection of gender and childhood parental social class ($B_{women*non\text{-}manual\_NCDS/58}$=-0.21 [-0.42, 0.00], p=0.048) (**Figure 6**), although in this latter case they were almost non-statistically significant at the 95%CI, showing larger childhood socioeconomic position inequalities in women than in men. Evidence suggestive of inequalities at those intersections in the starting points was not found in BCS/70.

In NCDS/58, a larger linear decrease among women ($B_{spline1\_linear*women\_NCDS/58}$=-0.04 [-0.07, -0.01], p=0.020) in the first segment of the long-term trajectory (up to the COVID-19 pandemic onset) was reflected in the gender gap decreasing towards the age of 30

(**Figure 2**). We did not find evidence of significant differences in the change over time by childhood socioeconomic position or their intersection with gender in any of the two cohorts.

The coefficients from the long-term trajectory models (multilevel growth curve models), are available in **eAppendix 8 (Supplementary Material)**.

Models estimated with continuous age and with the extended sample provided very similar results. Estimates and plots of the marginal mean predicted levels from these models are available in **eAppendix 9** and **eAppendix 10 (Supplementary Material)**, respectively.

Differences across key time-points

Table 2 shows the estimates and 95% CIs from the analyses comparing the psychological distress levels and gaps between the most recent survey sweeps in both birth cohorts and three key time-points.

Differences between the most recent pre-pandemic assessments and the latest sweeps (ages 50/64.5 in NCDS/58 and 46/52.5 in BCS/70) were not significant in NCDS/58 ($B_{prepandemic\_time\_NCDS/58}$=0.01 [-0.07, 0.09], p=0.791) and marginally significant and negative in BCS/70 ($B_{prepandemic\_time\_BCS/70}$=-0.08 [-0.15, -0.01], p=0.022), in line with the notion of a "bounce back" to (or even slight improvement compared to) pre-pandemic levels.

In addition to the above-reported inequalities at earliest time-points (akin to the starting points in the long-term trajectory analyses, age 23 in NCDS/58 and 26 in BCS/70) by gender, parental social class during childhood, and childhood housing tenure (and their intersections in NCDS/58), we found similar gaps at the height of the COVID-19 pandemic (age 62.5 in NCDS/58 and 50.5 in BCS/70). Similar results were found in the comparisons with the pre-pandemic time-point, although in this case the gap by parental social class during childhood was not significant in NCDS/58 ($B_{non\text{-}manual\_NCDS/58}$=-0.10 [-0.23, 0.04], p=0.162), widening again towards the post-pandemic period ($B_{prepandemic\_time*non\text{-}manual\_NCDS/58}$=-0.20 [-0.39, -0.01], p=0.039). In NCDS/58 there was a larger decrease in psychological distress between the pandemic and latest time-point among women than men ($B_{pandemic\_time*women\_NCDS/58}$=-0.19 [-0.35, -0.04], p=0.016). In BCS/70, however, we found evidence suggestive of a widening gender gap when comparing the pre-pandemic and most recent assessments ($B_{prepandemic\_time*women\_BCS/70}$=0.28 [0.13, 0.42], p<0.001).

The pooled analyses with the additional cohort terms (main effects and interactions) showed that, in line with **Figure 1**, overall levels of psychological distress were significantly higher in BCS/70 than NCDS/58 in the three time comparisons. The cohort gap was significantly smaller in the most recent sweep when compared to the earliest

time-point and to the gap during the pandemic ($B_{first\_time*BCS/70}$=-0.33 [-0.45, -0.21], p<0.001; $B_{pandemic\_time*BCS/70}$=-0.18 [-0.29, -0.07], p=0.002), but not significantly different when using the most recent pre-pandemic assessment as the comparison time-point ($B_{prepandemic\_time*BCS/70}$=-0.09 [-0.20, -0.01], p=0.087). The full results from the pooled analyses are available in **eAppendix 11 (Supplementary Material)**.

Table 2. Estimates and 95% confidence intervals (CIs) from analyses comparing psychological distress levels between most recent main sweeps and earliest time-point, most recent pre-pandemic assessment, or point of highest psychological distress during COVID-19 pandemic.

	NCDS/58 (n=6,553)					
	First (age 23) vs last (age 64.5)		Pre-pandemic (age 50) vs last (age 64.5)		Pandemic (age 62.5) vs last (age 64.5)	
	B (95% CI)	*p*	B (95% CI)	*p*	B (95% CI)	*p*
Overall						
Time	0.35 (0.26, 0.45)	<0.001	0.01 (-0.07, 0.09)	0.791	-0.16 (-0.23, -0.08)	<0.001
Gender (ref.: Men)						
Time	0.41 (0.28, 0.54)	<0.001	0.00 (-0.13, 0.12)	0.974	-0.06 (-0.17, 0.04)	0.248
Women	0.72 (0.61, 0.83)	<0.001	0.58 (0.45, 0.70)	<0.001	0.79 (0.67, 0.91)	<0.001
Time * Women	-0.12 (-0.30, 0.06)	0.208	0.03 (-0.15, 0.21)	0.765	-0.19 (-0.35, -0.04)	0.016
Parental social class (ref.: Manual)						
Time	0.38 (0.25, 0.50)	<0.001	0.08 (-0.04, 0.20)	0.179	-0.13 (-0.23, -0.02)	0.019
Non-manual	-0.24 (-0.35, -0.12)	<0.001	-0.10 (-0.23, 0.04)	0.162	-0.21 (-0.34, -0.08)	0.002
Time * Non-manual	-0.07 (-0.26, 0.13)	0.505	-0.20 (-0.39, -0.01)	0.039	-0.08 (-0.24, 0.07)	0.287
Gender (ref.: Men) and parental social class (ref.: Manual)						
Time	0.45 (0.28, 0.63)	<0.001	0.07 (-0.11, 0.24)	0.452	-0.01 (-0.15, 0.13)	0.882
Women	0.81 (0.66, 0.95)	<0.001	0.62 (0.45, 0.79)	<0.001	0.90 (0.73, 1.06)	<0.001
Non-manual	-0.11 (-0.27, 0.05)	0.175	-0.03 (-0.22, 0.16)	0.734	-0.06 (-0.23, 0.12)	0.532
Time * Women	-0.16 (-0.41, 0.09)	0.210	0.03 (-0.22, 0.27)	0.823	-0.24 (-0.45, -0.03)	0.026
Time * Non-manual	-0.13 (-0.41, 0.16)	0.377	-0.20 (-0.47, 0.08)	0.162	-0.15 (-0.37, 0.07)	0.176
Women * Non-manual	-0.25 (-0.50, -0.01)	0.044	-0.12 (-0.39, 0.15)	0.397	-0.29 (-0.56, -0.02)	0.034
Time * Women * Non-manual	0.13 (-0.31, 0.56)	0.563	0.00 (-0.38, 0.38)	0.983	0.14 (-0.20, 0.47)	0.417
Childhood housing tenure (ref.: Rented at both time-points)						
Time	0.35 (0.22, 0.49)	<0.001	0.05 (-0.07, 0.18)	0.401	-0.17 (-0.28, -0.05)	0.007
Owned at both time-points	-0.35 (-0.47, -0.23)	<0.001	-0.24 (-0.38, -0.10)	0.001	-0.35 (-0.50, -0.21)	<0.001
Time * Owned at both time-points	0.00 (-0.19, 0.20)	0.977	-0.10 (-0.30, 0.09)	0.294	0.00 (-0.17, 0.16)	0.961
Gender (ref.: Men) and childhood housing tenure (ref.: Rented at both time-points)						
Time	0.36 (0.18, 0.53)	<0.001	0.02 (-0.18, 0.22)	0.846	-0.07 (-0.23, 0.08)	0.363

Women	0.83 (0.66, 0.99)	<0.001	0.76 (0.55, 0.96)	<0.001	0.99 (0.79, 1.20)	<0.001
Owned at both time-points	-0.19 (-0.34, -0.05)	0.007	-0.06 (-0.24, 0.13)	0.545	-0.16 (-0.34, 0.03)	0.102
Time * Women	0.00 (-0.27, 0.26)	0.980	0.07 (-0.21, 0.34)	0.627	-0.18 (-0.43, 0.06)	0.144
Time * Owned at both time-points	0.03 (-0.21, 0.28)	0.781	-0.10 (-0.36, 0.16)	0.463	-0.02 (-0.24, 0.20)	0.882
Women * Owned at both time-points	-0.27 (-0.50, -0.04)	0.021	-0.33 (-0.60, -0.06)	0.017	-0.35 (-0.64, -0.07)	0.016
Time * Women * Owned at both time-points	-0.07 (-0.44, 0.31)	0.733	-0.01 (-0.38, 0.36)	0.968	0.01 (-0.32, 0.35)	0.932
	BCS/70 (n=7,629)					
	First (age 26) vs last (age 52.5)		**Pre-pandemic (age 46) vs last (age 52.5)**		**Pandemic (age 50.5) vs last (age 52.5)**	
	B (95% CI)	***p***	**B (95% CI)**	***p***	**B (95% CI)**	***p***
Overall						
Time	0.02 (-0.07, 0.11)	0.644	-0.08 (-0.15, -0.01)	0.022	-0.33 (-0.41, -0.26)	<0.001
Gender (ref.: Men)						
Time	0.00 (-0.12, 0.11)	0.975	-0.22 (-0.32, -0.13)	<0.001	-0.33 (-0.44, -0.22)	<0.001
Women	0.73 (0.63, 0.84)	<0.001	0.48 (0.36, 0.59)	<0.001	0.75 (0.63, 0.87)	<0.001
Time * Women	0.04 (-0.12, 0.21)	0.600	0.28 (0.13, 0.42)	<0.001	0.00 (-0.15, 0.15)	0.984
Parental social class (ref.: Manual)						
Time	0.02 (-0.11, 0.14)	0.783	-0.08 (-0.17, 0.02)	0.105	-0.34 (-0.46, -0.22)	<0.001
Non-manual	-0.27 (-0.40, -0.15)	<0.001	-0.24 (-0.37, -0.11)	<0.001	-0.26 (-0.41, -0.12)	<0.001
Time * Non-manual	0.01 (-0.19, 0.20)	0.939	-0.01 (-0.16, 0.14)	0.891	0.02 (-0.16, 0.19)	0.862
Gender (ref.: Men) and parental social class (ref.: Manual)						
Time	-0.05 (-0.22, 0.12)	0.566	-0.22 (-0.36, -0.08)	0.002	-0.34 (-0.51, -0.17)	<0.001
Women	0.73 (0.56, 0.89)	<0.001	0.55 (0.38, 0.72)	<0.001	0.84 (0.65, 1.02)	<0.001
Non-manual	-0.30 (-0.48, -0.11)	0.002	-0.15 (-0.33, 0.02)	0.089	-0.17 (-0.38, 0.04)	0.107
Time * Women	0.14 (-0.11, 0.39)	0.280	0.29 (0.09, 0.49)	0.005	0.00 (-0.22, 0.22)	0.993
Time * Non-manual	0.12 (-0.16, 0.40)	0.382	0.00 (-0.22, 0.21)	0.981	0.02 (-0.24, 0.27)	0.901
Women * Non-manual	0.03 (-0.24, 0.31)	0.814	-0.17 (-0.41, 0.08)	0.187	-0.19 (-0.48, 0.09)	0.180
Time * Women * Non-manual	-0.23 (-0.65, 0.19)	0.279	-0.03 (-0.34, 0.28)	0.860	0.00 (-0.37, 0.36)	0.991
Childhood housing tenure (ref.: Rented at both time-points)						
Time	0.08 (-0.11, 0.27)	0.399	0.00 (-0.16, 0.16)	0.960	-0.32 (-0.48, -0.16)	<0.001
Owned at both time-points	-0.31 (-0.47, -0.15)	<0.001	-0.28 (-0.45, -0.12)	0.001	-0.37 (-0.54, -0.19)	<0.001
Time * Owned at both time-points	-0.15 (-0.36, 0.07)	0.177	-0.13 (-0.32, 0.05)	0.164	-0.04 (-0.23, 0.15)	0.680
Gender (ref.: Men) and childhood housing tenure (ref.: Rented at both time-points)						

Time	0.07 (-0.18, 0.32)	0.592	-0.18 (-0.38, 0.03)	0.100	-0.41 (-0.63, -0.19)	<0.001
Women	0.86 (0.61, 1.12)	<0.001	0.54 (0.28, 0.80)	<0.001	0.70 (0.43, 0.98)	<0.001
Owned at both time-points	-0.25 (-0.45, -0.04)	0.020	-0.24 (-0.46, -0.02)	0.031	-0.39 (-0.64, -0.15)	0.001
Time * Women	0.02 (-0.34, 0.39)	0.892	0.34 (0.04, 0.64)	0.024	0.17 (-0.14, 0.48)	0.273
Time * Owned at both time-points	-0.12 (-0.41, 0.16)	0.397	-0.08 (-0.32, 0.17)	0.533	0.08 (-0.19, 0.34)	0.568
Women * Owned at both time-points	-0.12 (-0.42, 0.18)	0.419	-0.09 (-0.39, 0.22)	0.588	0.05 (-0.28, 0.39)	0.751
Time * Women * Owned at both time-points	-0.05 (-0.46, 0.37)	0.831	-0.10 (-0.45, 0.25)	0.571	-0.22 (-0.59, 0.15)	0.235

Note. BCS/70: 1970 British Cohort Study; B: coefficient; CI: confidence interval; NCDS/58: 1958 National Child Development Study; p: significance level. Results based on weighted and imputed data. Analyses including childhood housing tenure exclude cohort members who lived in a rented or owned house at only one of the time-points; sample size in these analyses is $n_{NCDS/58}$=4,703 and $n_{BCS/70}$=5,106.

406 **Between-person post-lockdown analyses**

407 We found a significant relationship between inflation and psychological distress in the
408 post-lockdown period, and we did not find evidence that this relationship significantly
409 varied by gender, (concurrent) socioeconomic position, or their intersection. Detailed
410 results from these analyses are available in **eAppendix 12** and **eAppendix 13**
411 **(Supplementary Material)**.

412

413 **Discussion**

414 In this study, we used data from two long-standing birth cohorts, representative of the
415 British population born in 1958 and 1970, with three aims: first, to understand how long-
416 term trajectories of mental (ill-)health evolved during the post-lockdown period, which
417 overlapped with large cost-of-living increases; second, to examine differences in the
418 trajectories by generation, gender, childhood socioeconomic position, and their
419 intersections; and, third, to explore differences in mental (ill-)health by cost-of-living
420 levels. Regarding the first and second aims, we found that, after a period of increased
421 distress coinciding with the COVID-19 pandemic, levels reduced towards the post-
422 lockdown period. These post-lockdown reductions were larger among the younger
423 cohort (born in 1970 vs 1958) and among women from the 1958 cohort than men.
424 Across most of the adult lifespan of both cohorts (ages 23-64.5 in NCDS/58 and 26-52.5
425 in BCS/70, spanning 41.5 and 26.5 years, respectively), women and those from a
426 disadvantaged childhood socioeconomic position had, on average, higher levels of
427 distress than men and those from an advantaged childhood socioeconomic position.
428 We also found evidence suggesting that the gaps across childhood socioeconomic
429 position were larger in women from the older cohort (NCDS/58). In most cases, we did
430 not find evidence of different changes over time by gender, childhood socioeconomic
431 position, or their intersection. The only evidence we found suggesting a reduction of
432 these gaps was for women from the older cohort (NCDS/58) between the height of the
433 pandemic and the latest data collection around 2022. In turn, partial evidence
434 suggested a widening in the gender gaps in the younger cohort (BCS/70) between the
435 pre- and post-pandemic periods, as well as a temporary reduction in the gaps by
436 parental social class in childhood at age 50 in the older cohort (NCDS/58), just to widen
437 again towards the most recent (post-pandemic) sweep. Finally, regarding the third aim,
438 we found that inflation was associated with the incidence of psychological distress
439 symptoms, but we did not find evidence suggesting that this relationship substantially
440 varied by gender, concurrent socioeconomic position, or their intersections.

441 Taken altogether, these results offer a mixed view of the population mental health in
442 post-lockdown Britain. The two generations of adults under study seem to be 'bouncing
443 back' from the high levels of psychological distress experienced during the pandemic

(4). However, our results also suggest that the improvement is smaller in the older cohort (NCDS/58). This is consistent with emerging evidence on depressive symptomatology in the pandemic aftermath among English adults aged 50 and older, with larger representation of adults aged 60-74 (50). However, it would not be expected based on previous cross-generational evidence including older (1946) cohorts at similar ages (4, 34) or from evidence on mental health around retirement age in Britain (51), both of which would have suggested an improvement in mental health around this age. Indeed, although the younger cohort (BCS/70, 'gen-X') had higher levels of psychological distress than the older cohort (NCDS/58, 'baby boomers') throughout the lifespan, in line with previous cross-generational evidence (4, 34), our study suggests that those gaps may be decreasing towards older ages. It is possible that this is a result of experiencing multiple population-wide shocks (e.g., COVID-19 pandemic and cost-of-living increases) at a particularly sensitive period (retirement age). However, this is uncharted territory in a scholarship otherwise suggesting a decline in multiple health (including mental health) outcomes in younger generations (20, 21), so further continued monitoring is needed.

We also found evidence suggesting a narrowing gender gap in psychological distress in the NCDS/58 cohort between the height of the pandemic and the post-lockdown period. On the one hand, it is possible that psychological distress levels for men in their 60s are declining or not improving as fast as for women in recent years. Considering the challenging economic situation and the crucial transition into retirement, this could be consistent with previous evidence suggesting that, although women's mental health tends to be poorer at all time-points, men's mental health can deteriorate more during economic crises (52) or with multiple inflation hardships (53), in line with sexist conceptions of the man as the 'breadwinner'. This could also be consistent with the finding that these and other (but not all) sexist conceptions and attitudes have declined in Britain over the last few decades (54), which could reflect in them having a larger influence over older cohorts. On the other hand, however, the gender gaps in the most recent NCDS/58 data collection were not different when compared to the ones earlier in life (ages 23 and 50). This suggests that these 'improvements' may be due to the fact that, since the pandemic came with a widening of the pre-existing gender inequalities (4), women had a longer way to 'bounce back', without really impacting the gender gaps in the long run. Unfortunately, this is consistent with the findings in BCS/70, where the gender gaps in the post-lockdown period were not significantly different than during the height of the pandemic, earlier in life (age 26) or, more dishearteningly, compared to prior to the pandemic, where part of our evidence actually suggests a widening in the gender gaps. A reason for this lack of improvement in the long run may be found in the same report on the change in (some) sexist attitudes, which suggests that behavioural changes have not followed attitudinal ones, with the division of domestic labour, for instance, still resting mostly on women's shoulders (54).

Like gender inequalities, childhood socioeconomic inequalities persisted throughout the entire long-term trajectories, without consistent evidence of these narrowing. On the one hand, we found that the proportion of people in the relatively disadvantaged childhood socioeconomic position was smaller in the younger generation, meaning that the proportion of individuals in the socioeconomically disadvantaged long-term trajectory has decreased across generations. On the other hand, we provide one of the longest-term empirical studies to date, which suggests early life socioeconomic disadvantage continues to influence mental health inequalities even after more than half a century. As a fundamental cause of health (including mental health) inequalities (12), early life socioeconomic inequalities can persist across the life course (and transmit across life courses) due to complex chains of privilege and disadvantage which start even before birth (55). Our study adds to a growing field supporting the notion that early life prevention of socioeconomic disadvantage will be crucial, in order to reduce life-course inequalities and prevent further intergenerational transmission of health inequalities (11). In light of the growing number of children in poverty in the UK (56), immediate measures to reduce socioeconomic adversity may be needed to prevent these disadvantage cycles to further reproduce into generations currently in their infancy and youth (57). This is also consistent with the results of our analysis focused on the post-lockdown period, which suggests that inflation had a negative relationship with mental health during this period and that most of the inequalities by gender and concurrent socioeconomic position were independent of inflation levels or predating the period with highest inflation levels.

At the intersection of both gender and childhood socioeconomic inequalities, we found that mental health inequalities by childhood socioeconomic position were larger in women than in men, but only in the older (NCDS/58) cohort. We did not find evidence of these intersectional inequalities decreasing over time within that cohort, and we did not find evidence of such inequalities in the younger (BCS/70) cohort. These cohort differences may be, in part, due to increases in educational attainment and, relatedly, labour market participation among women across generations (54), suggesting that these inequalities can be prevented.

Strengths and limitations

We used data from two long-standing birth cohort studies, representing two generations ('Baby Boomers' and 'Gen X') of the British population. To the best of our knowledge, this is the longest population-based study of long-term trajectories of mental (ill-)health within the same individuals, with trajectories spanning up to more than four decades. We used a robust approach to the measurement of mental (ill-)health across the life course, ensuring that the measures were equivalent not only over time within the same individuals but also by gender, childhood socioeconomic position, cohort, and their intersections, an aspect that is often overlooked in quantitative research on

intersectional inequalities (36). We also used the rich information collected from individuals across their life courses to inform our approach to dealing with missing data (43). By using these approaches, we maximised the plausibility that our results are generalisable to the British population at these ages.

However, the results from our study must be interpreted considering some limitations. First, our findings may not be generalisable to other countries, particularly those with substantially different geopolitical contexts and economic conditions and constraints, and which make up most of the global population, as well as to other sectors within the British adult population, including migrant and displaced communities or ethnically minoritised groups. Second, we used a relatively simple approach to categorising individuals into gender and socioeconomic groups. While we are aware that there is a larger complexity in how these social identities and positions can be approached (and even categorised) (58), we aimed to maximise comparability across the cohorts, minimise the presence of missing data, ensure temporal ordering, and limit model complexity. However, we acknowledge that these conform to an inherently limited set of intersecting identities and positions, as well as variables and categories (e.g., (58)), that are provisionally adopted as proxies of the systems of oppression underlying any of the inequalities we found (37). Third, we may have been limited in terms of statistical power to detect some 'effects' (in statistical terms), particularly those involving multiple interactions, which include most intersectional terms. We coupled the analytical approaches with data visualisations to avoid exclusively relying on statistical tests. The visualisations were generally consistent with the observation that social inequalities have not substantially reduced across the life course. It is important to note that the absence of an 'intersectional effect' does not imply the absence of intersectional experiences (59). Furthermore, future studies may use other methods (e.g., three-level intersectional MAIHDA models (60)) to either replicate our findings or extend them to additional intersectional strata.

Conclusions

This study shows that, after a period of increased levels of psychological distress during the early phases of the COVID-19 pandemic, levels of psychological distress in British adults born in 1958 and 1970 have reduced close to pre-pandemic levels. Our study also confirms long-range impacts of childhood socioeconomic disadvantage on adult mental health even after more than half a century, mental health inequalities by gender at all time points and, in the 1958 cohort, inequalities at the intersection of childhood socioeconomic position and gender, that persisted for most of the life course. Although inflation was associated with psychological distress, inequalities by gender and adult socioeconomic position were independent of (or predated high levels of) inflation. This suggests that efforts must be made to reduce gender and socioeconomic inequalities

561 from early in life, coupled with interventions (and further research into optimal
562 interventions) to reverse unjust inequalities in population mental health.

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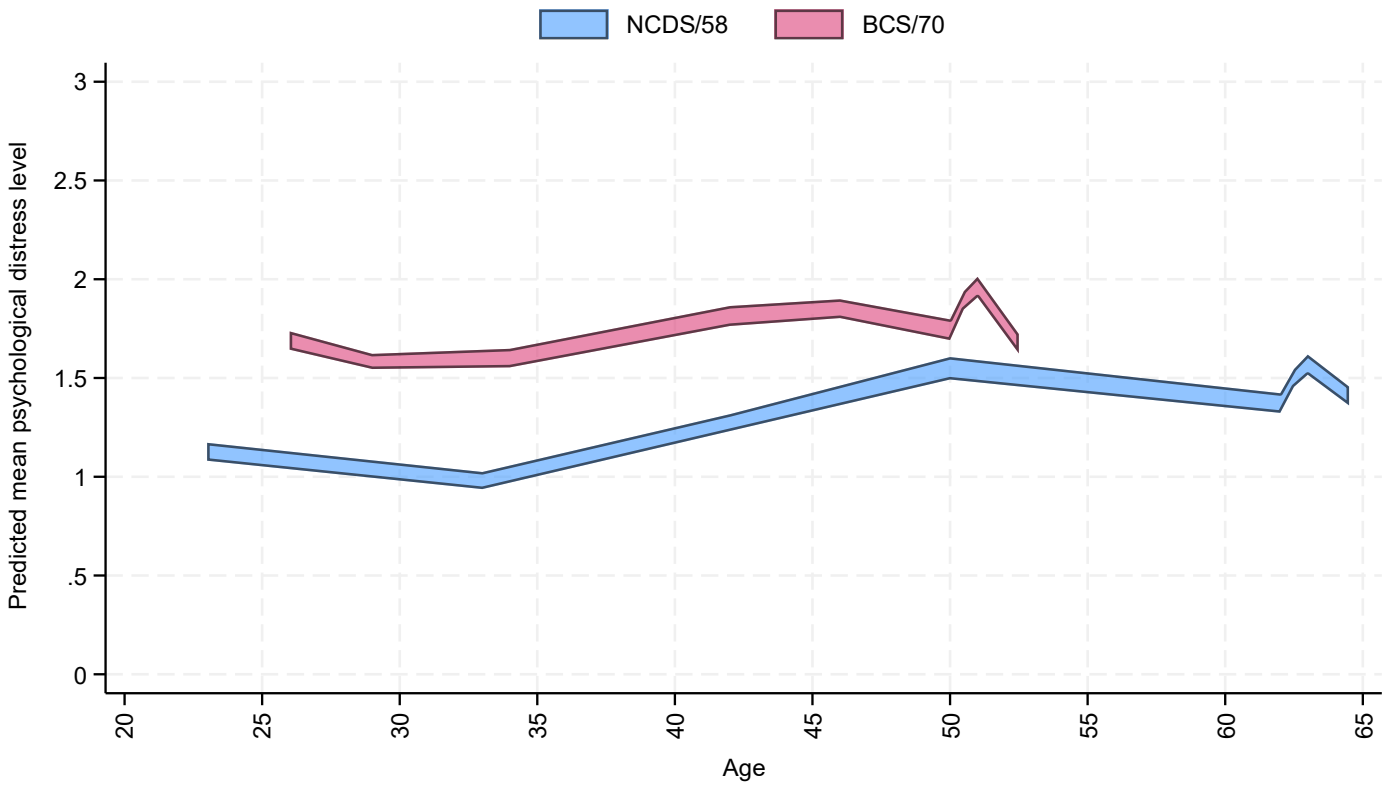
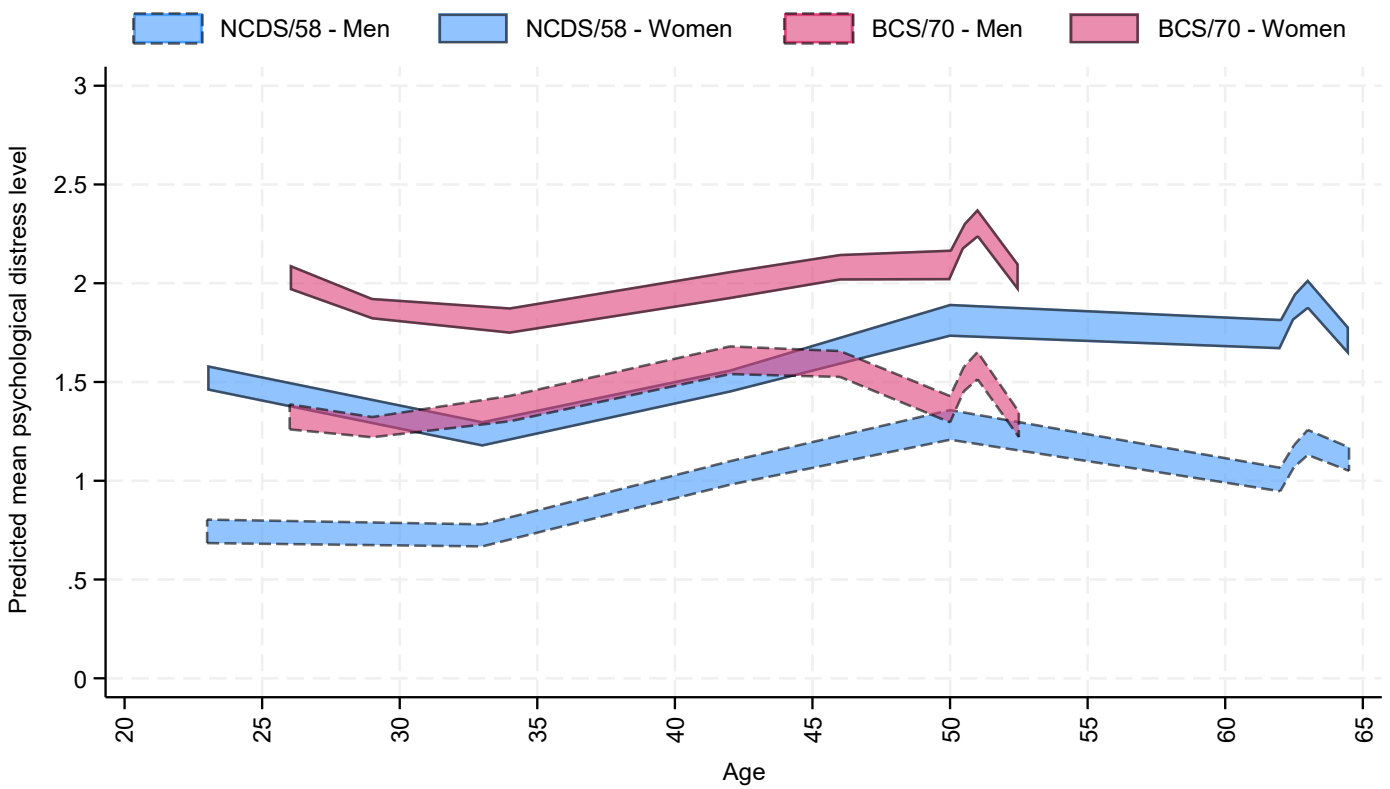
Figure 1. Overall long-term trajectories of psychological distress across NCDS/58 (n=6,553) and BCS/70 (n=7,629)



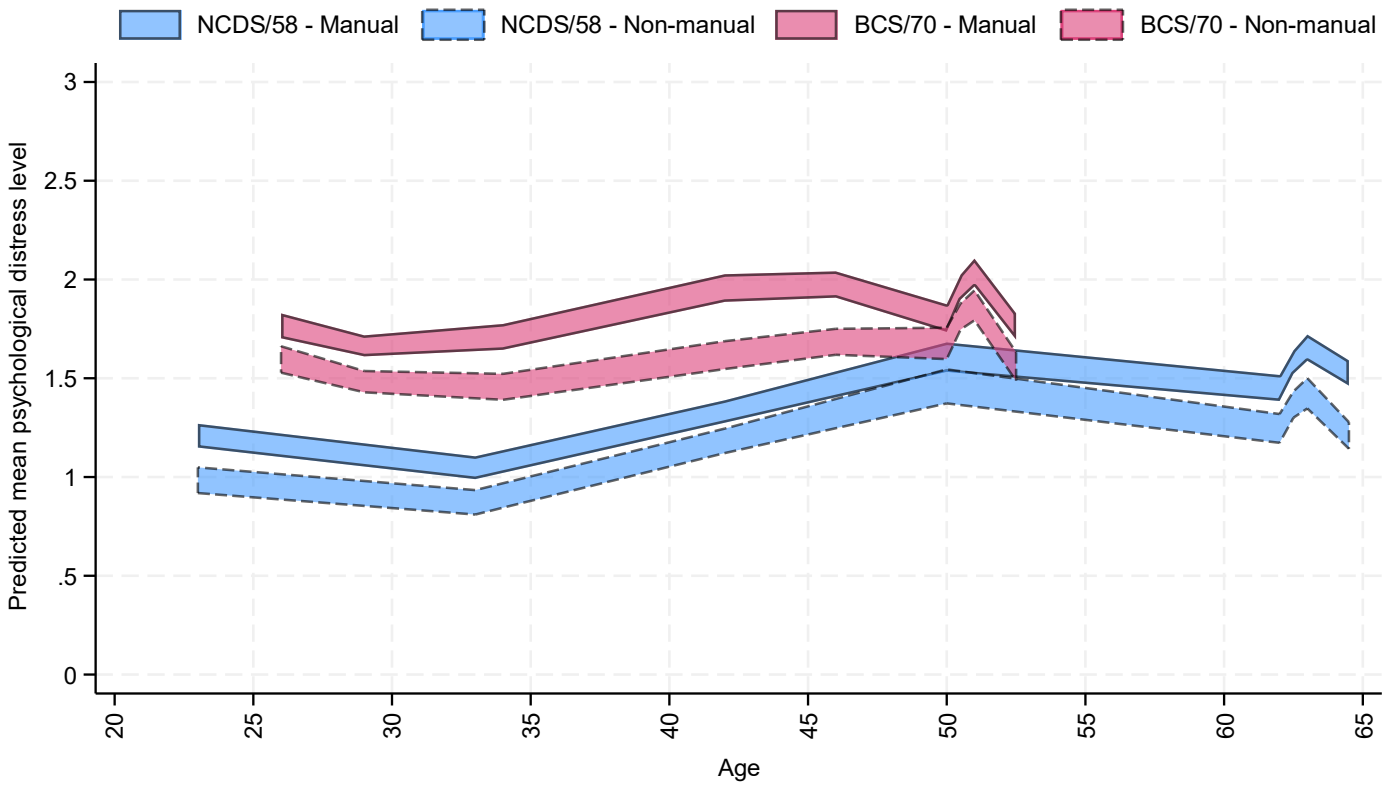
Note. 95% confidence intervals for the marginal predicted mean psychological distress levels from the multilevel growth curve models. Results based on weighted and imputed data.

Figure 2. Long-term trajectories of psychological distress by gender across NCDS/58 (n=6,553) and BCS/70 (n=7,629)



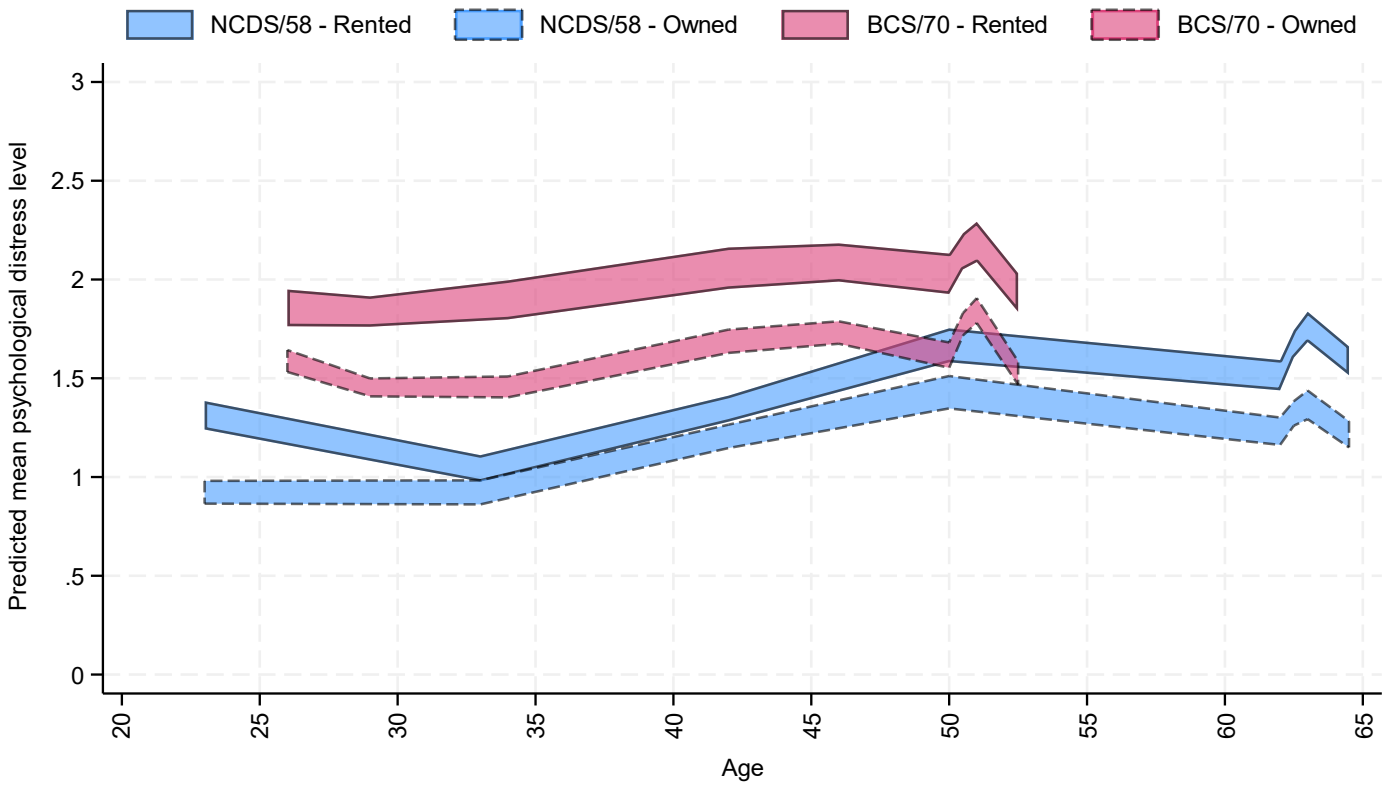
Note. 95% confidence intervals for the marginal predicted mean psychological distress levels from the multilevel growth curve models. Results based on weighted and imputed data.

Figure 3. Long-term trajectories of psychological distress by parental social class during childhood (age 10/11) across NCDS/58 (n=6,553) and BCS/70 (n=7,629)



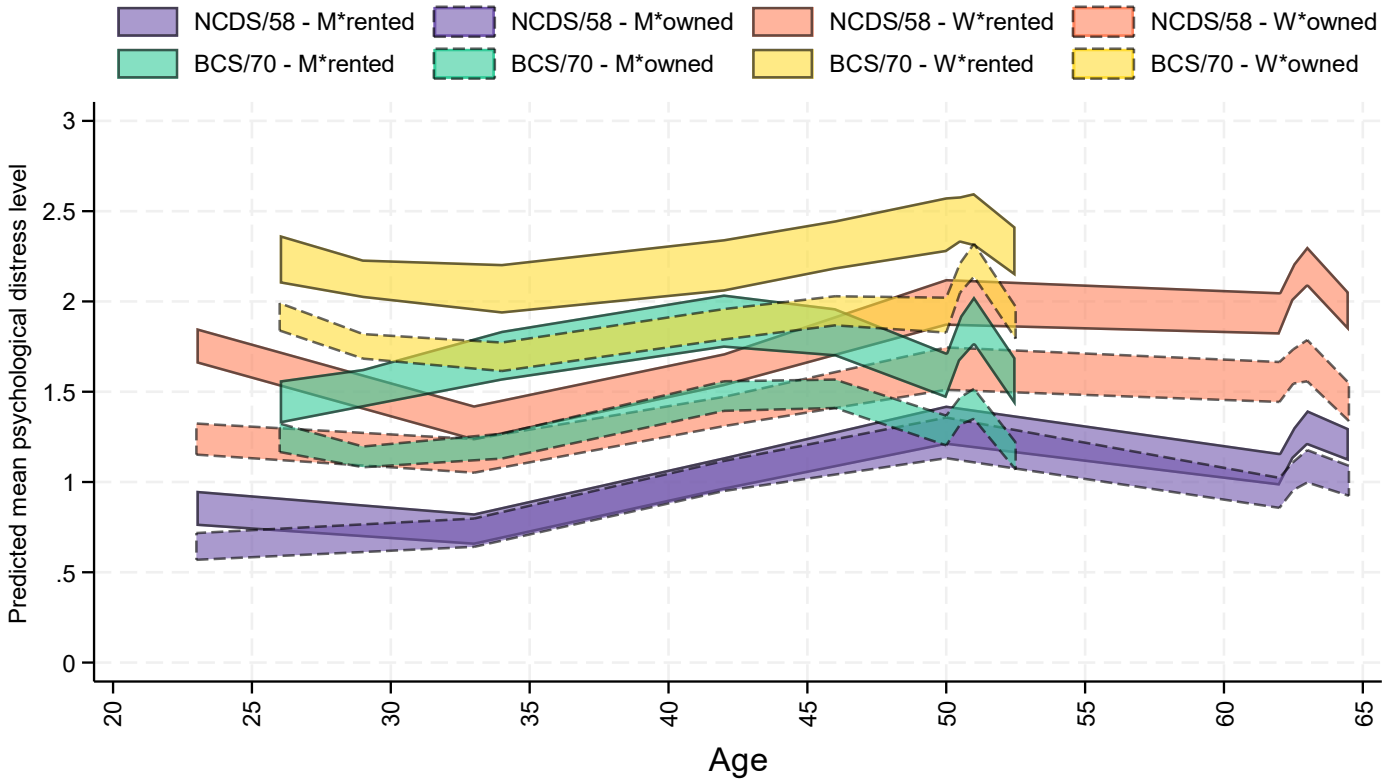
Note. 95% confidence intervals for the marginal predicted mean psychological distress levels from the multilevel growth curve models. Results based on weighted and imputed data.

Figure 4. Long-term trajectories of psychological distress by childhood housing tenure (ages 5&10/7&11) across NCDS/58 (n=6,553) and BCS/70 (n=7,629)



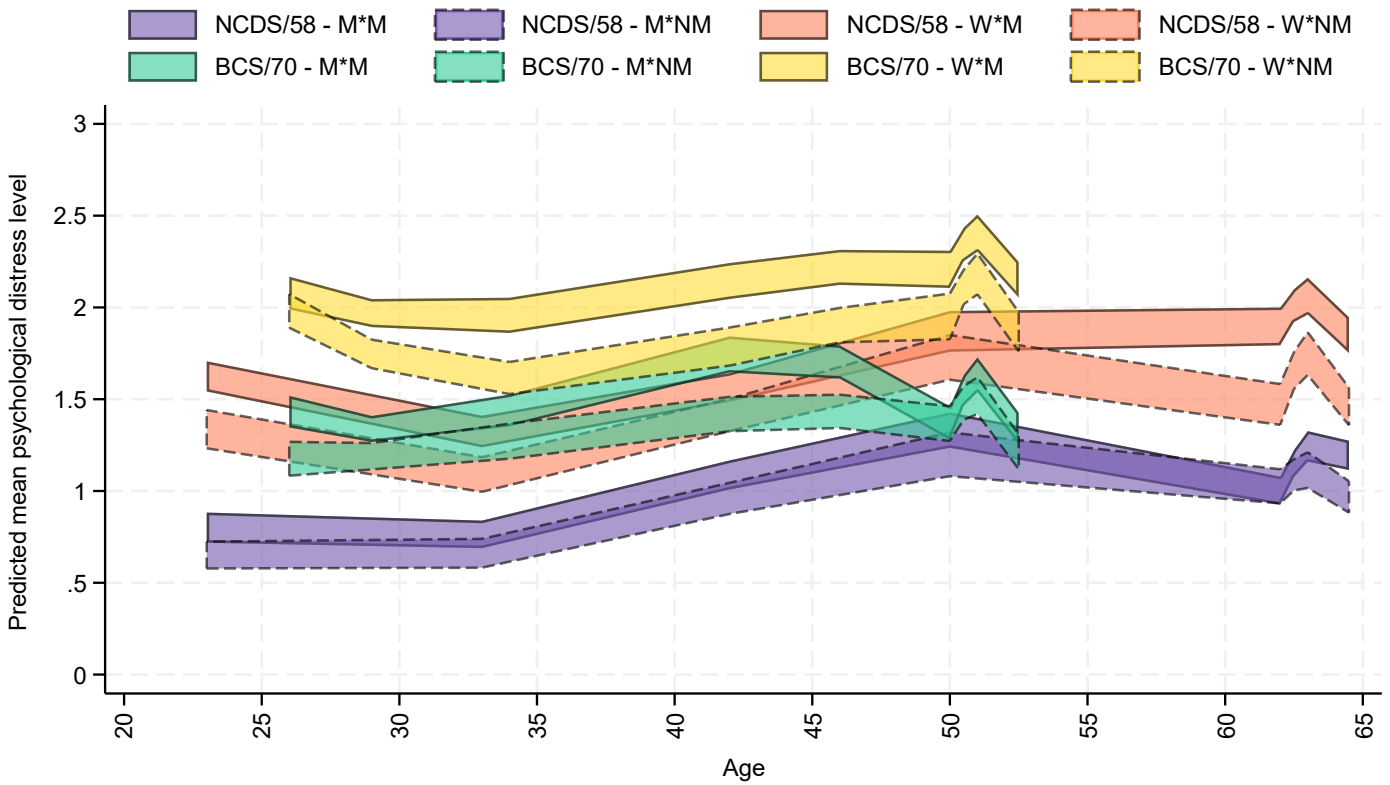
Note. 95% confidence intervals for the marginal predicted mean psychological distress levels from the multilevel growth curve models. Results based on weighted and imputed data.

Figure 5. Long-term trajectories of psychological distress by gender and childhood housing tenure (ages 5&10/7&11) across NCDS/58 (n=6,553) and BCS/70 (n=7,629)



Note. M: men; W: women. 95% confidence intervals for the marginal predicted mean psychological distress levels from the multilevel growth curve models. Results based on weighted and imputed data.

Figure 6. Long-term trajectories of psychological distress by gender and parental social class during childhood (age 10/11) across NCDS/58 (n=6,553) and BCS/70 (n=7,629)



Note. M*: men; *M: manual parental social class; *NM: non-manual parental social class; W*: women. 95% confidence intervals for the marginal predicted mean psychological distress levels from the multilevel growth curve models. Results based on weighted and imputed data.

COVID-19, economic downturn, and long-term trajectories of population mental health: evidence from two nationally representative British birth cohorts at the intersection of gender and socioeconomic position

Supplementary material

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eAppendix 1. Measurement invariance/equivalence (MI/E) testing approach and results

Rationale

One of the key assumptions in a study like ours, in which comparisons were going to be made across time-points within the same individuals, but also across groups within cohorts, and across cohorts, is that that measures of the construct under study (psychological distress) are being measured in an invariant or equivalent way [1, 2].

Previous evidence using data on the same measure (nine-item version of the Malaise Inventory) in the same cohorts (1958 National Child Development Study [NCDS/58] and 1970 British Cohort Study [BCS/70]) has shown that the measure is, indeed, equivalent across time-points within individuals, across genders, and even across cohorts at similar/same ages [3-5]. However, our study includes new data from these birth cohorts and, additionally, deals with comparisons across childhood socioeconomic positions (SEP) and at the intersection of gender and childhood SEP. Therefore, we needed to extend the previous evidence to account for the most recent main survey data collection time-points (or *sweeps*) as well as for equivalence across childhood SEPs (both childhood parental social class and childhood housing tenure) and the gender*childhood SEP intersections. Importantly, quantitative research on intersectional inequalities has typically overlooked the key issue of ensuring that measurement invariance holds across intersectional strata and not only across each of the social identity and position groups that make up the strata [6].

In order to ensure comparisons of psychological distress levels across time-points and groups are not due to differences in the measurement characteristics or parameters, evidence of scalar (also known as 'strong') invariance is typically needed, meaning that item loadings and thresholds are equivalent across time-points and groups [1].

When using a measure like the nine-item version of the Malaise inventory, which includes nine different experiences of mental ill-health, a further, more restrictive level of invariance ('Rasch' invariance) can be helpful. This level of invariance is achieved when the loadings across items within each of the conditions (time-points and groups) are the same. This is helpful because, otherwise, a one-unit increase in the observed Malaise inventory may have different implications on the underlying level of psychological distress depending on what specific indicator/symptom has been endorsed. Therefore, if the measure shows to be invariant at the 'Rasch' level, this provides further evidence of the validity of using the sum-score of the scale, as all indicators have a similarly strong relationship with the underlying construct.

Therefore, in our study, we aimed to empirically test whether the Malaise inventory was invariant at least at the metric level and, ideally, at the 'Rasch' level.

Analytical approach

We used a multiple-group confirmatory factor analysis (CFA) approach to estimate different models with increasing levels of constraints [1]. First, 'configural invariance' models were estimated, in which the same factor structure is imposed across conditions without further constraints. These models were considered to have good model fit if their Root Mean Square Error of Approximation (RMSEA) values were below 0.060, and their Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) values were above 0.950 [7]. If the configural models showed appropriate fit, 'scalar invariance' models were estimated, in which item loadings and thresholds were constrained to be equal across conditions (time-points and groups). Due to increasing constraints, these models are expected to have poorer fit to the data than the configural ones. However, scalar invariance was considered to be achieved if that loss in model fit was smaller than 0.015 for the RMSEA and smaller than 0.010 for the CFI [8, 9]. Finally, 'Rasch invariance' models were estimated, in which all items/indicators were constrained to have the same loadings. The loss in fit compared to the scalar invariance models was assessed using the same criteria.

All models were estimated in Mplus version 8 [10] using a Weighted Least Squares Mean and Variance adjusted (WLSMV) estimator and a Delta parameterisation [11].

Findings

We found evidence of the longitudinal invariance of the nine-item Malaise Inventory across genders, childhood SEP indicators, and their intersection in both NCDS/58 and BCS/70, as well as across both birth cohorts.

A 'Rasch' level of invariance (equal loadings and thresholds across groups and time-points as well as same loadings across items) was reached in all cases except for the three-categories childhood housing tenure, where a 'scalar' invariance model (equal loadings and thresholds across groups) was supported by the data, but a more constrained 'Rasch' model resulted in either an invalid solution (in NCDS/58 and BCS/70) or a solution with a large loss in fit (in the model combining both cohorts). A reduced version of the childhood housing tenure variable, focused on the participants living in owned or rented accommodation at both time-points provided a valid and acceptable solution.

Details on the fit indices across the different models and conditions are available in the table below.

Conditions: time-points * (cohorts) * groups		Model	Chi-square (df)	RMSEA (90% CI)	CFI	TLI	ΔRMSEA	ΔCFI
NCDS/58: 8 time-points (ages 23, 33, 42, 50, 62, 62.5, 63, 64.5) * groups	Sex/gender (2)	Configural	1330 (432)	0.025 (0.024, 0.027)	0.987	0.983		
		Scalar	1932 (537)	0.028 (0.027, 0.029)	0.980	0.979	-0.003	-0.007
		Rasch	**2028 (545)**	**0.029 (0.027, 0.030)**	**0.979**	**0.978**	**-0.001**	**-0.001**
	Childhood parental social class (2)	Configural	1500 (432)	0.027 (0.026, 0.029)	0.986	0.982		
		Scalar	2083 (537)	0.030 (0.028, 0.031)	0.980	0.978	-0.003	-0.006
		Rasch	**2340 (545)**	**0.032 (0.030, 0.033)**	**0.977**	**0.976**	**-0.002**	**-0.003**
	Childhood housing tenure (3)	Configural	2589 (648)	0.037 (0.036, 0.039)	0.975	0.967		
		Scalar	**3268 (809)**	**0.037 (0.036, 0.039)**	**0.969**	**0.967**	**0.000**	**-0.006**
		Rasch		Invalid solution				
	Childhood housing tenure reduced (2)	Configural	1292 (432)	0.025 (0.024, 0.027)	0.989	0.985		
		Scalar	1836 (537)	0.028 (0.027, 0.029)	0.983	0.982	-0.003	-0.006
		Rasch	**2074 (545)**	**0.030 (0.029, 0.032)**	**0.980**	**0.979**	**-0.002**	**-0.003**
	Sex/gender (2) * childhood parental social class (2)	Configural	2045 (864)	0.029 (0.027, 0.030)	0.984	0.979		
		Scalar	2842 (1081)	0.032 (0.030, 0.033)	0.977	0.975	-0.003	-0.007
		Rasch	**2896 (1089)**	**0.032 (0.030, 0.033)**	**0.976**	**0.975**	**0.000**	**-0.001**
	Sex/gender (2) * childhood housing tenure reduced (2)	Configural	1760 (864)	0.026 (0.024, 0.028)	0.988	0.984		
		Scalar	2508 (1081)	0.029 (0.028, 0.031)	0.980	0.979	-0.003	-0.008
		Rasch	**2560 (1089)**	**0.030 (0.028, 0.031)**	**0.980**	**0.979**	**-0.001**	**0.000**
BCS/70: 9 time-points (ages 26, 29, 34, 42, 46, 50, 50.5, 51, 52.5) * groups	Sex/gender (2)	Configural	1603 (486)	0.028 (0.027, 0.030)	0.987	0.983		
		Scalar	2184 (605)	0.030 (0.029, 0.032)	0.982	0.981	-0.002	-0.005
		Rasch	**2317 (613)**	**0.031 (0.030, 0.033)**	**0.981**	**0.980**	**-0.001**	**-0.001**
	Childhood parental social class (2)	Configural	1760 (486)	0.030 (0.029, 0.032)	0.987	0.983		
		Scalar	2233 (605)	0.031 (0.029, 0.032)	0.983	0.982	-0.001	-0.004
		Rasch	**2464 (613)**	**0.032 (0.031, 0.034)**	**0.981**	**0.980**	**-0.001**	**-0.002**
	Childhood housing tenure (3)	Configural	1950 (729)	0.030 (0.028, 0.031)	0.988	0.984		
		Scalar	**2501 (911)**	**0.030 (0.029, 0.032)**	**0.984**	**0.983**	**0.000**	-0.004
		Rasch		Invalid solution				
		Configural	1621 (486)	0.030 (0.028, 0.031)	0.988	0.984		

	Childhood housing tenure reduced (2)	Scalar	2115 (605)	0.031 (0.029, 0.032)	0.984	0.982	-0.001	-0.004
		Rasch	**2274 (613)**	**0.032 (0.031, 0.033)**	**0.982**	**0.981**	**-0.001**	**-0.002**
	Sex/gender (2) * childhood parental social class (2)	Configural	2255 (972)	0.030 (0.029, 0.032)	0.987	0.982		
		Scalar	2984 (1217)	0.033 (0.031, 0.034)	0.982	0.980	-0.003	-0.005
		Rasch	**3015 (1225)**	**0.032 (0.031, 0.033)**	**0.981**	**0.980**	**0.001**	**-0.001**
	Sex/gender (2) * childhood housing tenure reduced (2)	Configural	2109 (972)	0.030 (0.028, 0.031)	0.987	0.983		
		Scalar	2809(1217)	0.031 (0.030, 0.033)	0.982	0.981	-0.001	-0.005
		Rasch	**2873 (1225)**	**0.032 (0.030, 0.033)**	**0.982**	**0.981**	**-0.001**	**0.000**
NCDS/58 + BCS/70: 4 time-points (ages 23/26, 33/34, 42, 50) * 2 cohorts * groups	Sex/gender (2)	Configural	1230 (432)	0.024 (0.023, 0.026)	0.986	0.982		
		Scalar	1721 (537)	0.026 (0.025, 0.028)	0.980	0.978	-0.002	-0.006
		Rasch	**1785 (545)**	**0.027 (0.025, 0.028)**	**0.979**	**0.978**	**-0.001**	**-0.001**
	Childhood parental social class (2)	Configural	1294 (432)	0.025 (0.023, 0.027)	0.987	0.982		
		Scalar	1825 (537)	0.027 (0.026, 0.029)	0.980	0.979	-0.002	-0.007
		Rasch	**1986 (545)**	**0.029 (0.027, 0.030)**	**0.978**	**0.977**	**-0.002**	**-0.002**
	Childhood housing tenure (3)	Configural	1481 (648)	0.025 (0.023, 0.026)	0.988	0.983		
		Scalar	**2011 (809)**	**0.026 (0.025, 0.028)**	**0.982**	**0.981**	**-0.001**	**-0.006**
		Rasch	3828 (817)	0.042 (0.040, 0.043)	0.975	0.973	-0.016	-0.007
	Childhood housing tenure reduced (2)	Configural	1215 (432)	0.025 (0.023, 0.026)	0.988	0.983		
		Scalar	1707 (537)	0.027 (0.026, 0.029)	0.981	0.980	-0.002	-0.007
		Rasch	**1869 (545)**	**0.029 (0.027, 0.030)**	**0.979**	**0.978**	**-0.002**	**-0.002**
	Sex/gender (2) * childhood parental social class (2)	Configural	1828 (864)	0.026 (0.025, 0.028)	0.985	0.980		
		Scalar	2521 (1081)	0.029 (0.027, 0.030)	0.978	0.976	-0.003	-0.007
		Rasch	**2555 (1089)**	**0.029 (0.028, 0.031)**	**0.978**	**0.976**	**0.000**	**0.000**
	Sex/gender (2) * childhood housing tenure reduced (2)	Configural	1755 (864)	0.026 (0.025, 0.028)	0.986	0.981		
		Scalar	2428 (1081)	0.029 (0.027, 0.031)	0.978	0.977	-0.003	-0.008
		Rasch	**2463 (1089)**	**0.029 (0.028, 0.031)**	**0.978**	**0.977**	**0.000**	**0.000**

Note. BCS/70: 1970 British Cohort Study; CFI: Comparative Fit Index; df: degrees of freedom; NCDS/58: 1958 National Child Development Study; RMSEA: Root Mean Square Error of Approximation; TLI: Tucker-Lewis Index; ΔCFI: difference in CFI; ΔRMSEA: difference in RMSEA. Results based on weighted data. Selected models are highlighted in bold.

eAppendix 2. Rationale and methodological approach for between-person analyses focused on the relationship between inflation and mental (ill-)health

To supplement the within-person long-term trajectory analyses, we also wished to understand the potential shorter-term impacts of the cost-of-living increases and pre-existing sources of disadvantage. The aim of these analyses was to explore the relationship between inflation and population mental (ill-)health, and –in line with the main analyses– whether this relationship varied by generation, gender, socioeconomic position, and their intersections.

Measures

The same outcome measure (psychological distress as measured by the nine-item version of the Malaise Inventory) and the same approach to approaching gender as in the long-term trajectory analyses were used in these analyses.

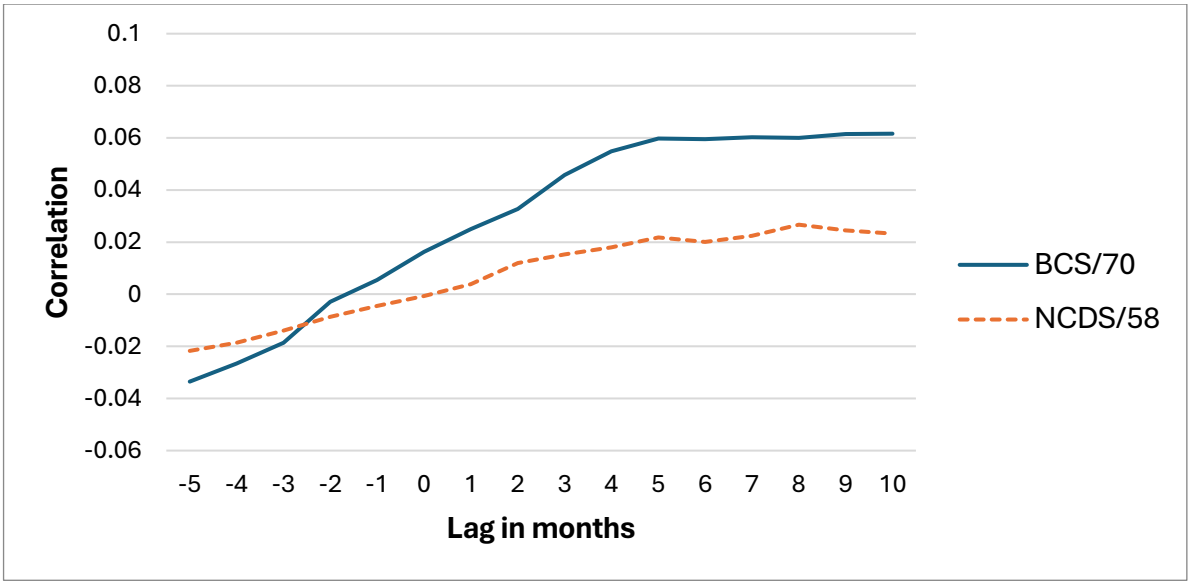
However, instead of childhood socioeconomic position indicators used in the main analyses, we used two alternative indicators representing the cohort member's *concurrent* socioeconomic position: housing tenure, grouped into owner (outright), owner (with mortgage), and other arrangements; and self-rated financial situation, assessed with the question "How well would you say you personally are managing financially these days?", and grouped into "Living comfortably", "Doing all right", and "Just about getting by or finding it quite/very difficult". Descriptive information on these variables is available in the following table:

	NCDS/58, N = 6,140		**BCS/70, N = 7,856**	
Gender, N (%)				
Women	3,277	50.0%	4,015	52.6%
Men	3,276	50.0%	3,614	47.4%
Adult SEP, N (%)				
Adult housing tenure				
Own outright	4,556	69.5%	2,036	26.7%
Own with mortgage	942	14.4%	4,062	53.2%
Other	977	14.9%	1,491	19.5%
Missing	*78*	*1.2%*	*40*	*0.5%*
Self-rated financial situation				
Just about/quite/very difficult	973	14.8%	1,519	19.9%
Doing all right	2,481	37.9%	3,264	42.8%
Living comfortably	3,059	46.7%	2,804	36.8%
Missing	*40*	*0.6%*	*42*	*0.6%*
Gender and adult SEP, N (%)				
Gender * adult housing tenure				

Women * own outright	2,346	35.8%	1,144	15.0%
Women * own with mortgage	423	6.5%	2,073	27.2%
Women * other	475	7.2%	776	10.2%
*Women * missing*	*33*	*0.5%*	*22*	*0.3%*
Men * own outright	2,210	33.7%	892	11.7%
Men * own with mortgage	519	7.9%	1,989	26.1%
Men * other	502	7.7%	715	9.4%
*Men * missing*	*45*	*0.7%*	*18*	*0.2%*
Gender * self-rated financial situation				
Women * just about/quite/very difficult	499	7.6%	854	11.2%
Women * doing all right	1,218	18.6%	1,652	21.7%
Women * living comfortably	1,537	23.5%	1,474	19.3%
*Women * missing*	*23*	*0.4%*	*35*	*0.5%*
Men * just about/quite/very difficult	474	7.2%	665	8.7%
Men * doing all right	1,263	19.3%	1,612	21.1%
Men * living comfortably	1,522	23.2%	1,330	17.4%
*Men * missing*	*17*	*0.3%*	*7*	*0.1%*

Note. BCS/70: 1970 British Cohort Study; N: frequency; NCDS/58: 1958 National Child Development Study; SD: standard deviation; SEP: socioeconomic position. Results based on unweighted data. Analytical samples exclude participants who took part in the latest main survey sweep prior to the COVID-19 pandemic onset (n=1,662 in NCDS/58 and n=116 in BCS/70) or within the period spanning the COVID-19 Surveys data collection (n=44 in BCS/70, interviewed between September-October 2020).

We augmented the latest sweep of the two birth cohorts with the UK Office for National Statistics (ONS) monthly Consumer Prices Index including owner occupiers' housing costs (CPIH) dataset [12], matching each individual's interview date with the CPIH three months before. CPIH is the most comprehensive measure of inflation available as it compiles a large sample of goods and services across multiple outlets in the UK, as well as owner occupiers' housing costs and Council Tax (a local tax on residential properties paid by occupiers regardless of ownership). The three-month lag was chosen upon inspection of the correlation between different CPIH lags and psychological distress in both birth cohorts, allowing a plausible yet not too protracted lag between exposure and outcome. The graph depicting the correlation between different CPIH lags and psychological distress scores (9-item Malaise Inventory) in NCDS/58 and BCS/70 are shown below:



Note that a lag of zero (0) represents the correlation between the 9-item Malaise Inventory scores and the concurrent inflation level (as measured by the Consumer Prices Index including owner occupiers' housing costs, CPIH) of the same month in which the interview took place.

For the analyses during the post-lockdown period, potential confounders (including seasonality, childhood socioeconomic position, educational attainment, and youth and adulthood mental health, presence of long-standing illnesses, and living situation, among others) were identified based on previous literature [13, 14] and included in directed acyclic graphs (DAGs). A full list of the additional variables used in the study and the DAGs for these between-person post-lockdown analyses are included in **eAppendix 3** and **eAppendix 4 (Supplementary Material)**, respectively.

Statistical analysis

Negative binomial regression models were used to explore differences in mental ill-health by cost-of-living levels during the post-lockdown period, as well as variation in these differences by generation, gender, socioeconomic position, and their intersections.

In these analyses, we leveraged the variability in the dates of interviews in the latest main survey sweeps in both NCDS/58 and BCS/70. Two main sets of analyses were conducted to understand the potential between-person relationship between inflation and psychological distress. First, negative binomial regression models including the continuous CPIH level (lagged three months) as the main exposure and the Malaise inventory sum-score as outcome were estimated. Second, we assigned each participant to a group of 'unexposed' vs 'exposed' to 'very high inflation', based on whether they had been interviewed at a time when CPIH levels had been above 6 points

for at least the three previous months (which was the case between June 2022 and December 2023). Due to this design, in addition to the participants excluded in the previous set of analysis, an additional 406 participants from NCDS/58 and 64 participants from BCS/70, whose interviews took place in January-April 2024, were excluded from the analyses with a binary CPIH operationalisation. Models were estimated separately for each birth cohort. First, general models for the overall cohort were estimated. Then, the potential variability in the relationship between inflation and psychological distress was explored by including the appropriate interaction terms between the exposure (i.e., the continuous CPIH or the binary 'very high inflation' variable) and the grouping variables (i.e., gender, each of the concurrent socioeconomic position indicators, or the intersection of between both). Unadjusted and adjusted models were estimated, based on literature-informed DAGs [13, 14] (see **eAppendix 4 (Supplementary Material)**.

In line with the main analyses (long-term trajectory analyses), both non-response weights and multiple imputation by chained equations (MICE) models were used to deal with missing data. In order to ensure congeniality between the imputation and analytical models, separate imputation models were used for each cohort and inequality under study (gender, tenure, self-rated financial position, gender * tenure, and gender * self-rated financial position).

The complete list of auxiliary variables included in the imputation models is available in **eAppendix 3 (Supplementary Material)**. Fifty imputed datasets were created, discarding the first 10 iterations of each chain. The analytical models were then conducted over the imputed datasets using Rubin's rules to pool the estimates and standard errors [15].

eAppendix 3. Full list of variables used in the study

Analysis	Variable	Name / dataset NCDS/58	Name / dataset BCS/70	Derivation / transformation
Outcomes				
WP (all time-points) + BP (most recent time-point)	Sum-score of nine-item Malaise inventory	Derived from corresponding items at ages 23, 33, 42, 50, and 64.5 sweeps and COVID-19 survey waves.	Derived from corresponding items at ages 26, 29, 34, 42, 46, and 52.5 sweeps and COVID-19 survey waves	Sum score
Exposures				
WP + BP	Gender	Sex assigned at birth (birth sweep). Complemented by additional sweeps if missing information.	Sex assigned at birth (birth sweep). Complemented by additional sweeps if missing information.	
WP	Parental social class during childhood	fclrg90 (CLOSER WP2, age 11)	fclrg90 (CLOSER WP2, age 10)	Recoded into 'Manual' and 'Non-manual'
WP	Housing tenure during childhood	tenure (CLOSER WP9, ages 7 & 11)	tenure (CLOSER WP9, ages 5 & 10)	
BP	Current self-rated financial situation	FINNOW (age 64.5 sweep)	b11finnow (age 52.5 sweep)	'Just about getting by', 'Finding it quite difficult' and 'Finding it very difficult' combined into single group
BP	Current housing tenure	TENURE (age 64.5 sweep). Complemented by previous sweeps if unchanged.	b11ten (age 52.5 sweep). Complemented by previous sweeps if unchanged.	
BP	Inflation (CPIH)	Monthly CPIH (ONS dataset)	Monthly CPIH (ONS dataset)	
Confounders				
BP	Seasonality	month of interview (age 64.5 sweep)	month of interview (age 52.5 sweep)	
BP	Gender	Sex assigned at birth (birth sweep). Complemented by additional sweeps if missing information.	Sex assigned at birth (birth sweep). Complemented by additional sweeps if missing information.	
BP	Parental social class	fclrg90 (CLOSER WP2, age 11)	fclrg90 (CLOSER WP2, age 10)	

	during childhood			
BP	Cognitive ability (childhood)	n457 and n1840 (copying designs test and human figure drawing; age 7 sweep)	f119 and f121 (copying designs test and human figure drawing; age 5 sweep)	First principal component derived from principal component analysis
BP	Housing tenure during childhood	tenure (CLOSER WP9, ages 7 & 11)	tenure (CLOSER WP9, ages 5 & 10)	
BP	Youth mental health	intncdsz extncdsz (CLOSER WP9, age 16)	intbcsz extbcsz (CLOSER WP9, age 16)	
BP	Cohort member's social class in adulthood	clrg90 (CLOSER WP2, age 42)	clrg90 (CLOSER WP2, age 42)	
BP	Highest educational attainment	ND8HNVQ (age 50 sweep)	BD9HNVQ (age 42 sweep)	
BP	Cognitive ability (adulthood)	N8CFLISD N8CFANI and N8CFCOR (word list recall, timed letter search/cancellation, animal naming; age 50 sweep)	B10CFLISD B10CFANI and B10CFCOR (word list recall, timed letter search/cancellation, animal naming; age 46 sweep)	First principal component derived from principal component analysis
BP	Adult mental health	ND8MAL (age 50 sweep)	BD10MAL (age 46 sweep)	
BP	Self-rated financial situation before most recent main survey sweep	N9FINNOW (age 55 sweep)	B10FINNOW (age 46 sweep)	'Just about getting by', 'Finding it quite difficult' and 'Finding it very difficult' combined into single group
BP	Housing tenure before most recent main survey sweep	Derived from N9TEN (age 55 sweep)	Derived from BD10TENURE (age 46 sweep)	Recoded into 'Owners/part-owners' and 'Not owners/part-owners'
BP	Long-standing illness	N9LOIL (age 55 sweep)	B10LOIL (age 46 sweep)	
BP	Economic activity	ND9ECACT (age 55 sweep)	BD10ECACT (age 46 sweep)	Recoded into 'Currently working' and 'Not currently working'. In

				NCDS/58, a third group including 'Retired' people was created and included in models wherever this did not affect model convergence
BP	Physical activity	N8EXERSE (age 50 sweep) *Dichotomous variable reflecting whether the person reports exercising regularly or not*.	B10EXERSE (age 46 sweep) *Number of days per week the person reports exercising*.	
BP	Living situation (living alone or not)	Derived from ND9HSIZE (age 55 sweep)	Derived from BD10HSIZE (age 46 sweep)	Recoded into 'Living alone' and 'Not living alone'
Auxiliary variables				
WP	House overcrowding during childhood	Derived from crowd (CLOSER WP9; birth, age 7 & 11 sweeps)	Derived from crowd (CLOSER WP9; age 5 sweep)	Recoded into 'Up to 1 person per room' and 'Over 1 persons per room'
WP	Parental divorce during childhood	divorce (CLOSER WP9; up to age 16)	divorce (CLOSER WP9; up to age 16)	
WP	Low birth weight	lowbwt (CLOSER WP9, birth sweep)	lowbwt (CLOSER WP9, birth sweep)	
WP	Breastfed	brfed (CLOSER WP9, age 7 sweep)	brfed (CLOSER WP9, age 5 sweep)	
BP	Cognitive ability (cohort-specific information)	Derived from n914 and n917 (general ability; age 11 sweep)	Derived from i3617 i3618 i3619 i3620 i3621 i3622 i3623 i3624 i3625 i3626 i3627 i3628 i3629 i3630 i3631 i3632 i3633 i3634 i3635 i3636 i3637 i3638 i3639 i3640 i3641 i3642 i3643 and i3644 (BAS matrix tasks; age 10 sweep)	Sum
BP	Voted in last general elections	N9VOTE10 (age 55 sweep)	B9SCQ6 (age 42 sweep)	

BP	Membership in organisations	Derived from N8ORGN01 N8ORGN02 N8ORGN03 N8ORGN04 N8ORGN05 N8ORGN06 N8ORGN07 N8ORGN08 N8ORGN09 N8ORGN10 N8ORGN11 N8ORGN12 N8ORGN13 N8ORGN14 N8ORGN15 and N8ORGN16 (current member of different organisations; age 42 sweep)	Derived from B9SCQ8A B9SCQ8B B9SCQ8C B9SCQ8D B9SCQ8E B9SCQ8F B9SCQ8G B9SCQ8H B9SCQ8I B9SCQ8J B9SCQ8K B9SCQ8L B9SCQ8M B9SCQ8N and B9SCQ8O (current member of different organisations; age 42 sweep)	Sum
BP	Provided consent for collection of biomarkers information	blcmea (age 44 sweep)	B10BSWILL (age 46 sweep)	
BP	Partnership status	Derived from ND9MS, ND9COHAB, and ND9PARTP (age 55 sweep)	Derived from BD10MS, BD10COHAB, and BD10PARTP (age 46 sweep)	Recoded into 'In a partnership (regardless of cohabitation)' and 'Not in a partnership'
BP	BMI	ND9BMI (age 55 sweep)	BD10BMI (age 46 sweep)	
BP	Self-rated health	N9HLTHGN (age 55 sweep)	B10HLTHGN (age 46 sweep)	
BP	Smoking status	Derived from N9SMOKIG (age 55 sweep)	Derived from B10SMOKIG (age 46 sweep)	Recoded into 'Never smoked', 'Ever smoked (not currently)', and 'Currently smokes'
BP	Social support	N8LISTEN (age 50 sweep)	B10LISTEN (age 46 sweep)	
BP	Number of non-responses to previous sweeps	Derived from OUTCME01 OUTCME02 OUTCME03 OUTCME04 OUTCME05 OUTCME06	Derived from OUTCME01 OUTCME02 OUTCME03 OUTCME04 OUTCME05 OUTCME06	Sum

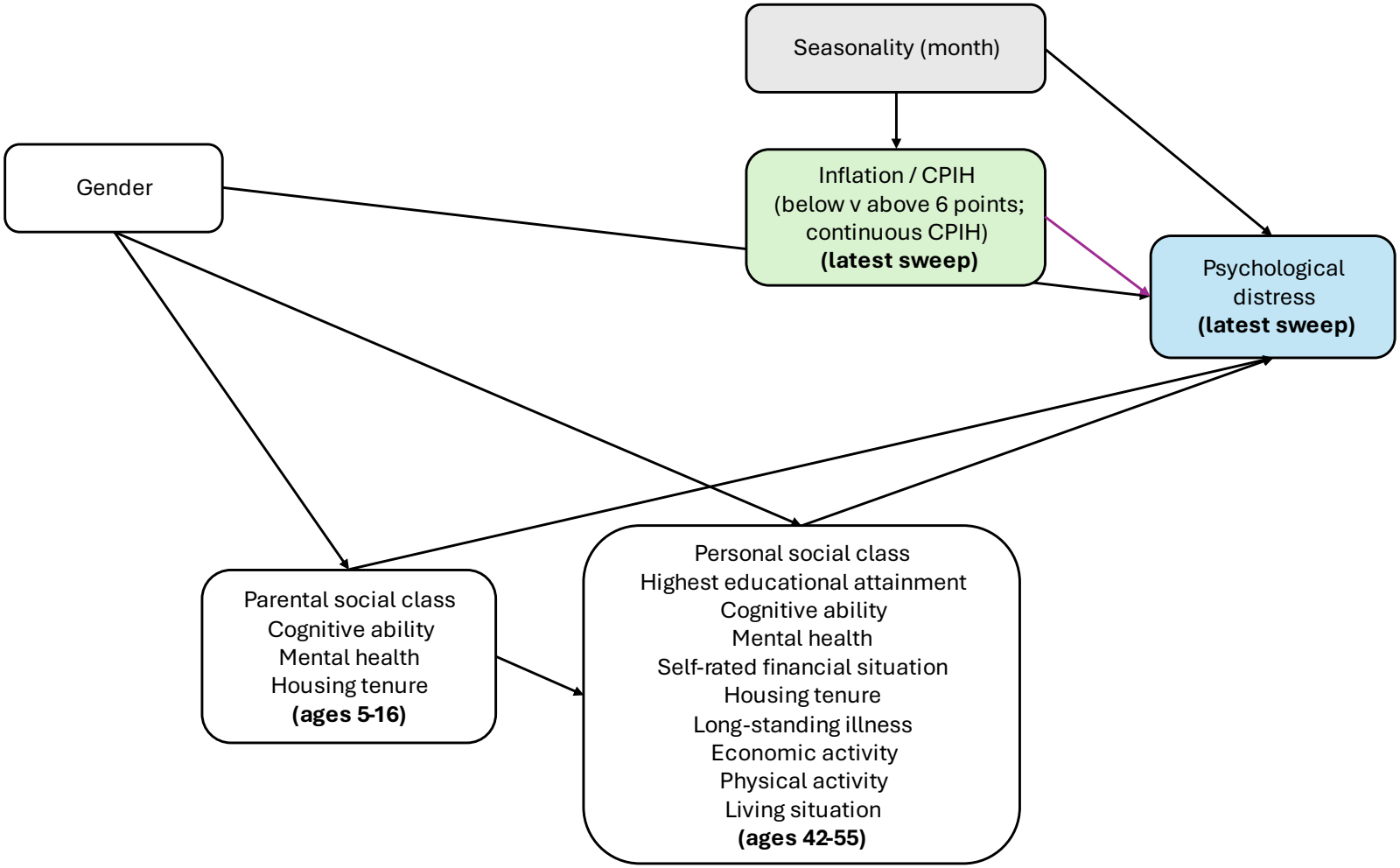
		OUTCME07 OUTCME08 OUTCME09 (response dataset)	OUTCME07 OUTCME08 OUTCME09 OUTCME10 (response dataset)	

Note. BCS/70: 1970 British Cohort Study; BP: between-person post-lockdown analyses; NCDS/58: 1958 National Child Development Study; WP: within-person long-term trajectory analyses. Due to convergence issues, some of the auxiliary variables for the between-person post-lockdown analyses were not included in some of the imputation models. In NCDS/58, these were: consent for biomarker collection and partnership status in overall models and models by gender; housing tenure in most recent pre-pandemic sweep, organisations membership, and non-responses to previous sweeps in models by tenure; non-responses to previous sweeps in models by financial situation; living situation, organisations membership, consent for biomarker collection, highest educational attainment, housing tenure in most recent pre-pandemic sweep, and non-responses to previous sweeps in models by the intersection of gender and tenure; and living situation, organisations membership, consent for biomarker collection, physical exercise, and non-responses to previous sweeps in models by the intersection of gender and financial situation. In BCS/70, these were: partnership status in models by tenure; partnership status and non-responses to previous sweeps in models by financial situation; housing tenure in most recent pre-pandemic sweep, economic activity, living situation, partnership status, and non-responses to previous sweeps in models by the intersection of gender and financial situation; and partnership status and non-responses to previous sweeps in models by gender and tenure.

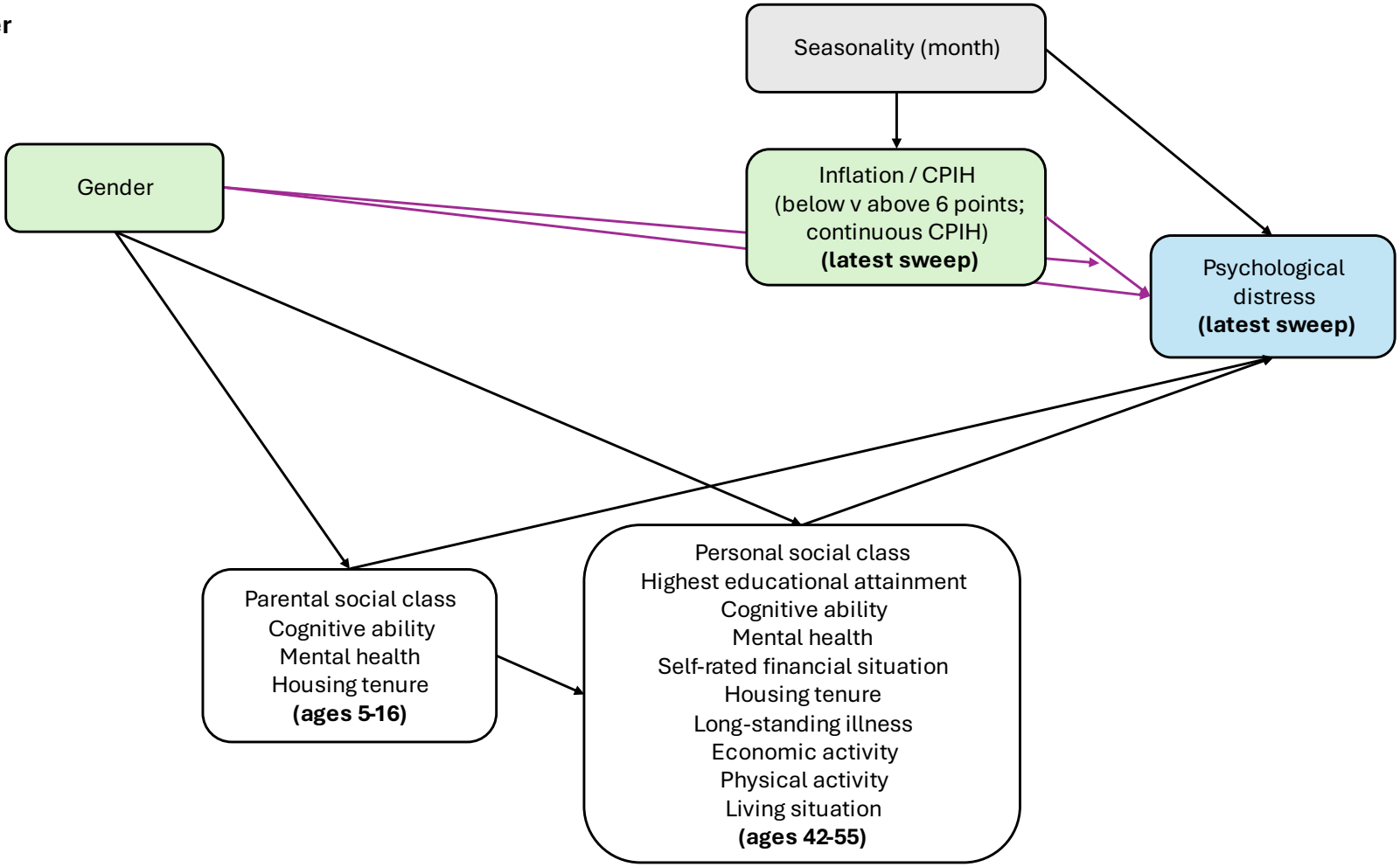
eAppendix 4. Directed Acyclic Graphs (DAGs) for the between-person post-lockdown analyses

The following figures depict the DAGs for the between-person post-lockdown analyses. The main exposures appear in green shade, whereas the outcome appears in blue shade. Key pathways of interest are highlighted in **purple colour**, and the (groups of) variables that could confound the relationship are shaded in grey. The (groups of) variables that may not confound the relationship or may be on the pathway (and hence, adjusting for them could attenuate the relationship of interest) are included in white shade.

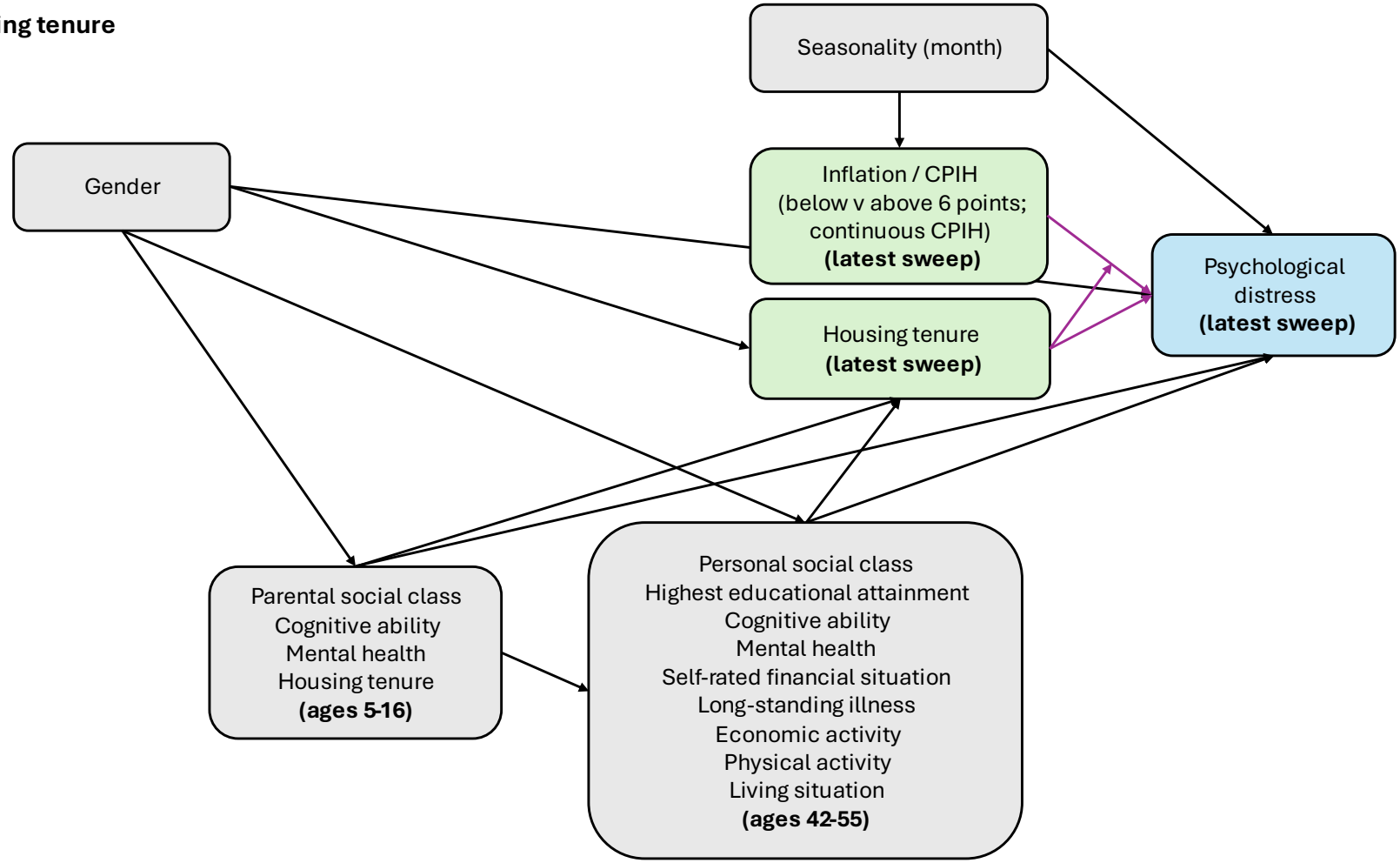
Overall


Seasonality (month)
Gender
Inflation / CPIH
(below v above 6 points;
continuous CPIH)
(latest sweep)
Psychological
distress
(latest sweep)
Parental social class
Cognitive ability
Mental health
Housing tenure
(ages 5-16)
Personal social class
Highest educational attainment
Cognitive ability
Mental health
Self-rated financial situation
Housing tenure
Long-standing illness
Economic activity
Physical activity
Living situation
(ages 42-55)

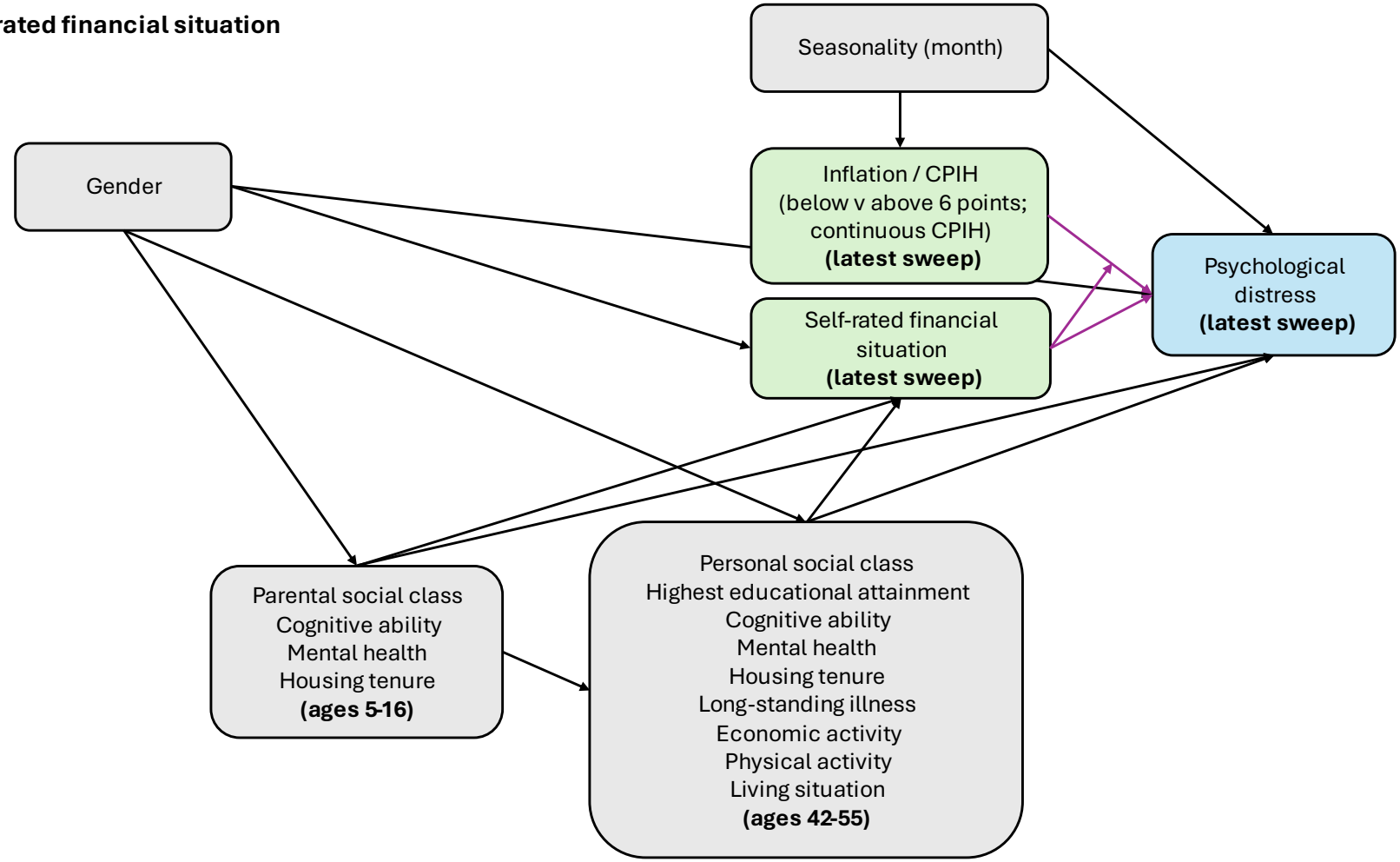
By gender


Seasonality (month)
Gender
Inflation / CPIH
(below v above 6 points;
continuous CPIH)
(latest sweep)
Psychological
distress
(latest sweep)
Parental social class
Cognitive ability
Mental health
Housing tenure
(ages 5-16)
Personal social class
Highest educational attainment
Cognitive ability
Mental health
Self-rated financial situation
Housing tenure
Long-standing illness
Economic activity
Physical activity
Living situation
(ages 42-55)

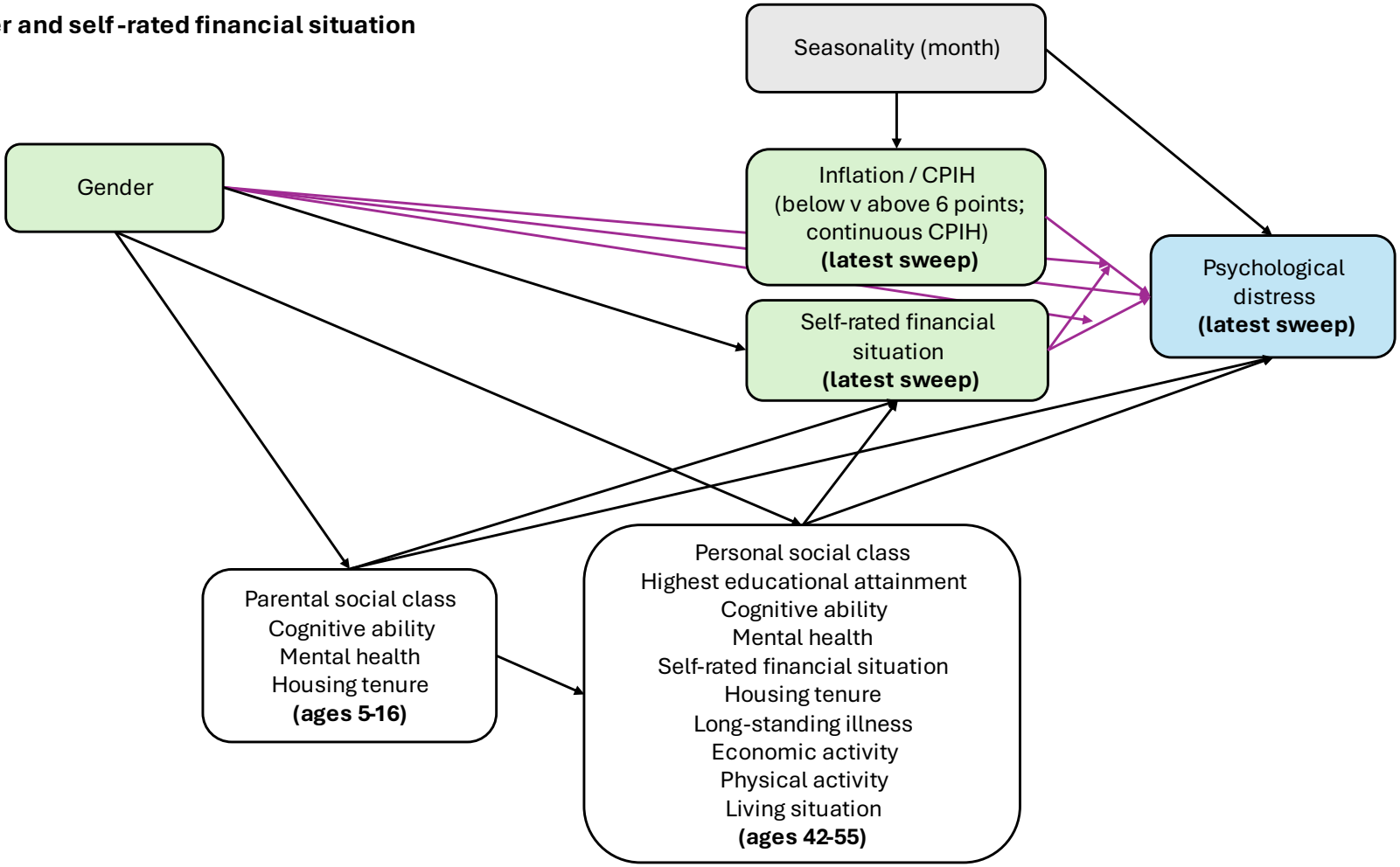
By housing tenure



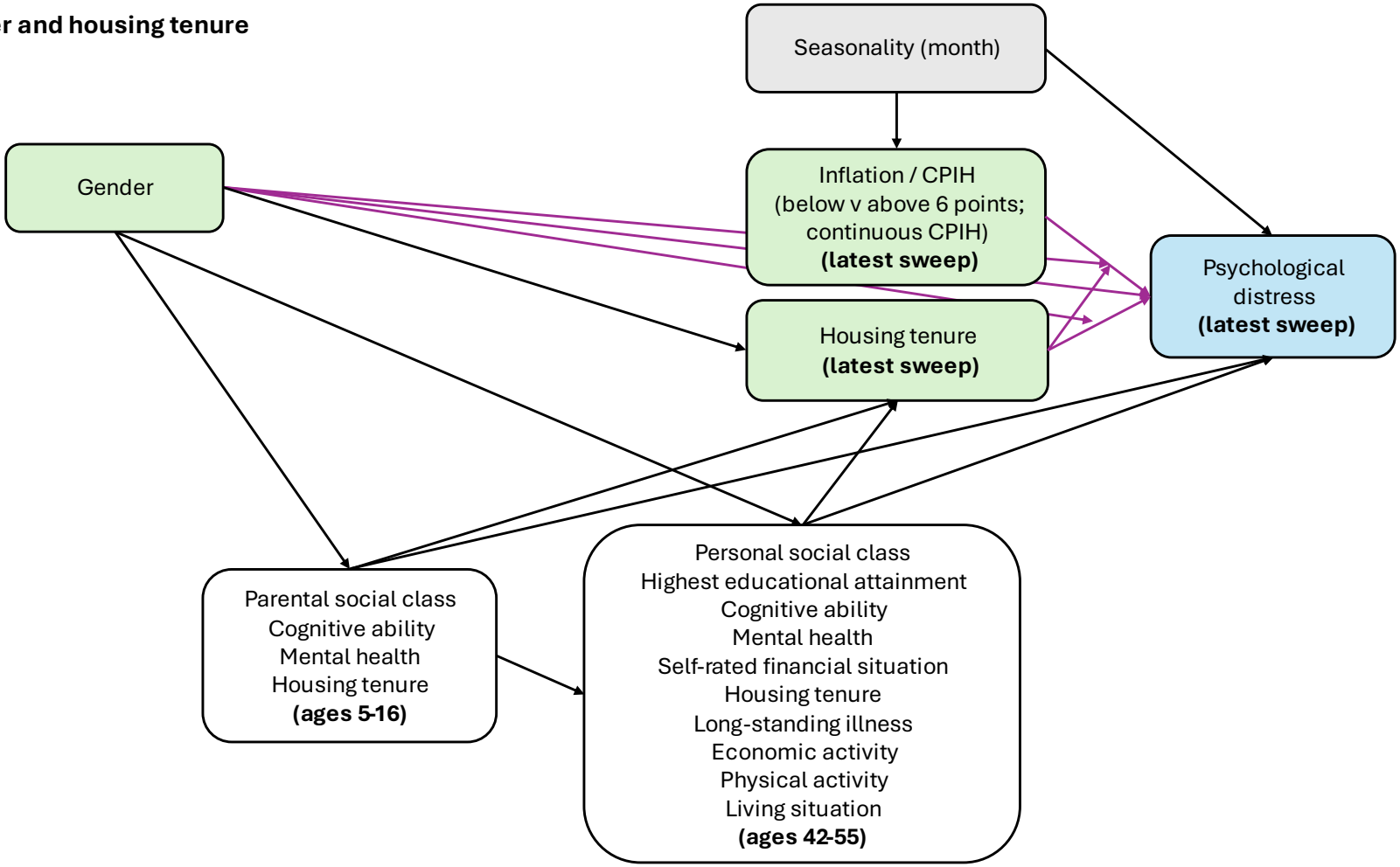
By self-rated financial situation



By gender and self-rated financial situation



By gender and housing tenure



eAppendix 5. Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist for cohort studies

	Item No	Recommendation	Section / paragraph
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	Title, abstract
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	Abstract
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	Introduction / 1-4
Objectives	3	State specific objectives, including any prespecified hypotheses	Introduction / 5
Methods			
Study design	4	Present key elements of study design early in the paper	Methods / 1
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Methods / 1
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up	Methods / 1
		(*b*) For matched studies, give matching criteria and number of exposed and unexposed	-
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	Methods / 2-6 eAppendices 2-4
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	Methods / 2-6 eAppendix 1,2
Bias	9	Describe any efforts to address potential sources of bias	Methods / 8-10 eAppendices 1, 2, 7, 9
Study size	10	Explain how the study size was arrived at	Methods / 8 eAppendix 2
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	Methods / 2-6
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	Methods / 7-12 eAppendices 2-4
		(*b*) Describe any methods used to examine subgroups and interactions	Methods / 9, 11

			eAppendix 2
		(*c*) Explain how missing data were addressed	Methods / 13-15
		(*d*) If applicable, explain how loss to follow-up was addressed	Methods / 13-15
		(*e*) Describe any sensitivity analyses	Methods / 10
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	Results / 1 Table 1
		(b) Give reasons for non-participation at each stage	Results / 1 Table 1
		(c) Consider use of a flow diagram	
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	Results / 1 Table 1
		(b) Indicate number of participants with missing data for each variable of interest	Table 1
		(c) Summarise follow-up time (eg, average and total amount)	Results / 1
Outcome data	15*	Report numbers of outcome events or summary measures over time	Results / 1 Table 1
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	Results / 4-6, 10-12 Table 2 eAppendices 3-4, 8, 12
		(*b*) Report category boundaries when continuous variables were categorized	-
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	-
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	Results / 8, 13 eAppendices 9-13
Discussion			
Key results	18	Summarise key results with reference to study objectives	Discussion / 1
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Discussion / 7

Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Discussion / 2-5, 8
Generalisability	21	Discuss the generalisability (external validity) of the study results	Discussion / 6-7
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Funding statement

*Give information separately for exposed and unexposed groups.

Note. eAppendices are included in this Supplementary Material.

An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at http://www.strobe-statement.org.

eAppendix 6. Descriptive information on the analytical and overall samples

	NCDS/58				BCS/70			
	Overall, N = 8,215		Without pre-pandemic cases, N = 6,553		Overall, N = 7,789		Without pre- and during pandemic cases, N = 7,629	
Social identities and positions								
Gender								
Women	4,127	50.2%	3,277	50.0%	4,100	52.6%	4,015	52.6%
Men	4,088	49.8%	3,276	50.0%	3,689	47.4%	3,614	47.4%
Childhood socioeconomic position								
Parental social class								
Manual	4,211	51.3%	3,394	51.8%	3,694	47.4%	3,618	47.4%
Non-manual	2,693	32.8%	2,116	32.3%	2,921	37.5%	2,864	37.5%
Missing	*1,311*	*16.0%*	*1,043*	*15.9%*	*1,174*	*15.1%*	*1,147*	*15.0%*
Childhood housing tenure								
Owned at both time points	2,824	34.4%	2,250	34.3%	3,502	45.0%	3,418	44.8%
Owned at one time point	516	6.3%	414	6.3%	572	7.3%	565	7.4%
Rented at both time points	3,025	36.8%	2,419	36.9%	1,694	21.7%	1,667	21.9%
Missing	*1,850*	*22.5%*	*1,470*	*22.4%*	*2,021*	*25.9%*	*1,979*	*25.9%*
Gender * parental social class								
Women * Manual	2,104	25.6%	1,699	25.9%	1,939	24.9%	1,898	24.9%
Women * Non-manual	1,352	16.5%	1,048	16.0%	1,560	20.0%	1,529	20.0%
*Women * missing*	*671*	*8.2%*	*530*	*8.1%*	*601*	*7.7%*	*588*	*7.7%*
Men * Manual	2,107	25.6%	1,695	25.9%	1,755	22.5%	1,720	22.5%
Men * Non-manual	1,341	16.3%	1,068	16.3%	1,361	17.5%	1,335	17.5%
*Men * missing*	*640*	*7.8%*	*513*	*7.8%*	*573*	*7.4%*	*559*	*7.3%*
Gender * childhood housing tenure								

Women * owned at both time points	1,390	16.9%	1,093	16.7%	1,866	24.0%	1,819	23.8%
Women * owned at one time point	270	3.3%	218	3.3%	317	4.1%	312	4.1%
Women * rented at both time points	1,555	18.9%	1,239	18.9%	896	11.5%	883	11.6%
*Women * missing*	*912*	*11.1%*	*727*	*11.1%*	*1,021*	*13.1%*	*1,001*	*13.1%*
Men * owned at both time points	1,434	17.5%	1,157	17.7%	1,636	21.0%	1,599	21.0%
Men * owned at one time point	246	3.0%	196	3.0%	255	3.3%	253	3.3%
Men * rented at both time points	1,470	17.9%	1,180	18.0%	798	10.2%	784	10.3%
*Men * missing*	*938*	*11.4%*	*743*	*11.3%*	*1,000*	*12.8%*	*978*	*12.8%*
Adult socioeconomic position								
Adult housing tenure								
Own outright	5,586	68.0%	4,556	69.5%	2,081	26.7%	2,036	26.7%
Own with mortgage	1,247	15.2%	942	14.4%	4,152	53.3%	4,062	53.2%
Other	1,222	14.9%	977	14.9%	1,516	19.5%	1,491	19.5%
Missing	*160*	*1.9%*	*78*	*1.2%*	*40*	*0.5%*	*40*	*0.5%*
Self-rated financial situation								
Just about/quite/very difficult	1,209	14.7%	973	14.8%	1,549	19.9%	1,519	19.9%
Doing all right	3,090	37.6%	2,481	37.9%	3,330	42.8%	3,264	42.8%
Living comfortably	3,870	47.1%	3,059	46.7%	2,868	36.8%	2,804	36.8%
Missing	*46*	*0.6%*	*40*	*0.6%*	*42*	*0.5%*	*42*	*0.6%*
Gender * adult housing tenure								
Women * own outright	2,892	35.2%	2,346	35.8%	1,171	15.0%	1,144	15.0%
Women * own with mortgage	561	6.8%	423	6.5%	2,118	27.2%	2,073	27.2%
Women * other	605	7.4%	475	7.2%	789	10.1%	776	10.2%
*Women * missing*	*69*	*0.8%*	*33*	*0.5%*	*22*	*0.3%*	*22*	*0.3%*

Men * own outright	2,694	32.8%	2,210	33.7%		910	11.7%	892	11.7%
Men * own with mortgage	686	8.4%	519	7.9%		2,034	26.1%	1,989	26.1%
Men * other	617	7.5%	502	7.7%		727	9.3%	715	9.4%
*Men * missing*	*91*	*1.1%*	*45*	*0.7%*		*18*	*0.2%*	*18*	*0.2%*
Gender * self-rated financial situation									
Women * just about/quite/very difficult	622	7.6%	499	7.6%		871	11.2%	854	11.2%
Women * doing all right	1,506	18.3%	1,218	18.6%		1,685	21.6%	1,652	21.7%
Women * living comfortably	1,972	24.0%	1,537	23.5%		1,509	19.4%	1,474	19.3%
*Women * missing*	*27*	*0.3%*	*23*	*0.4%*		*35*	*0.4%*	*35*	*0.5%*
Men * just about/quite/very difficult	587	7.1%	474	7.2%		678	8.7%	665	8.7%
Men * doing all right	1,584	19.3%	1,263	19.3%		1,645	21.1%	1,612	21.1%
Men * living comfortably	1,898	23.1%	1,522	23.2%		1,359	17.4%	1,330	17.4%
*Men * missing*	*19*	*0.2%*	*17*	*0.3%*		*7*	*0.1%*	*7*	*0.1%*
Malaise inventory, M (SD)									
Age 23	1.12	1.46	1.11	1.45	*Age 26*	1.69	1.72	1.69	1.71
Age 33	0.92	1.44	0.90	1.42	*Age 29*	1.45	1.67	1.45	1.66
Age 42	1.43	1.68	1.42	1.68	*Age 34*	1.59	1.84	1.59	1.84
Age 50	1.40	1.85	1.40	1.87	*Age 42*	1.77	1.93	1.77	1.93
Age 62	1.22	1.69	1.22	1.69	*Age 46*	1.70	2.06	1.69	2.06
Age 62.5	1.50	1.88	1.50	1.88	*Age 50*	1.63	1.93	1.63	1.93
Age 63	1.43	1.84	1.43	1.85	*Age 50.5*	1.97	2.10	1.97	2.10
Age 64.5	1.40	1.80	1.38	1.78	*Age 51*	1.86	2.06	1.86	2.06
					Age 52.5	1.66	2.00	1.66	2.00
Malaise inventory missingness, N (%)									
Age 23	*856*	*11.0%*	*624*	*10.2%*	*Age 26*	*2,562*	*32.0%*	*2,512*	*32.0%*
Age 33	*685*	*8.8%*	*478*	*7.8%*	*Age 29*	*1,273*	*15.9%*	*1,252*	*15.9%*

Age 42	*268*	*3.4%*	*142*	*2.3%*	*Age 34*	*1,666*	*20.8%*	*1,632*	*20.8%*
Age 50	*431*	*5.5%*	*272*	*4.4%*	*Age 42*	*1,718*	*21.4%*	*1,696*	*21.6%*
Age 62	*3,540*	*45.4%*	*2,783*	*45.3%*	*Age 46*	*1,619*	*20.2%*	*1,596*	*20.3%*
Age 62.5	*2,372*	*30.4%*	*1,797*	*29.3%*	*Age 50*	*4,589*	*57.2%*	*4,511*	*57.4%*
Age 63	*1,957*	*25.1%*	*1,463*	*23.8%*	*Age 50.5*	*3,613*	*45.1%*	*3,507*	*44.6%*
Age 64.5	*68*	*0.9%*	*22*	*0.4%*	*Age 51*	*3,215*	*40.1%*	*3,143*	*40.0%*
					Age 52.5	*828*	*10.3%*	*819*	*10.4%*

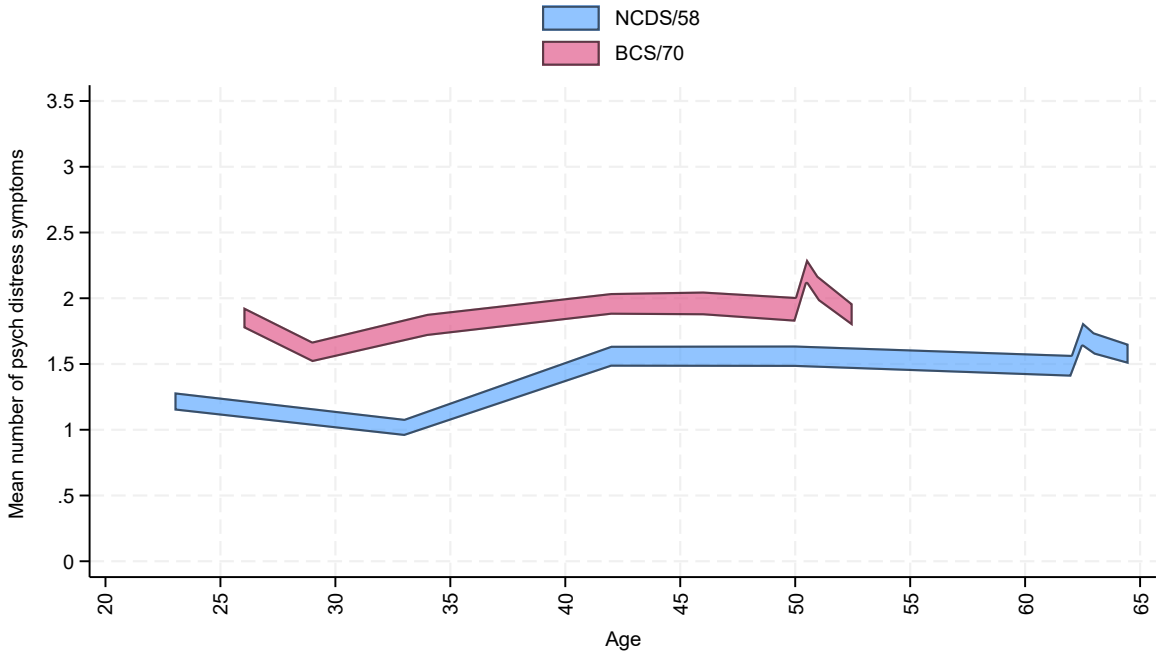
Note. BCS/70: 1970 British Cohort Study; M: mean; N: frequency; NCDS/58: 1958 National Child Development Study; SD: standard deviation; SEP: socioeconomic position. Results based on unweighted data. Analytical samples exclude participants who took part in the latest main survey sweep prior to the COVID-19 pandemic onset (n=1,662 in NCDS/58 and n=116 in BCS/70) or within the period spanning the COVID-19 Surveys data collection (n=44 in BCS/70, interviewed between September-October 2020).

eAppendix 7. Selection of optimal functional form for multilevel growth curve models

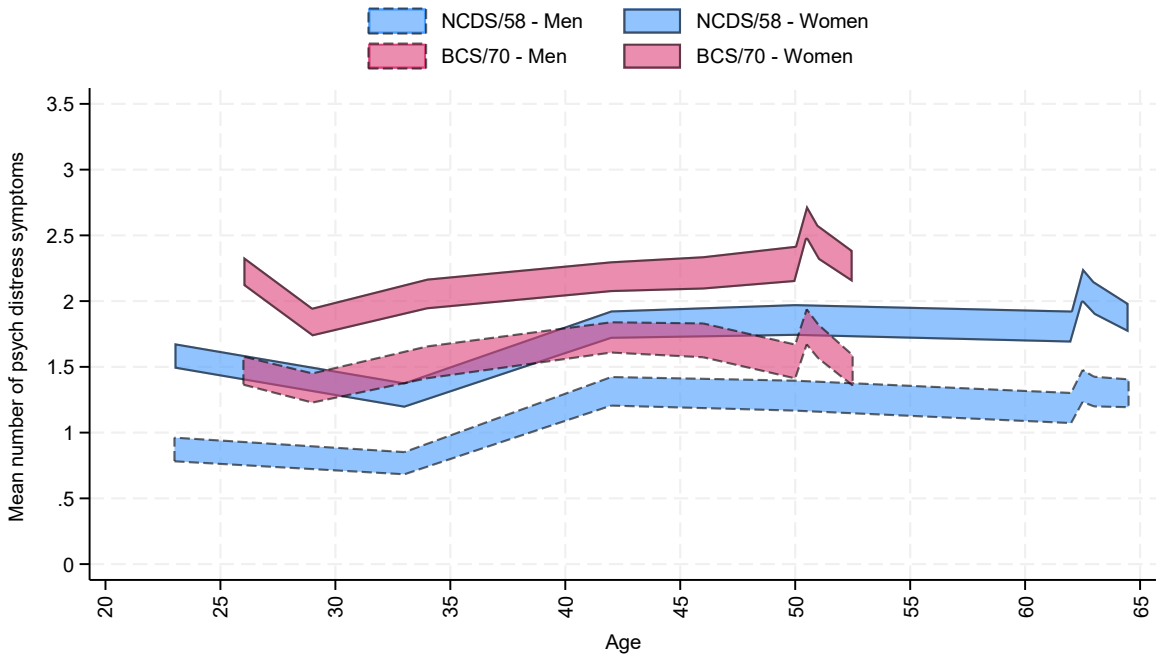
Visualisation of imputed and weighted life-course data

The graphs below show the connected 95% confidence intervals (CI) of the mean Malaise Inventory score estimated independently at each time-point, based on weighted and imputed data, for the overall samples, by gender, each of the childhood SEP indicators and, finally, by both gender and childhood SEP. The different 95% CIs have been connected for visualisation purposes only.

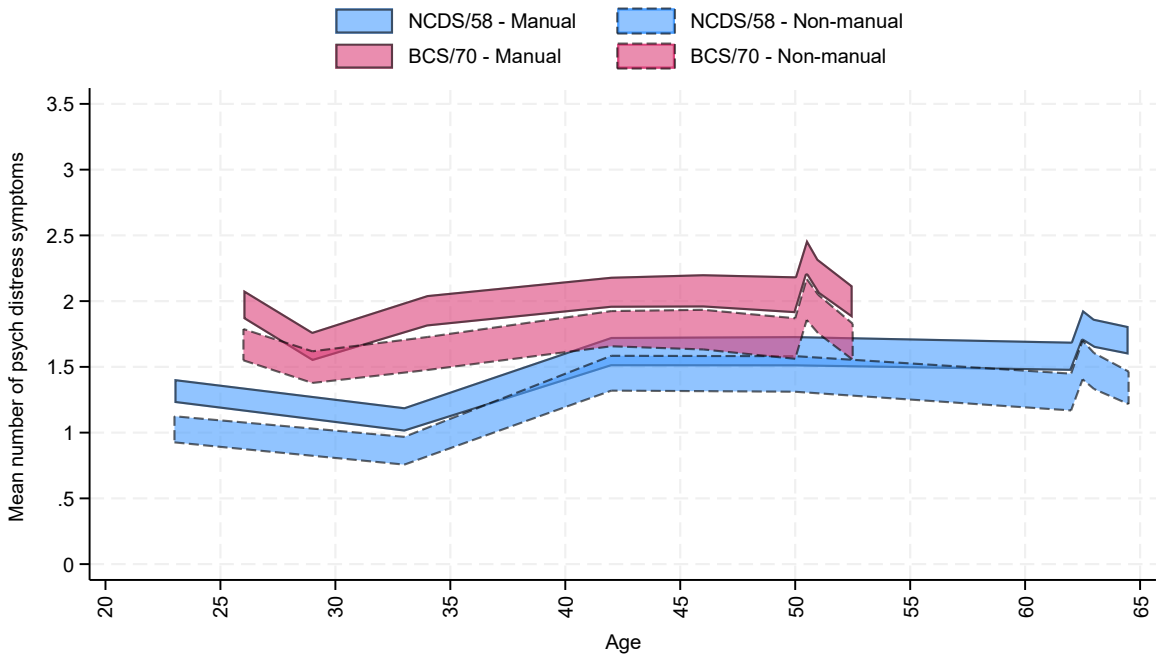
Overall



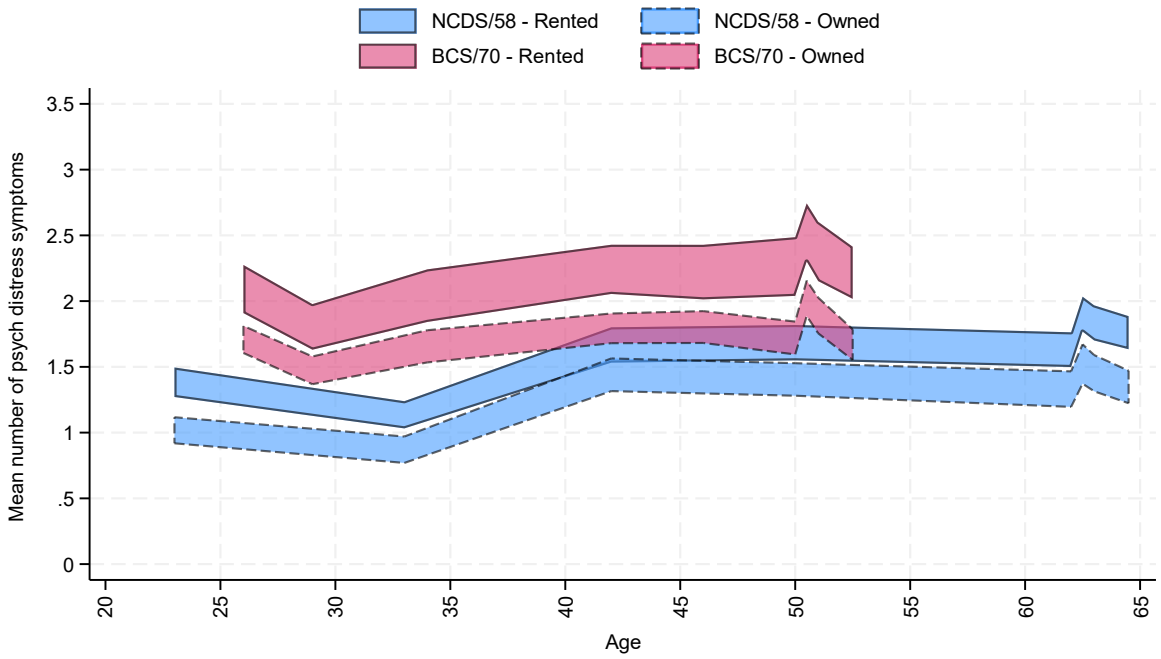
By gender



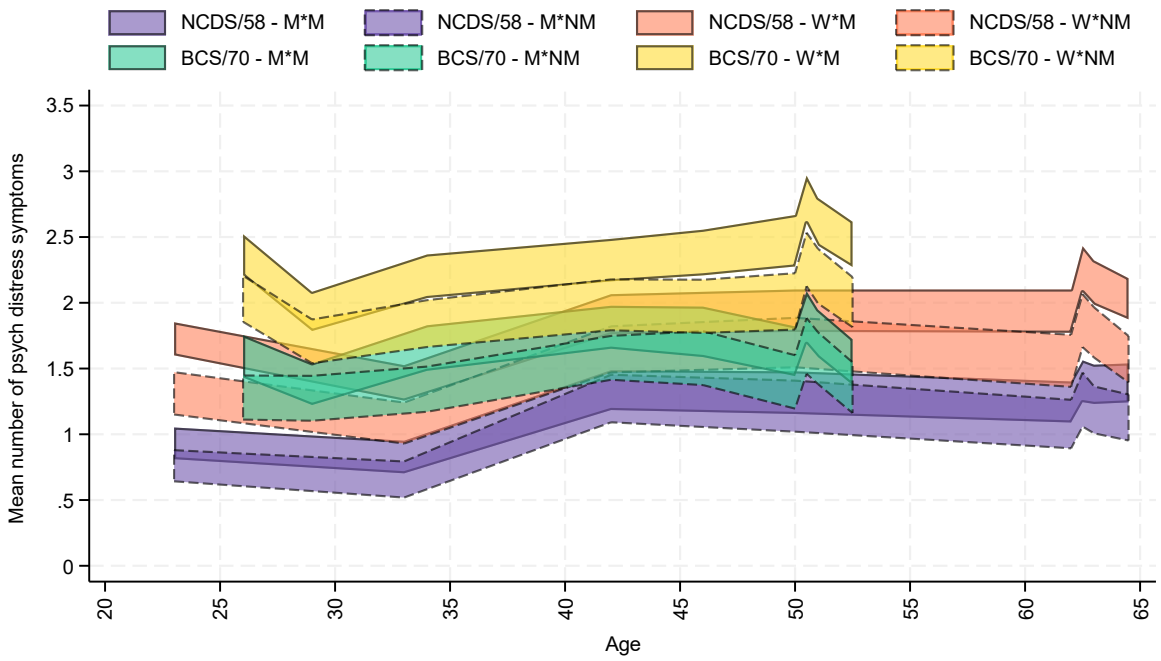
By parental social class



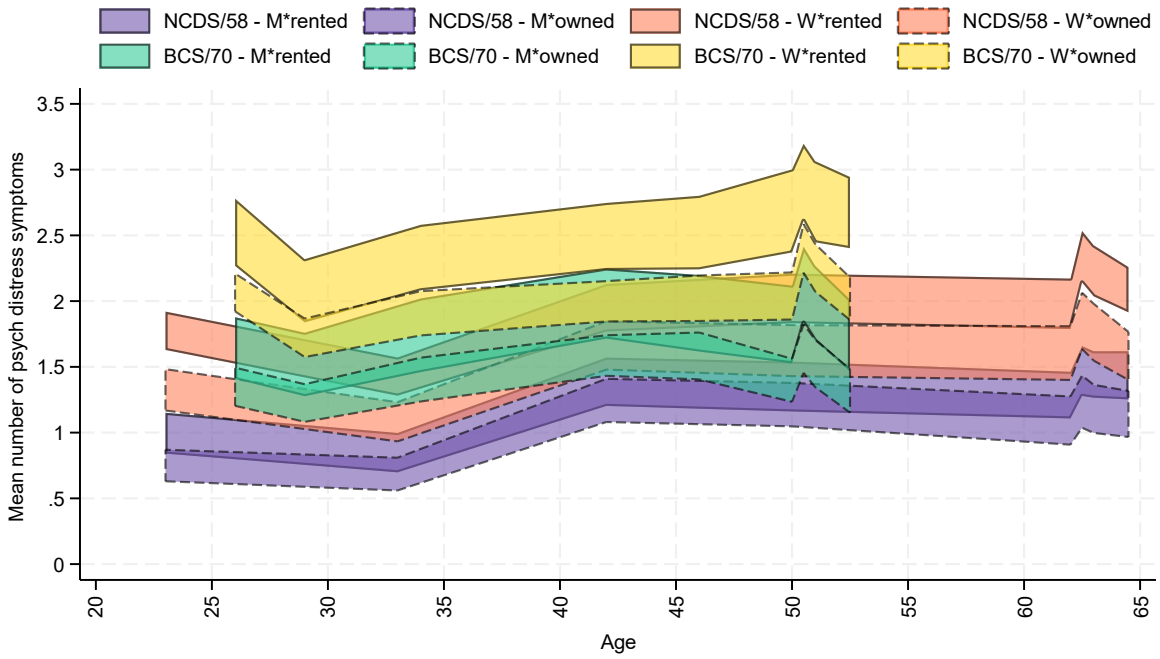
By childhood housing tenure



By gender (M: men; W: women) and parental social class (M: manual; NM: non-manual)



By gender (M: men; W: women) and childhood housing tenure



Candidate model specifications and model comparison strategy

The visual exploration of the weighted and imputed mean values of the outcome measure across the different time-points in both birth cohorts suggested the appropriateness of exploring three main functional forms for the long-term trajectories:

1. A cubic polynomial trajectory, which would allow to model the initial decrease, later increase, and further plateau or reversal of the increase in both cohorts, although without much ability to capture the observed increases during the COVID-19 pandemic.

2. A cubic polynomial trajectory with a time-specific factor capturing the step-increase during the COVID-19 pandemic, which would allow to, in addition to the previous case (#1), accommodate a transient increase during that period).

3. A piecewise model with a cubic and a quadratic spline with a knot at the latest pre-pandemic assessment, which, unlike #2, would allow to model the changes during and after the pandemic with more granularity than as a step-increase, but rather as an initial increase and posterior decrease (without necessarily returning to the overall cubic trajectory).

Models were estimated using a complete-case approach, separately for each birth cohort and for each condition (overall and then including an interaction between the growth parameters and gender, each of the childhood socioeconomic position indicators, and the gender*childhood SEP intersection). Models were estimated with

and without random slopes for the linear growth parameters (linear random slopes were chosen to accommodate variability in the change over time across individuals without introducing the model complexity that random slopes for the polynomial terms would have introduced). Random intercepts were included as default to accommodate individual variability in the starting points.

The Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) were obtained, representing the ability of the model to reproduce the data, with lower AIC and BIC suggesting better fit. Models with the best fit to the data were selected. Where different models were supported by the AIC and BIC indices, models with more consistent functional forms across the different scenarios were favoured.

Results of the model comparison strategy can be found in the table below.

Model comparison results

Interaction with growth parameters	Model	NCDS/58					BCS/70				
		N obs	Log-likelihood	df	AIC	BIC	N obs	Log-likelihood	df	AIC	BIC
Overall (none)	Cubic	41,539	-59,309.4	6	118,630.7	118,682.5	50,036	-74,486.1	6	148,984.1	149,037.1
	Cubic with random linear slopes	41,539	-58,219.8	7	116,453.6	116,514.0	50,036	-73,469.4	7	146,952.7	147,014.5
	Cubic with pandemic factor	41,539	-59,308.1	7	118,630.2	118,690.7	50,036	-74,463.5	7	148,941.0	149,002.8
	Cubic with pandemic factor and random linear slopes	41,539	-58,219.5	8	116,454.9	116,524.0	50,036	-73,431.7	8	146,879.4	146,950.0
	Piecewise cubic + quadratic	41,539	-59,286.5	8	118,589.1	118,658.1	50,036	-74,448.8	8	148,913.6	148,984.1
	Piecewise cubic + quadratic with random linear slopes	41,539	-58,167.0	10	**116,353.9**	**116,440.2**	50,036	-73,325.7	10	**146,671.4**	**146,759.6**
Gender	Cubic	41,539	-59,118.2	10	118,256.4	118,342.8	50,036	-74,301.5	10	148,623.0	148,711.2
	Cubic with random linear slopes	41,539	-58,019.6	11	116,061.2	116,156.2	50,036	-73,290.8	11	146,603.5	146,700.6
	Cubic with pandemic factor	41,539	-59,114.3	12	118,252.6	118,356.2	50,036	-74,282.8	12	148,589.6	148,695.4
	Cubic with pandemic factor and random linear slopes	41,539	-58,016.6	13	116,059.2	116,171.4	50,036	-73,254.9	13	146,535.8	146,650.5
	Piecewise cubic + quadratic	41,539	-59,091.2	14	118,210.5	118,331.3	50,036	-74,267.0	14	148,562.0	148,685.5
	Piecewise cubic + quadratic with random linear slopes	41,539	-57,961.3	16	**115,954.7**	**116,092.8**	50,036	-73,145.9	16	**146,323.8**	**146,465.0**
Parental social class	Cubic	35,377	-48,541.4	10	97,102.7	97,187.5	43,087	-61,527.2	10	123,074.5	123,161.2
	Cubic with random linear slopes	35,377	-47,763.2	11	95,548.3	95,641.5	43,087	-60,819.3	11	121,660.5	121,755.9
	Cubic with pandemic factor	35,377	-48,540.6	12	97,105.1	97,206.8	43,087	-61,502.4	12	123,028.7	123,132.8
	Cubic with pandemic factor and random linear slopes	35,377	-47,762.8	13	95,551.7	95,661.8	43,087	-60,785.3	13	121,596.5	121,709.3
	Piecewise cubic + quadratic	35,377	-48,519.7	14	97,067.3	97,186.0	43,087	-61,489.5	14	123,006.9	123,128.3
	Piecewise cubic + quadratic with random linear slopes	35,377	-47,736.2	16	**95,504.3**	**95,639.9**	43,087	-60,745.3	16	**121,522.6**	**121,661.3**
	Cubic	32,723	-44,461.7	14	88,951.4	89,068.9	37,716	-52,003.9	14	104,035.8	104,155.3

Childhood housing tenure	Cubic with random linear slopes	32,723	-43,792.5	15	87,615.0	**87,740.9**	37,716	-51,470.7	15	102,971.5	103,099.5
	Cubic with pandemic factor	32,723	-44,459.8	17	88,953.6	89,096.3	37,716	-51,982.2	17	103,998.5	104,143.6
	Cubic with pandemic factor and random linear slopes	32,723	-43,790.5	18	87,616.9	87,768.1	37,716	-51,442.5	18	102,921.1	**103,074.7**
	Piecewise cubic + quadratic	32,723	-44,442.0	20	88,924.0	89,091.9	37,716	-51,969.2	20	103,978.3	104,149.1
	Piecewise cubic + quadratic with random linear slopes	32,723	-43,768.1	22	**87,580.2**	87,764.9	37,716	-51,423.2	22	**102,890.3**	103,078.2
Gender and parental social class	Cubic	35,377	-48,367.5	18	96,771.0	96,923.5	43,087	-61,354.0	18	122,743.9	122,900.0
	Cubic with random linear slopes	35,377	-47,579.4	19	95,196.7	**95,357.7**	43,087	-60,653.0	19	121,343.9	121,508.6
	Cubic with pandemic factor	35,377	-48,359.8	22	96,763.6	96,950.0	43,087	-61,332.7	22	122,709.5	122,900.2
	Cubic with pandemic factor and random linear slopes	35,377	-47,572.6	23	95,191.2	95,386.1	43,087	-60,620.4	23	121,286.8	121,486.3
	Piecewise cubic + quadratic	35,377	-48,337.2	26	96,726.3	96,946.6	43,087	-61,318.3	26	122,688.6	122,914.1
	Piecewise cubic + quadratic with random linear slopes	35,377	-47,544.0	28	**95,144.0**	95,381.3	43,087	-60,578.6	28	**121,213.1**	**121,455.9**
Gender and childhood housing tenure	Cubic	32,723	-44,293.6	26	88,639.1	88,857.4	37,716	-51,851.7	26	103,755.4	103,977.4
	Cubic with random linear slopes	32,723	-43,618.3	27	87,290.7	**87,517.4**	37,716	-51,318.4	27	102,690.9	**102,921.4**
	Cubic with pandemic factor	32,723	-44,289.0	32	88,642.0	88,910.7	37,716	-51,831.8	32	103,727.5	104,000.7
	Cubic with pandemic factor and random linear slopes	32,723	-43,613.4	33	87,292.8	87,569.8	37,716	-51,290.2	33	102,646.4	102,928.2
	Piecewise cubic + quadratic	32,723	-44,270.2	38	88,616.4	88,935.4	37,716	-51,816.9	38	103,709.7	104,034.2
	Piecewise cubic + quadratic with random linear slopes	32,723	-43,589.7	40	**87,259.4**	87,595.2	37,716	-51,268.4	40	**102,616.8**	102,958.3

Note. AIC: Akaike Information Criterion; BCS/70: 1970 British Cohort Study; BIC: Bayesian Information Criterion; df: degrees of freedom; NCDS/58: 1958 National Child Development Study. Best fit indices within each condition are highlighted in boldface.

eAppendix 8. Results from the multilevel growth curve models

	NCDS/58 (n=6,553)		BCS/70 (n=7,629)	
	B (95% CI)	p	B (95% CI)	p
Overall				
Intercept	1.11 (1.06, 1.16)	<0.001	1.68 (1.62, 1.73)	<0.001
Spline 1, linear term	-0.05 (-0.06, -0.03)	<0.001	-0.05 (-0.08, -0.03)	<0.001
Spline 1, quadratic term	0.004 (0.004, 0.005)	<0.001	0.006 (0.004, 0.009)	<0.001
Spline 1, cubic term	-0.0001 (-0.0001, -0.0001)	<0.001	-0.0002 (-0.0002, -0.0001)	<0.001
Spline 2, linear term	0.33 (0.21, 0.44)	<0.001	0.37 (0.24, 0.50)	<0.001
Spline 2, quadratic term	-0.12 (-0.17, -0.08)	<0.001	-0.16 (-0.21, -0.11)	<0.001
Spline 1, linear term (SD)	0.03 (0.03, 0.03)		0.05 (0.05, 0.06)	
Spline 2, linear term (SD)	0.23 (0.20, 0.27)		0.27 (0.24, 0.30)	
Intercept (SD)	1.02 (0.98, 1.07)		1.28 (1.24, 1.32)	
Residual (SD)	1.09 (1.06, 1.12)		1.19 (1.16, 1.21)	
Gender (ref.: Men)				
Intercept	0.75 (0.69, 0.82)	<0.001	1.30 (1.23, 1.38)	<0.001
Spline 1, linear term	-0.03 (-0.05, -0.01)	0.004	-0.03 (-0.06, 0.01)	0.114
Spline 1, quadratic term	0.004 (0.002, 0.005)	<0.001	0.006 (0.002, 0.009)	0.002
Spline 1, cubic term	-0.0001 (-0.0001, 0.0000)	<0.001	-0.0002 (-0.0003, -0.0001)	<0.001
Spline 2, linear term	0.23 (0.08, 0.39)	0.004	0.35 (0.19, 0.51)	<0.001
Spline 2, quadratic term	-0.08 (-0.14, -0.02)	0.006	-0.16 (-0.22, -0.10)	<0.001
Intercept * Women	0.72 (0.62, 0.82)	<0.001	0.73 (0.62, 0.83)	<0.001
Spline 1, linear term * Women	-0.04 (-0.07, -0.01)	0.020	-0.05 (-0.10, 0.00)	0.069
Spline 1, quadratic term * Women	0.002 (0.000, 0.004)	0.126	0.002 (-0.004, 0.007)	0.568
Spline 1, cubic term * Women	0.0000 (-0.0001, 0.0000)	0.295	0.0000 (-0.0001, 0.0002)	0.810
Spline 2, linear term * Women	0.20 (-0.05, 0.44)	0.111	0.04 (-0.20, 0.28)	0.747
Spline 2, quadratic term * Women	-0.09 (-0.18, 0.00)	0.052	-0.01 (-0.10, 0.08)	0.828
Spline 1, linear term (SD)	0.03 (0.03, 0.03)		0.05 (0.05, 0.05)	
Spline 2, linear term (SD)	0.23 (0.20, 0.27)		0.27 (0.23, 0.30)	

Intercept (SD)	0.98 (0.94, 1.03)		1.25 (1.21, 1.29)	
Residual (SD)	1.09 (1.06, 1.12)		1.19 (1.16, 1.21)	
Parental social class (ref.: Manual)				
Intercept	1.20 (1.13, 1.27)	<0.001	1.78 (1.70, 1.86)	<0.001
Spline 1, linear term	-0.05 (-0.07, -0.03)	<0.001	-0.05 (-0.09, -0.02)	0.002
Spline 1, quadratic term	0.004 (0.003, 0.006)	<0.001	0.007 (0.003, 0.010)	<0.001
Spline 1, cubic term	-0.0001 (-0.0001, -0.0001)	<0.001	-0.0002 (-0.0003, -0.0001)	<0.001
Spline 2, linear term	0.33 (0.18, 0.48)	<0.001	0.35 (0.17, 0.53)	<0.001
Spline 2, quadratic term	-0.12 (-0.18, -0.06)	<0.001	-0.16 (-0.22, -0.09)	<0.001
Intercept * Non-manual	-0.24 (-0.35, -0.14)	<0.001	-0.23 (-0.35, -0.12)	<0.001
Spline 1, linear term * Non-manual	0.00 (-0.03, 0.04)	0.808	0.01 (-0.04, 0.05)	0.789
Spline 1, quadratic term * Non-manual	0.000 (-0.002, 0.003)	0.742	-0.001 (-0.005, 0.004)	0.798
Spline 1, cubic term * Non-manual	0.0000 (0.0000, 0.0000)	0.557	0.0000 (-0.0001, 0.0001)	0.857
Spline 2, linear term * Non-manual	-0.01 (-0.25, 0.23)	0.946	0.05 (-0.21, 0.30)	0.709
Spline 2, quadratic term * Non-manual	-0.01 (-0.10, 0.08)	0.823	-0.02 (-0.11, 0.08)	0.749
Spline 1, linear term (SD)	0.03 (0.03, 0.03)		0.05 (0.05, 0.06)	
Spline 2, linear term (SD)	0.23 (0.20, 0.27)		0.27 (0.24, 0.30)	
Intercept (SD)	1.02 (0.98, 1.06)		1.27 (1.24, 1.31)	
Residual (SD)	1.09 (1.06, 1.12)		1.19 (1.16, 1.21)	
Childhood housing tenure (ref.: Rented at both time-points)				
Intercept	1.27 (1.19, 1.35)	<0.001	1.87 (1.75, 1.99)	<0.001
Spline 1, linear term	-0.06 (-0.08, -0.03)	<0.001	-0.05 (-0.10, 0.00)	0.070
Spline 1, quadratic term	0.005 (0.003, 0.007)	<0.001	0.006 (0.001, 0.011)	0.024
Spline 1, cubic term	-0.0001 (-0.0001, -0.0001)	<0.001	-0.0002 (-0.0003, 0.0000)	0.031
Spline 2, linear term	0.38 (0.20, 0.56)	<0.001	0.31 (0.03, 0.59)	0.031
Spline 2, quadratic term	-0.14 (-0.21, -0.07)	<0.001	-0.14 (-0.24, -0.04)	0.008
Intercept * Owned at one time-point	-0.16 (-0.37, 0.05)	0.128	-0.13 (-0.36, 0.10)	0.265
Intercept * Owned at both time-points	-0.34 (-0.46, -0.22)	<0.001	-0.30 (-0.45, -0.15)	<0.001
Spline 1, linear term * Owned at one time-point	0.01 (-0.05, 0.07)	0.747	-0.02 (-0.13, 0.08)	0.670
Spline 1, linear term * Owned at both time-points	0.02 (-0.01, 0.06)	0.241	0.00 (-0.07, 0.07)	0.981

Spline 1, quadratic term * Owned at one time-point	0.000 (-0.005, 0.004)	0.843	0.002 (-0.008, 0.013)	0.638
Spline 1, quadratic term * Owned at both time-points	-0.001 (-0.003, 0.002)	0.491	0.000 (-0.006, 0.007)	0.957
Spline 1, cubic term * Owned at one time-point	0.0000 (-0.0001, 0.0001)	0.931	-0.0001 (-0.0003, 0.0002)	0.599
Spline 1, cubic term * Owned at both time-points	0.0000 (0.0000, 0.0001)	0.674	0.0000 (-0.0002, 0.0002)	0.859
Spline 2, linear term * Owned at one time-point	-0.05 (-0.48, 0.38)	0.814	0.14 (-0.34, 0.63)	0.566
Spline 2, linear term * Owned at both time-points	-0.12 (-0.38, 0.14)	0.373	0.08 (-0.24, 0.40)	0.613
Spline 2, quadratic term * Owned at one time-point	0.03 (-0.13, 0.19)	0.725	-0.05 (-0.23, 0.13)	0.602
Spline 2, quadratic term * Owned at both time-points	0.03 (-0.06, 0.13)	0.486	-0.03 (-0.15, 0.09)	0.594
Spline 1, linear term (SD)	0.03 (0.03, 0.03)		0.05 (0.05, 0.06)	
Spline 2, linear term (SD)	0.23 (0.20, 0.27)		0.27 (0.24, 0.30)	
Intercept (SD)	1.02 (0.97, 1.06)		1.27 (1.23, 1.31)	
Residual (SD)	1.09 (1.06, 1.12)		1.19 (1.16, 1.21)	
Gender (ref.: Men) and parental social class (ref.: Manual)				
Intercept	0.80 (0.72, 0.89)	<0.001	1.41 (1.30, 1.52)	<0.001
Spline 1, linear term	-0.03 (-0.06, 0.00)	0.028	-0.03 (-0.08, 0.02)	0.206
Spline 1, quadratic term	0.003 (0.002, 0.005)	<0.001	0.006 (0.001, 0.011)	0.021
Spline 1, cubic term	-0.0001 (-0.0001, 0.0000)	<0.001	-0.0002 (-0.0003, -0.0001)	0.008
Spline 2, linear term	0.23 (0.02, 0.45)	0.033	0.34 (0.11, 0.57)	0.004
Spline 2, quadratic term	-0.07 (-0.15, 0.00)	0.064	-0.15 (-0.24, -0.07)	0.001
Intercept * Women	0.80 (0.66, 0.93)	<0.001	0.73 (0.57, 0.89)	<0.001
Spline 1, linear term * Women	-0.04 (-0.08, 0.00)	0.050	-0.05 (-0.12, 0.02)	0.204
Spline 1, quadratic term * Women	0.002 (-0.001, 0.005)	0.202	0.001 (-0.006, 0.008)	0.694
Spline 1, cubic term * Women	0.0000 (-0.0001, 0.0000)	0.398	0.0000 (-0.0002, 0.0002)	0.805
Spline 2, linear term * Women	0.20 (-0.13, 0.53)	0.226	0.02 (-0.31, 0.36)	0.901
Spline 2, quadratic term * Women	-0.10 (-0.22, 0.02)	0.118	0.00 (-0.13, 0.12)	0.952
Intercept * Non-manual	-0.13 (-0.27, 0.00)	0.052	-0.24 (-0.41, -0.07)	0.005
Spline 1, linear term * Non-manual	0.00 (-0.04, 0.04)	0.915	0.01 (-0.06, 0.08)	0.781
Spline 1, quadratic term * Non-manual	0.001 (-0.002, 0.003)	0.687	-0.001 (-0.008, 0.007)	0.831
Spline 1, cubic term * Non-manual	0.0000 (-0.0001, 0.0000)	0.613	0.0000 (-0.0002, 0.0002)	0.840
Spline 2, linear term * Non-manual	0.00 (-0.33, 0.33)	0.989	0.03 (-0.30, 0.35)	0.872

Spline 2, quadratic term * Non-manual	-0.02 (-0.14, 0.10)	0.759	-0.01 (-0.13, 0.11)	0.897
Intercept * Women * Non-manual	-0.21 (-0.42, 0.00)	0.048	0.01 (-0.25, 0.27)	0.964
Spline 1, linear term * Women * Non-manual	0.01 (-0.05, 0.07)	0.689	0.00 (-0.12, 0.11)	0.931
Spline 1, quadratic term * Women * Non-manual	0.000 (-0.005, 0.004)	0.833	0.000 (-0.011, 0.012)	0.961
Spline 1, cubic term * Women * Non-manual	0.0000 (-0.0001, 0.0001)	0.933	0.0000 (-0.0003, 0.0003)	0.910
Spline 2, linear term * Women * Non-manual	-0.01 (-0.48, 0.46)	0.967	0.04 (-0.46, 0.54)	0.866
Spline 2, quadratic term * Women * Non-manual	0.02 (-0.16, 0.19)	0.848	-0.01 (-0.19, 0.17)	0.882
Spline 1, linear term (SD)	0.03 (0.03, 0.03)		0.05 (0.05, 0.05)	
Spline 2, linear term (SD)	0.23 (0.20, 0.27)		0.27 (0.23, 0.30)	
Intercept (SD)	0.98 (0.94, 1.02)		1.24 (1.20, 1.28)	
Residual (SD)	1.09 (1.06, 1.12)		1.19 (1.16, 1.21)	
Gender (ref.: Men) and childhood housing tenure (ref.: Rented at both time-points)				
Intercept	0.85 (0.74, 0.96)	<0.001	1.45 (1.29, 1.61)	<0.001
Spline 1, linear term	-0.03 (-0.07, 0.00)	0.042	-0.02 (-0.09, 0.06)	0.646
Spline 1, quadratic term	0.004 (0.001, 0.006)	0.001	0.005 (-0.003, 0.012)	0.214
Spline 1, cubic term	-0.0001 (-0.0001, 0.0000)	0.001	-0.0002 (-0.0003, 0.0000)	0.132
Spline 2, linear term	0.27 (0.02, 0.51)	0.032	0.40 (0.05, 0.74)	0.027
Spline 2, quadratic term	-0.09 (-0.18, 0.00)	0.052	-0.18 (-0.31, -0.05)	0.006
Intercept * Women	0.83 (0.68, 0.99)	<0.001	0.82 (0.58, 1.06)	<0.001
Spline 1, linear term * Women	-0.05 (-0.09, 0.00)	0.055	-0.06 (-0.17, 0.04)	0.240
Spline 1, quadratic term * Women	0.002 (-0.001, 0.006)	0.161	0.003 (-0.008, 0.014)	0.618
Spline 1, cubic term * Women	0.0000 (-0.0001, 0.0000)	0.287	0.0000 (-0.0003, 0.0003)	0.971
Spline 2, linear term * Women	0.23 (-0.15, 0.60)	0.232	-0.17 (-0.69, 0.35)	0.518
Spline 2, quadratic term * Women	-0.10 (-0.24, 0.03)	0.138	0.08 (-0.11, 0.26)	0.415
Intercept * Owned at one time-point	-0.14 (-0.43, 0.15)	0.332	-0.05 (-0.38, 0.28)	0.761
Intercept * Owned at both time-points	-0.19 (-0.33, -0.04)	0.014	-0.23 (-0.44, -0.02)	0.031
Spline 1, linear term * Owned at one time-point	0.01 (-0.09, 0.11)	0.810	-0.03 (-0.16, 0.11)	0.716
Spline 1, linear term * Owned at both time-points	0.01 (-0.04, 0.05)	0.730	-0.01 (-0.11, 0.08)	0.761
Spline 1, quadratic term * Owned at one time-point	0.000 (-0.007, 0.006)	0.892	0.002 (-0.012, 0.015)	0.806
Spline 1, quadratic term * Owned at both time-points	0.000 (-0.003, 0.003)	0.999	0.001 (-0.008, 0.010)	0.754

Spline 1, cubic term * Owned at one time-point	0.0000 (-0.0001, 0.0001)	0.945	0.0000 (-0.0004, 0.0003)	0.797
Spline 1, cubic term * Owned at both time-points	0.0000 (-0.0001, 0.0001)	0.875	0.0000 (-0.0003, 0.0002)	0.743
Spline 2, linear term * Owned at one time-point	-0.06 (-0.69, 0.56)	0.842	0.06 (-0.64, 0.75)	0.871
Spline 2, linear term * Owned at both time-points	-0.08 (-0.40, 0.25)	0.652	-0.09 (-0.49, 0.31)	0.650
Spline 2, quadratic term * Owned at one time-point	0.03 (-0.20, 0.26)	0.823	0.00 (-0.26, 0.26)	0.984
Spline 2, quadratic term * Owned at both time-points	0.02 (-0.11, 0.14)	0.785	0.04 (-0.11, 0.18)	0.615
Intercept * Women * Owned at one time-point	-0.05 (-0.45, 0.35)	0.822	-0.18 (-0.63, 0.28)	0.450
Intercept * Women * Owned at both time-points	-0.27 (-0.49, -0.05)	0.014	-0.13 (-0.43, 0.18)	0.405
Spline 1, linear term * Women * Owned at one time-point	0.00 (-0.12, 0.11)	0.943	0.01 (-0.19, 0.20)	0.960
Spline 1, linear term * Women * Owned at both time-points	0.03 (-0.04, 0.09)	0.420	0.03 (-0.10, 0.16)	0.664
Spline 1, quadratic term * Women * Owned at one time-point	0.000 (-0.008, 0.008)	0.983	0.001 (-0.019, 0.021)	0.890
Spline 1, quadratic term * Women * Owned at both time-points	-0.002 (-0.006, 0.003)	0.444	-0.002 (-0.016, 0.011)	0.715
Spline 1, cubic term * Women * Owned at one time-point	0.0000 (-0.0001, 0.0001)	0.977	0.0000 (-0.0006, 0.0005)	0.866
Spline 1, cubic term * Women * Owned at both time-points	0.0000 (0.0000, 0.0001)	0.482	0.0000 (-0.0003, 0.0004)	0.791
Spline 2, linear term * Women * Owned at one time-point	0.03 (-0.80, 0.86)	0.947	0.17 (-0.82, 1.15)	0.739
Spline 2, linear term * Women * Owned at both time-points	-0.08 (-0.59, 0.42)	0.750	0.34 (-0.26, 0.95)	0.265
Spline 2, quadratic term * Women * Owned at one time-point	0.00 (-0.31, 0.31)	0.989	-0.10 (-0.46, 0.27)	0.590
Spline 2, quadratic term * Women * Owned at both time-points	0.03 (-0.16, 0.22)	0.735	-0.14 (-0.35, 0.08)	0.218
Spline 1, linear term (SD)	0.03 (0.03, 0.03)		0.05 (0.05, 0.05)	
Spline 2, linear term (SD)	0.23 (0.20, 0.27)		0.27 (0.23, 0.30)	
Intercept (SD)	0.98 (0.93, 1.02)		1.24 (1.20, 1.28)	
Residual (SD)	1.09 (1.06, 1.12)		1.19 (1.16, 1.21)	

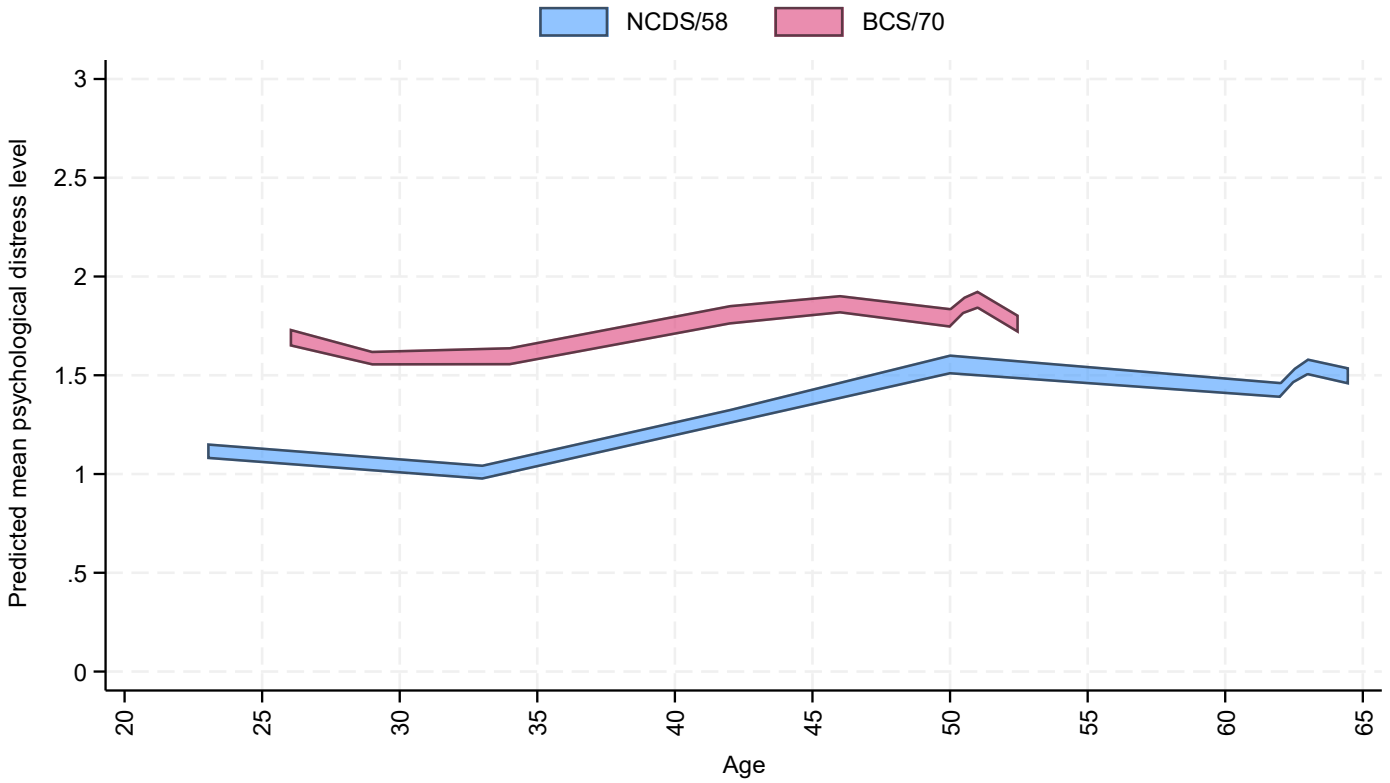
Note. BCS/70: 1970 British Cohort Study; B: coefficient; CI: confidence interval; NCDS/58: 1958 National Child Development Study; p: significance level; SD: standard deviation (standardised random effects: intercepts, slopes, and residual). Results based on weighted and imputed data. The intercept is located at the first time-point in each of the trajectories, corresponding to age 23 in NCDS/58 and age 26 in BCS/70.

eAppendix 9. Results from sensitivity check models including continuous age in most recent main survey data collection time-point

	NCDS/58 (n=8,215)		BCS/70 (n=7,789)	
Overall	B (95% CI)	p	B (95% CI)	p
Intercept	1.12 (1.07, 1.16)	<0.001	1.68 (1.63, 1.73)	<0.001
Spline 1, linear term	-0.04 (-0.05, -0.03)	<0.001	-0.05 (-0.07, -0.02)	<0.001
Spline 1, quadratic term	0.004 (0.003, 0.005)	<0.001	0.006 (0.003, 0.008)	<0.001
Spline 1, cubic term	-0.0001 (-0.0001, -0.0001)	<0.001	-0.0002 (-0.0002, -0.0001)	<0.001
Spline 2, linear term	0.18 (0.10, 0.25)	<0.001	0.15 (0.06, 0.24)	0.002
Spline 2, quadratic term	-0.06 (-0.08, -0.03)	<0.001	-0.07 (-0.10, -0.04)	<0.001
Spline 1, linear term (SD)	0.03 (0.03, 0.03)		0.05 (0.05, 0.06)	
Spline 2, linear term (SD)	0.21 (0.18, 0.25)		0.26 (0.23, 0.29)	
Intercept (SD)	1.02 (0.99, 1.06)		1.28 (1.24, 1.32)	
Residual (SD)	1.09 (1.07, 1.12)		1.19 (1.17, 1.22)	

Note. BCS/70: 1970 British Cohort Study; B: coefficient; CI: confidence interval; NCDS/58: 1958 National Child Development Study; p: significance level; SD: standard deviation (standardised random effects: intercepts, slopes, and residual). Results based on weighted and imputed data. The intercept is located at the first time-point in each of the trajectories, corresponding to age 23 in NCDS/58 and age 26 in BCS/70.

eAppendix 10. Plot of marginal predicted levels for each time-point and group (long-term trajectory plots) from sensitivity check models including continuous age in most recent main survey data collection time-point (NCDS/58, n=8,215; BCS/70, n=7,789)



Note. 95% confidence intervals for the marginal predicted mean psychological distress levels from the multilevel growth curve models. Results based on weighted and imputed data.

eAppendix 11. Estimates and 95% confidence intervals (CIs) from pooled analyses comparing psychological distress levels and gaps between most recent main survey sweeps and earliest time-point or point of highest psychological distress during COVID-19 pandemic.

	Pooled samples (n=14,182)					
	First vs last		Pre-pandemic vs last		Pandemic vs last	
	B (95% CI)	*p*	B (95% CI)	*p*	B (95% CI)	*p*
Overall						
Time	0.35 (0.26, 0.45)	<0.001	0.01 (-0.07, 0.09)	0.791	-0.16 (-0.23, -0.08)	<0.001
Cohort (ref.: NCDS/58): BCS/70	0.61 (0.53, 0.69)	<0.001	0.36 (0.27, 0.44)	<0.001	0.45 (0.36, 0.54)	<0.001
Time * BCS/70	-0.33 (-0.45, -0.21)	<0.001	-0.09 (-0.20, 0.01)	0.087	-0.18 (-0.29, -0.07)	0.002
Gender (ref.: Men)						
Time	0.41 (0.28, 0.54)	<0.001	0.00 (-0.13, 0.12)	0.974	-0.06 (-0.17, 0.04)	0.248
Cohort (ref.: NCDS/58): BCS/70	0.59 (0.48, 0.69)	<0.001	0.39 (0.28, 0.51)	<0.001	0.45 (0.33, 0.57)	<0.001
Women	0.72 (0.61, 0.83)	<0.001	0.58 (0.45, 0.70)	<0.001	0.79 (0.67, 0.91)	<0.001
Time * BCS/70	-0.41 (-0.58, -0.25)	<0.001	-0.22 (-0.38, -0.06)	0.006	-0.27 (-0.42, -0.12)	0.001
Time * Women	-0.12 (-0.30, 0.06)	0.208	0.03 (-0.15, 0.21)	0.765	-0.19 (-0.35, -0.04)	0.016
BCS/70 * Women	0.01 (-0.14, 0.17)	0.860	-0.10 (-0.27, 0.07)	0.254	-0.04 (-0.22, 0.14)	0.653
Time * BCS/70 * Women	0.16 (-0.09, 0.41)	0.203	0.25 (0.02, 0.48)	0.036	0.19 (-0.02, 0.41)	0.082
Parental social class (ref.: Manual)						
Time	0.38 (0.25, 0.50)	<0.001	0.08 (-0.04, 0.20)	0.179	-0.13 (-0.23, -0.02)	0.019
Cohort (ref.: NCDS/58): BCS/70	0.64 (0.53, 0.75)	<0.001	0.42 (0.31, 0.54)	<0.001	0.48 (0.36, 0.61)	<0.001
Non-manual	-0.24 (-0.35, -0.12)	<0.001	-0.09 (-0.23, 0.04)	0.172	-0.21 (-0.34, -0.08)	0.002
Time * BCS/70	-0.36 (-0.53, -0.19)	<0.001	-0.16 (-0.31, -0.01)	0.038	-0.21 (-0.37, -0.06)	0.008
Time * Non-manual	-0.07 (-0.26, 0.13)	0.505	-0.20 (-0.39, -0.01)	0.039	-0.08 (-0.24, 0.07)	0.287
BCS/70 * Non-manual	-0.04 (-0.20, 0.13)	0.674	-0.15 (-0.33, 0.03)	0.112	-0.06 (-0.24, 0.13)	0.558
Time * BCS/70 * Non-manual	0.07 (-0.21, 0.35)	0.608	0.19 (-0.05, 0.43)	0.122	0.10 (-0.11, 0.31)	0.361
Gender (ref.: Men) and parental social class (ref.: Manual)						
Time	0.45 (0.28, 0.63)	<0.001	0.07 (-0.11, 0.24)	0.452	-0.01 (-0.15, 0.13)	0.882

Cohort (ref.: NCDS/58): BCS/70	0.67 (0.52, 0.82)	<0.001	0.45 (0.28, 0.61)	<0.001	0.50 (0.32, 0.68)	<0.001
Women	0.81 (0.66, 0.95)	<0.001	0.62 (0.45, 0.79)	<0.001	0.90 (0.73, 1.06)	<0.001
Non-manual	-0.11 (-0.26, 0.05)	0.184	-0.03 (-0.22, 0.16)	0.756	-0.06 (-0.24, 0.12)	0.527
Time * BCS/70	-0.50 (-0.74, -0.27)	<0.001	-0.29 (-0.50, -0.07)	0.009	-0.33 (-0.55, -0.11)	0.004
Time * Women	-0.16 (-0.41, 0.09)	0.210	0.03 (-0.22, 0.27)	0.823	-0.24 (-0.45, -0.03)	0.026
Time * Non-manual	-0.13 (-0.41, 0.16)	0.377	-0.20 (-0.47, 0.08)	0.162	-0.15 (-0.37, 0.07)	0.176
BCS/70 * Women	-0.08 (-0.31, 0.14)	0.472	-0.07 (-0.31, 0.17)	0.578	-0.06 (-0.31, 0.19)	0.638
BCS/70 * Non-manual	-0.19 (-0.42, 0.04)	0.104	-0.13 (-0.37, 0.12)	0.320	-0.11 (-0.39, 0.16)	0.414
Women * Non-manual	-0.25 (-0.50, -0.01)	0.043	-0.12 (-0.39, 0.15)	0.393	-0.29 (-0.56, -0.02)	0.035
Time * BCS/70 * Women	0.30 (-0.05, 0.65)	0.096	0.26 (-0.05, 0.57)	0.103	0.24 (-0.05, 0.53)	0.105
Time * BCS/70 * Non-manual	0.25 (-0.13, 0.64)	0.199	0.19 (-0.13, 0.52)	0.245	0.17 (-0.17, 0.50)	0.325
Time * Women * Non-manual	0.13 (-0.31, 0.56)	0.563	0.00 (-0.38, 0.38)	0.983	0.14 (-0.20, 0.47)	0.417
BCS/70 * Women * Non-manual	0.28 (-0.08, 0.64)	0.121	-0.05 (-0.41, 0.31)	0.785	0.10 (-0.30, 0.50)	0.621
Time * BCS/70 * Women * Non-manual	-0.36 (-0.94, 0.22)	0.225	-0.02 (-0.50, 0.45)	0.922	-0.14 (-0.63, 0.35)	0.570
Childhood housing tenure (ref.: Rented at both time-points)						
Time	0.35 (0.22, 0.49)	<0.001	0.05 (-0.07, 0.18)	0.401	-0.17 (-0.28, -0.05)	0.007
Cohort (ref.: NCDS/58): BCS/70	0.66 (0.51, 0.82)	<0.001	0.42 (0.25, 0.59)	<0.001	0.51 (0.33, 0.70)	<0.001
Owned at both time-points	-0.35 (-0.47, -0.23)	<0.001	-0.23 (-0.38, -0.09)	0.001	-0.35 (-0.50, -0.21)	<0.001
Time * BCS/70	-0.27 (-0.50, -0.05)	0.019	-0.05 (-0.25, 0.15)	0.619	-0.16 (-0.35, 0.04)	0.120
Time * Owned at both time-points	0.00 (-0.19, 0.20)	0.977	-0.10 (-0.30, 0.09)	0.294	0.00 (-0.17, 0.16)	0.961
BCS/70 * Owned at both time-points	0.04 (-0.16, 0.23)	0.693	-0.05 (-0.26, 0.16)	0.638	-0.01 (-0.24, 0.22)	0.938
Time * BCS/70 * Owned at both time-points	-0.15 (-0.43, 0.13)	0.293	-0.03 (-0.29, 0.23)	0.824	-0.04 (-0.29, 0.22)	0.786
Gender (ref.: Men) and childhood housing tenure (ref.: Rented at both time-points)						
Time	0.36 (0.18, 0.53)	<0.001	0.02 (-0.18, 0.22)	0.846	-0.07 (-0.23, 0.08)	0.363
Cohort (ref.: NCDS/58): BCS/70	0.64 (0.44, 0.84)	<0.001	0.53 (0.30, 0.75)	<0.001	0.65 (0.42, 0.89)	<0.001
Women	0.83 (0.66, 0.99)	<0.001	0.76 (0.55, 0.96)	<0.001	0.99 (0.79, 1.20)	<0.001

Owned at both time-points	-0.19 (-0.34, -0.05)	0.008	-0.05 (-0.24, 0.13)	0.556	-0.16 (-0.34, 0.03)	0.101
Time * BCS/70	-0.29 (-0.58, 0.01)	0.058	-0.19 (-0.47, 0.08)	0.172	-0.34 (-0.60, -0.08)	0.011
Time * Women	0.00 (-0.27, 0.26)	0.980	0.07 (-0.21, 0.34)	0.627	-0.18 (-0.43, 0.06)	0.144
Time * Owned at both time-points	0.03 (-0.21, 0.28)	0.781	-0.10 (-0.36, 0.16)	0.463	-0.02 (-0.24, 0.20)	0.882
BCS/70 * Women	0.04 (-0.27, 0.34)	0.806	-0.21 (-0.54, 0.11)	0.199	-0.29 (-0.63, 0.04)	0.085
BCS/70 * Owned at both time-points	-0.05 (-0.30, 0.20)	0.686	-0.19 (-0.47, 0.09)	0.186	-0.24 (-0.54, 0.06)	0.122
Women * Owned at both time-points	-0.27 (-0.50, -0.04)	0.021	-0.33 (-0.60, -0.06)	0.017	-0.35 (-0.64, -0.07)	0.016
Time * BCS/70 * Women	0.03 (-0.42, 0.48)	0.901	0.28 (-0.12, 0.67)	0.173	0.35 (-0.02, 0.72)	0.060
Time * BCS/70 * Owned at both time-points	-0.16 (-0.53, 0.21)	0.401	0.02 (-0.33, 0.37)	0.912	0.09 (-0.24, 0.43)	0.588
Time * Women * Owned at both time-points	-0.07 (-0.44, 0.31)	0.733	-0.01 (-0.38, 0.36)	0.968	0.01 (-0.32, 0.35)	0.932
BCS/70 * Women * Owned at both time-points	0.15 (-0.22, 0.52)	0.436	0.24 (-0.17, 0.66)	0.253	0.41 (-0.02, 0.83)	0.063
Time * BCS/70 * Women * Owned at both time-points	0.02 (-0.53, 0.57)	0.943	-0.09 (-0.62, 0.43)	0.726	-0.24 (-0.72, 0.24)	0.329

Note. BCS/70: 1970 British Cohort Study; B: coefficient; CI: confidence interval; NCDS/58: 1958 National Child Development Study; p: significance level. Results based on weighted and imputed data. Analyses including childhood housing tenure exclude cohort members who lived in a rented or owned house at only one of the time-points; sample size in these analyses is $n_{NCDS/58}$=4,409 and $n_{BCS/70}$=5,246. Age at first time-point, most recent pre-pandemic time-point, during-pandemic time-point, and last time-point are 23, 50, 62.5, and 64.5 in NCDS/58, and 26, 46, 50.5, and 52.5 in BCS/70.

eAppendix 12. Results from between-person post-lockdown analyses on the relationship between inflation and psychological distress.

The analyses focused on the post-lockdown period in the overall samples showed significant differences in the incidence rate of psychological distress symptoms by inflation, both as a continuous or binary measure, in both cohorts. Differences attenuated after adjustment for seasonality. Women (particularly in BCS/70) and those in a disadvantaged (concurrent) socioeconomic position had significantly higher overall incidence rates than men and those in an advantaged (concurrent) socioeconomic position. Gender differences in BCS/70 remained significant after adjustment for seasonality, and this was also the case in most instances for the differences across self-rated financial situations, where the confounder set was more extensive. Differences by concurrent housing tenure were smaller than by self-rated financial situation and often attenuated to non-significance or close to non-significance after adjustment. We did not find evidence of overall gaps in the incidence rates at the intersection of gender and concurrent socioeconomic position. We did not find evidence suggesting a different relationship between inflation (either continuous or binary) and psychological distress by gender, socioeconomic position, or their intersection. The only exception was for the unadjusted interaction between continuous CPIH and the 'living comfortably' self-rated financial situation in BCS/70 ($IRR_{CPIHcont*comfortably\_BCS/70}$= 0.95 [0.91, 1.00], p = .044), with the coefficient becoming non-significant after confounder adjustment.

Detailed results from these analyses are provided in the table below, whereas the visual depiction of the marginal predicted number of distress symptoms before and after CPIH had been ≥6% for three months are available in **eAppendix 13 (Supplementary Material)**.

	NCDS/58							
	Continuous CPIH				Binary (high inflation)			
	Unadjusted		Adjusted		Unadjusted		Adjusted	
	IRR (95% CI)	*p*	IRR (95% CI)	*p*	IRR (95% CI)	*p*	IRR (95% CI)	*p*
Overall, n=6,553 [6,147] **								
Inflation	1.03 (1.01, 1.06)	0.006	1.02 (0.99, 1.06)	0.146	1.23 (1.09, 1.38)	0.001	1.19 (1.00, 1.42)	0.050
Gender (ref.: Men), n=6,553 [6,147] **								
Inflation	1.03 (0.99, 1.07)	0.106	1.02 (0.98, 1.06)	0.405	1.38 (1.13, 1.68)	0.001	1.39 (1.15, 1.67)	0.001
Women	1.40 (0.99, 1.98)	0.058	1.41 (1.00, 1.99)	0.052	1.19 (0.98, 1.44)	0.081	1.13 (0.89, 1.44)	0.302
Inflation * Women	1.01 (0.96, 1.06)	0.794	1.01 (0.96, 1.06)	0.750	1.08 (0.85, 1.37)	0.523	1.09 (0.86, 1.37)	0.481
Housing tenure (ref.: Own outright), n=6,475 [6,076] **								
Inflation	1.02 (0.99, 1.04)	0.185	0.99 (0.97, 1.02)	0.534	1.13 (1.00, 1.29)	0.050	0.98 (0.85, 1.14)	0.822
Own with mortgage	1.16 (0.76, 1.76)	0.494	1.05 (0.70, 1.56)	0.816	1.20 (0.96, 1.51)	0.112	1.12 (0.90, 1.38)	0.314
Other	1.52 (0.96, 2.39)	0.071	1.21 (0.79, 1.84)	0.383	1.83 (1.41, 2.38)	<0.001	1.24 (1.00, 1.54)	0.055
Inflation * Own with mortgage	1.00 (0.94, 1.06)	0.961	1.00 (0.95, 1.06)	0.947	0.95 (0.70, 1.29)	0.757	0.94 (0.72, 1.22)	0.635
Inflation * Other	1.03 (0.97, 1.09)	0.387	0.99 (0.93, 1.05)	0.712	1.04 (0.77, 1.41)	0.814	0.88 (0.67, 1.17)	0.384
Self-rated financial situation (ref.: Difficulties), n=6,513 [6,123] **								
Inflation	1.03 (0.99, 1.08)	0.143	0.98 (0.94, 1.03)	0.491	1.16 (0.94, 1.44)	0.171	0.91 (0.71, 1.15)	0.414
Doing all right	0.66 (0.43, 1.01)	0.058	0.83 (0.55, 1.26)	0.388	0.66 (0.52, 0.84)	0.001	0.84 (0.68, 1.04)	0.113
Living comfortably	0.46 (0.31, 0.68)	<0.001	0.65 (0.44, 0.96)	0.031	0.40 (0.33, 0.49)	<0.001	0.63 (0.52, 0.77)	<0.001
Inflation * Doing all right	0.99 (0.93, 1.05)	0.656	1.00 (0.94, 1.06)	0.943	0.89 (0.67, 1.19)	0.435	0.97 (0.75, 1.27)	0.847
Inflation * Living comfortably	0.98 (0.93, 1.03)	0.443	1.00 (0.95, 1.06)	0.937	0.98 (0.75, 1.28)	0.868	1.06 (0.82, 1.37)	0.649
Gender (ref.: Men) * housing tenure (ref.: Own outright), n=6,475 [6,076] **								
Inflation	1.01 (0.97, 1.05)	0.521	1.00 (0.96, 1.04)	0.884	1.11 (0.91, 1.35)	0.323	1.07 (0.86, 1.33)	0.520
Women	1.48 (1.02, 2.15)	0.039	1.48 (1.02, 2.15)	0.040	1.51 (1.24, 1.84)	<0.001	1.51 (1.24, 1.84)	<0.001
Own with mortgage	1.58 (0.94, 2.64)	0.084	1.54 (0.92, 2.58)	0.097	1.35 (1.02, 1.79)	0.036	1.34 (1.02, 1.77)	0.039
Other	1.60 (0.75, 3.42)	0.223	1.57 (0.76, 3.22)	0.221	2.22 (1.44, 3.41)	<0.001	2.18 (1.46, 3.25)	<0.001
Inflation * Women	1.01 (0.96, 1.06)	0.678	1.01 (0.96, 1.06)	0.660	1.08 (0.84, 1.38)	0.543	1.08 (0.84, 1.38)	0.542
Inflation * Own with mortgage	0.95 (0.88, 1.03)	0.205	0.96 (0.89, 1.03)	0.230	0.79 (0.52, 1.19)	0.262	0.80 (0.53, 1.21)	0.288

Inflation * Other	1.04 (0.94, 1.15)	0.478	1.04 (0.94, 1.15)	0.445	0.97 (0.59, 1.60)	0.897	0.98 (0.61, 1.56)	0.931
Women * Own with mortgage	0.64 (0.30, 1.37)	0.253	0.65 (0.30, 1.38)	0.263	0.86 (0.57, 1.30)	0.481	0.87 (0.58, 1.31)	0.515
Women * Other	0.96 (0.38, 2.41)	0.934	1.00 (0.41, 2.44)	0.998	0.75 (0.44, 1.27)	0.288	0.76 (0.46, 1.26)	0.285
Inflation * Women * Own with mortgage	1.08 (0.97, 1.20)	0.182	1.07 (0.96, 1.20)	0.191	1.38 (0.78, 2.42)	0.266	1.35 (0.77, 2.37)	0.293
Inflation * Women * Other	0.98 (0.87, 1.11)	0.772	0.98 (0.86, 1.11)	0.725	1.13 (0.60, 2.10)	0.710	1.12 (0.62, 2.03)	0.711
Gender (ref.: Men) * self-rated financial situation (ref.: Difficulties), n=6,513 [6,123] **								
Inflation	1.03 (0.96, 1.11)	0.384	1.02 (0.94, 1.10)	0.635	1.17 (0.81, 1.68)	0.413	1.11 (0.75, 1.62)	0.604
Women	1.30 (0.69, 2.45)	0.422	1.35 (0.72, 2.53)	0.355	1.34 (0.95, 1.91)	0.098	1.36 (0.96, 1.93)	0.088
Doing all right	0.67 (0.33, 1.39)	0.282	0.67 (0.33, 1.36)	0.271	0.68 (0.45, 1.03)	0.066	0.67 (0.45, 1.00)	0.050
Living comfortably	0.45 (0.24, 0.85)	0.014	0.45 (0.24, 0.84)	0.011	0.37 (0.26, 0.53)	<0.001	0.36 (0.26, 0.52)	<0.001
Inflation * Women	1.00 (0.92, 1.10)	0.924	1.00 (0.91, 1.09)	0.990	1.00 (0.65, 1.55)	0.983	0.99 (0.64, 1.52)	0.968
Inflation * Doing all right	0.97 (0.88, 1.07)	0.543	0.97 (0.88, 1.07)	0.544	0.76 (0.46, 1.25)	0.276	0.77 (0.48, 1.24)	0.281
Inflation * Living comfortably	0.97 (0.89, 1.06)	0.470	0.97 (0.89, 1.06)	0.492	1.00 (0.63, 1.59)	0.986	1.01 (0.65, 1.58)	0.957
Women * Doing all right	0.93 (0.39, 2.22)	0.873	0.89 (0.38, 2.09)	0.782	0.92 (0.56, 1.51)	0.749	0.91 (0.56, 1.47)	0.705
Women * Living comfortably	1.10 (0.50, 2.43)	0.814	1.07 (0.49, 2.34)	0.873	1.16 (0.75, 1.78)	0.503	1.15 (0.75, 1.77)	0.511
Inflation * Women * Doing all right	1.03 (0.92, 1.17)	0.587	1.04 (0.92, 1.17)	0.504	1.37 (0.76, 2.48)	0.292	1.40 (0.79, 2.50)	0.253
Inflation * Women * Living comfortably	1.01 (0.90, 1.13)	0.909	1.01 (0.91, 1.13)	0.827	0.95 (0.55, 1.65)	0.849	0.96 (0.56, 1.65)	0.880

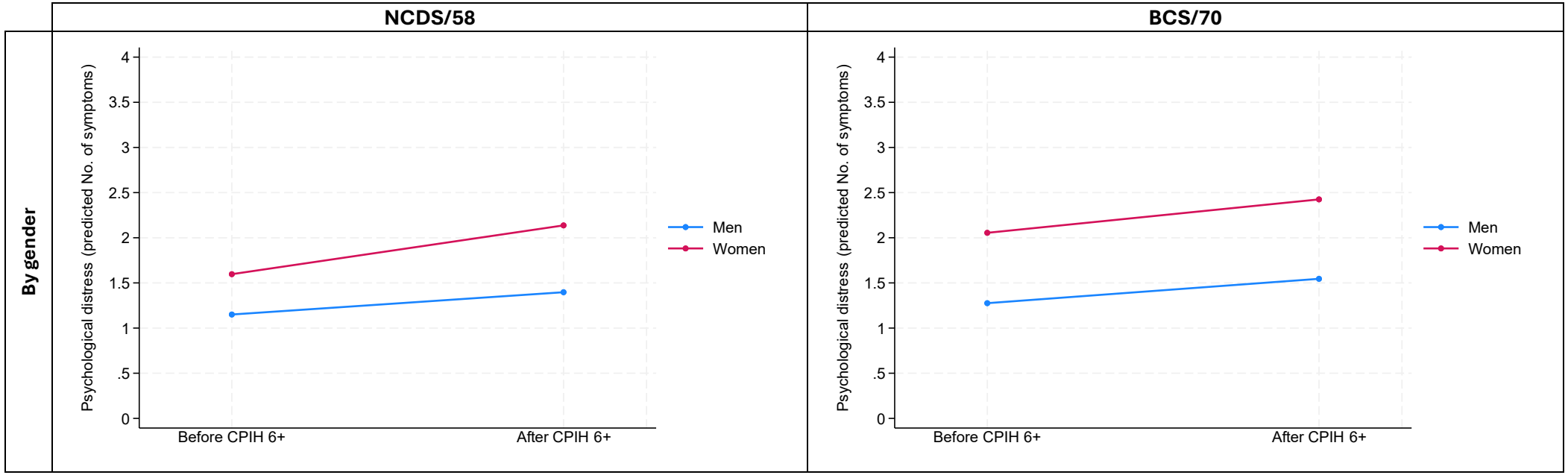
	BCS/70							
	Continuous CPIH				Binary (high inflation)			
	Unadjusted		Adjusted		Unadjusted		Adjusted	
	IRR (95% CI)	*p*	IRR (95% CI)	*p*	IRR (95% CI)	*p*	IRR (95% CI)	*p*
Overall, n=7,629 [7,561] **								
Inflation	1.05 (1.03, 1.07)	<0.001	1.04 (1.01, 1.06)	0.001	1.24 (1.13, 1.36)	<0.001	1.17 (1.04, 1.32)	0.009
Gender (ref.: Men), n=7,629 [7,561] **								
Inflation	1.04 (1.01, 1.08)	0.015	1.04 (1.00, 1.07)	0.065	1.24 (1.04, 1.49)	0.019	1.19 (0.98, 1.45)	0.085
Women	1.49 (1.13, 1.96)	0.005	1.50 (1.14, 1.97)	0.003	1.56 (1.31, 1.85)	<0.001	1.57 (1.34, 1.84)	<0.001
Inflation * Women	1.01 (0.97, 1.05)	0.752	1.01 (0.97, 1.05)	0.777	1.00 (0.81, 1.24)	0.970	1.00 (0.82, 1.22)	0.965
Housing tenure (ref.: Own outright), n=7,589 [7,521] **								
Inflation	1.03 (0.99, 1.07)	0.124	1.00 (0.97, 1.04)	0.873	1.14 (0.98, 1.32)	0.101	0.95 (0.82, 1.11)	0.533
Own with mortgage	1.03 (0.79, 1.33)	0.853	1.04 (0.82, 1.32)	0.718	1.00 (0.88, 1.13)	0.989	1.00 (0.89, 1.12)	0.972
Other	1.50 (1.05, 2.14)	0.025	1.13 (0.82, 1.57)	0.445	1.57 (1.26, 1.96)	<0.001	1.01 (0.84, 1.21)	0.938
Inflation * Own with mortgage	0.99 (0.95, 1.04)	0.758	1.00 (0.96, 1.03)	0.831	0.97 (0.81, 1.18)	0.786	1.02 (0.87, 1.21)	0.776
Inflation * Other	1.01 (0.96, 1.07)	0.664	0.99 (0.94, 1.04)	0.631	1.05 (0.80, 1.38)	0.727	1.04 (0.82, 1.30)	0.755
Self-rated financial situation (ref.: Difficulties), n=7,587 [7,524] **								
Inflation	1.04 (1.00, 1.08)	0.032	0.99 (0.96, 1.03)	0.770	1.17 (0.97, 1.41)	0.094	0.97 (0.80, 1.18)	0.788
Doing all right	0.64 (0.47, 0.88)	0.006	0.71 (0.52, 0.96)	0.029	0.58 (0.48, 0.71)	<0.001	0.73 (0.62, 0.86)	<0.001
Living comfortably	0.51 (0.37, 0.70)	<0.001	0.65 (0.48, 0.89)	0.008	0.42 (0.34, 0.50)	<0.001	0.63 (0.53, 0.75)	<0.001
Inflation * Doing all right	0.97 (0.93, 1.02)	0.225	1.00 (0.96, 1.05)	0.968	0.88 (0.70, 1.10)	0.263	0.98 (0.80, 1.20)	0.848
Inflation * Living comfortably	0.95 (0.91, 1.00)	0.044	0.98 (0.94, 1.03)	0.496	0.83 (0.66, 1.05)	0.112	0.91 (0.73, 1.12)	0.356
Gender (ref.: Men) * housing tenure (ref.: Own outright), n=7,589 [7,521] **								
Inflation	1.02 (0.95, 1.09)	0.621	1.01 (0.94, 1.08)	0.818	1.23 (0.91, 1.64)	0.172	1.15 (0.86, 1.54)	0.341
Women	1.52 (0.93, 2.48)	0.092	1.48 (0.92, 2.40)	0.108	1.80 (1.45, 2.24)	<0.001	1.79 (1.44, 2.23)	<0.001
Own with mortgage	0.96 (0.58, 1.57)	0.858	0.94 (0.57, 1.53)	0.800	1.09 (0.87, 1.37)	0.453	1.08 (0.86, 1.35)	0.516
Other	1.74 (0.89, 3.38)	0.104	1.66 (0.87, 3.20)	0.127	1.94 (1.26, 3.00)	0.003	1.89 (1.26, 2.82)	0.002
Inflation * Women	1.01 (0.94, 1.10)	0.720	1.02 (0.94, 1.10)	0.610	0.90 (0.64, 1.26)	0.541	0.92 (0.66, 1.28)	0.616
Inflation * Own with mortgage	1.01 (0.94, 1.10)	0.741	1.02 (0.94, 1.10)	0.662	0.95 (0.67, 1.34)	0.760	0.97 (0.69, 1.36)	0.860

Inflation * Other	1.00 (0.91, 1.10)	0.956	1.01 (0.92, 1.11)	0.850	0.87 (0.52, 1.45)	0.581	0.90 (0.55, 1.46)	0.664
Women * Own with mortgage	1.11 (0.62, 1.98)	0.723	1.14 (0.65, 2.02)	0.649	0.90 (0.69, 1.18)	0.448	0.91 (0.69, 1.19)	0.475
Women * Other	0.74 (0.34, 1.61)	0.449	0.77 (0.36, 1.66)	0.510	0.72 (0.44, 1.18)	0.189	0.74 (0.46, 1.17)	0.199
Inflation * Women * Own with mortgage	0.97 (0.89, 1.07)	0.568	0.97 (0.88, 1.06)	0.476	1.04 (0.69, 1.55)	0.868	1.01 (0.68, 1.51)	0.955
Inflation * Women * Other	1.03 (0.92, 1.15)	0.611	1.02 (0.91, 1.14)	0.711	1.42 (0.79, 2.57)	0.246	1.36 (0.77, 2.39)	0.292
Gender (ref.: Men) * self-rated financial situation (ref.: Difficulties), n=7,587 [7,524] **								
Inflation	1.02 (0.95, 1.09)	0.631	1.01 (0.95, 1.08)	0.706	1.03 (0.70, 1.50)	0.897	0.99 (0.68, 1.43)	0.947
Women	1.02 (0.58, 1.79)	0.951	1.03 (0.59, 1.79)	0.910	1.14 (0.78, 1.67)	0.487	1.16 (0.81, 1.66)	0.405
Doing all right	0.46 (0.25, 0.83)	0.010	0.47 (0.26, 0.84)	0.011	0.46 (0.31, 0.68)	<0.001	0.47 (0.33, 0.67)	<0.001
Living comfortably	0.44 (0.24, 0.80)	0.007	0.45 (0.25, 0.80)	0.007	0.34 (0.23, 0.50)	<0.001	0.34 (0.24, 0.49)	<0.001
Inflation * Women	1.04 (0.97, 1.12)	0.297	1.04 (0.97, 1.12)	0.314	1.26 (0.84, 1.90)	0.269	1.24 (0.84, 1.82)	0.284
Inflation * Doing all right	1.01 (0.93, 1.09)	0.842	1.01 (0.93, 1.09)	0.873	1.09 (0.71, 1.68)	0.691	1.08 (0.72, 1.62)	0.713
Inflation * Living comfortably	0.94 (0.87, 1.02)	0.147	0.94 (0.87, 1.02)	0.138	0.83 (0.54, 1.30)	0.417	0.82 (0.54, 1.26)	0.369
Women * Doing all right	1.77 (0.89, 3.51)	0.103	1.75 (0.89, 3.42)	0.104	1.50 (0.98, 2.29)	0.064	1.48 (0.99, 2.21)	0.058
Women * Living comfortably	1.27 (0.65, 2.48)	0.484	1.25 (0.65, 2.42)	0.504	1.44 (0.94, 2.21)	0.091	1.42 (0.95, 2.13)	0.088
Inflation * Women * Doing all right	0.94 (0.86, 1.04)	0.233	0.95 (0.86, 1.04)	0.243	0.70 (0.43, 1.15)	0.159	0.72 (0.45, 1.14)	0.164
Inflation * Women * Living comfortably	1.02 (0.93, 1.12)	0.702	1.02 (0.93, 1.12)	0.669	0.98 (0.60, 1.61)	0.936	1.00 (0.62, 1.62)	0.997

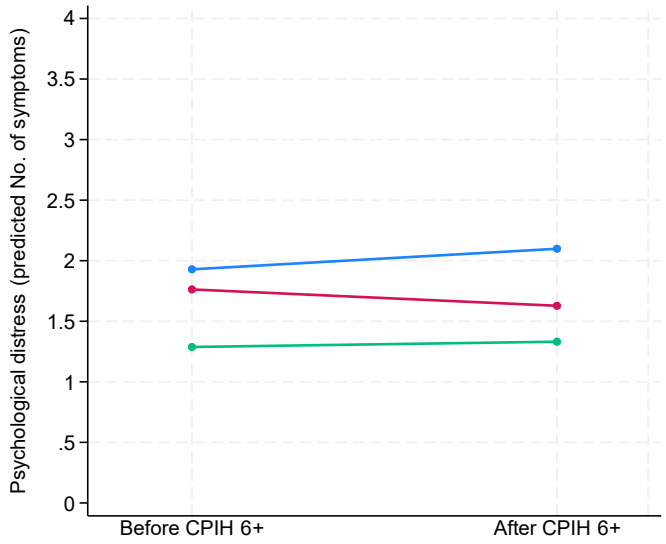
Note. BCS/70: 1970 British Cohort Study; CI: confidence interval; CPIH: Consumer Prices Index including owner occupiers' housing costs; IRR: incidence rate ratio; NCDS/58: 1958 National Child Development Study; p: significance level. Results based on weighted and imputed data. ** Binary analyses exclude participants whose interview took place in 2024 (406 participants in NCDS/58; 64 participants in BCS/70); sample size for these analyses is included in brackets.

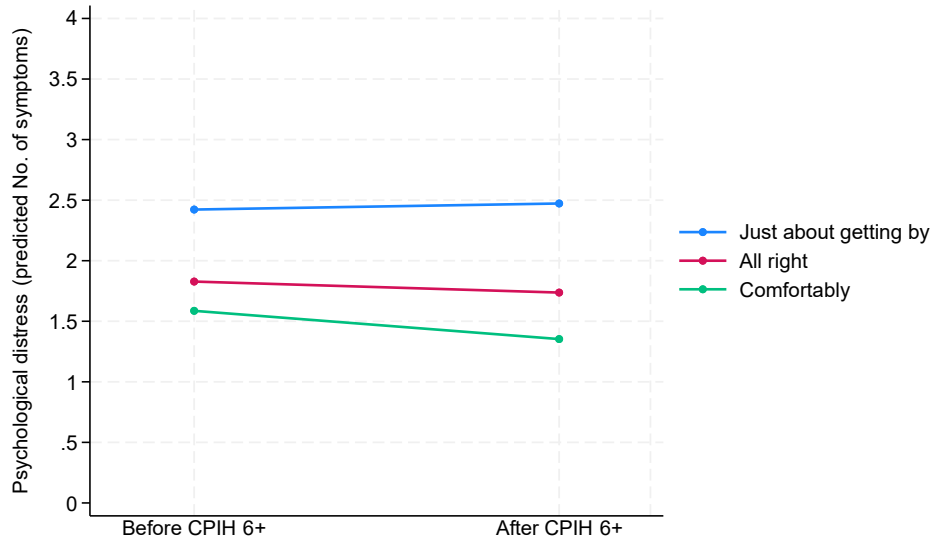
eAppendix 13. Visual depiction of marginal mean predicted number of psychological distress symptoms before and after high inflation (Consumer Prices Index including owner occupiers' housing costs, CPIH ≥ 6%), adjusted results

The graphs below show the marginal predicted number of symptoms before and after the Consumer Prices Index including owner occupiers' housing costs (CPIH) had been equal or higher than 6% for at least three months. Results are based weighted and imputed data and exclude participants whose interview took place in 2024 (406 participants in NCDS/58; 64 participants in BCS/70).

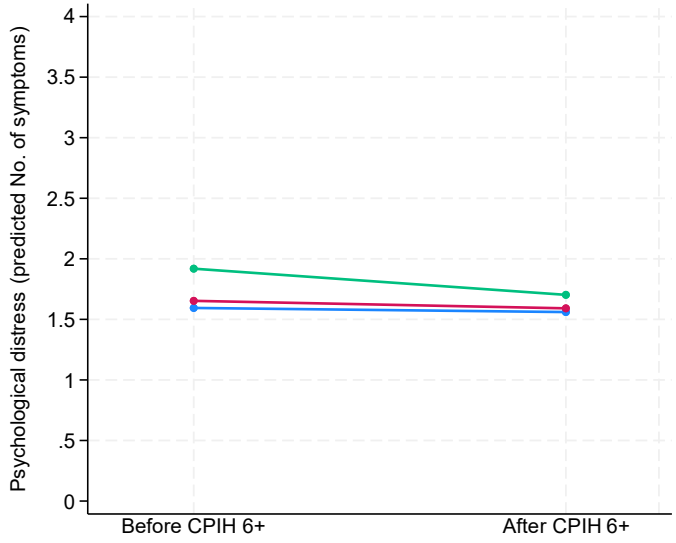


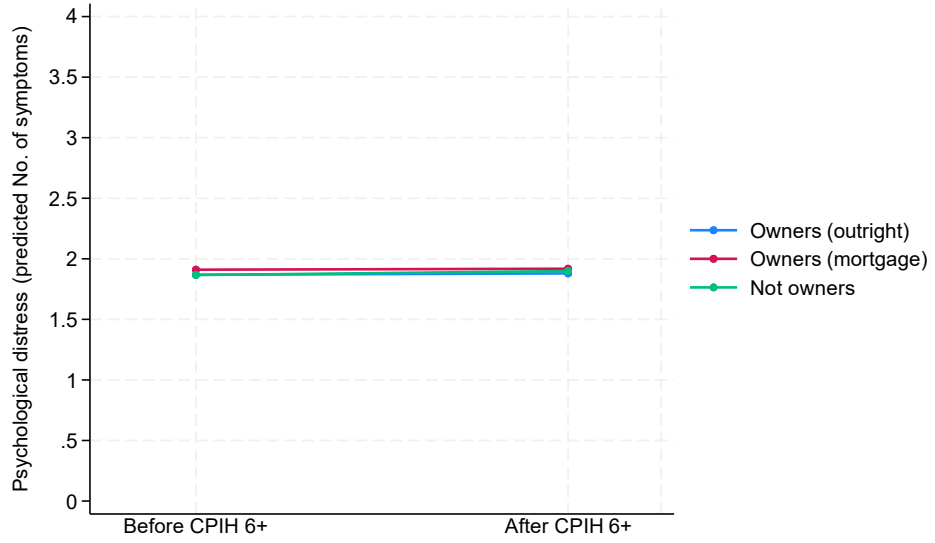
By self-rated financial situation



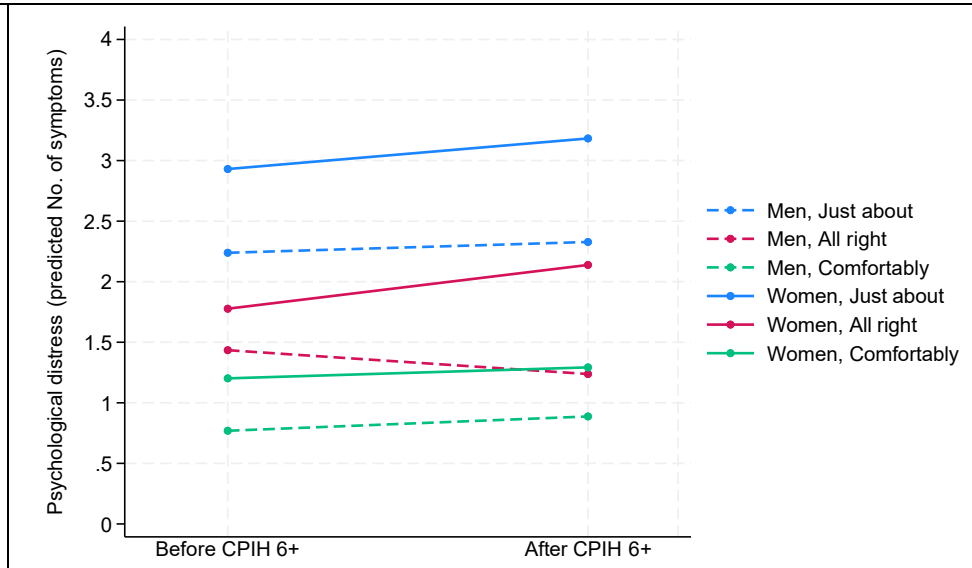


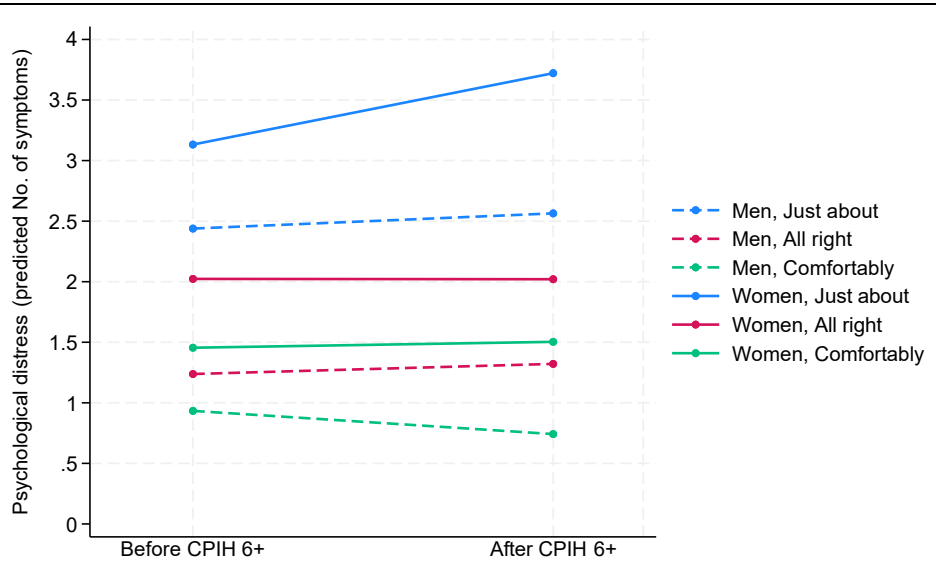
By housing tenure



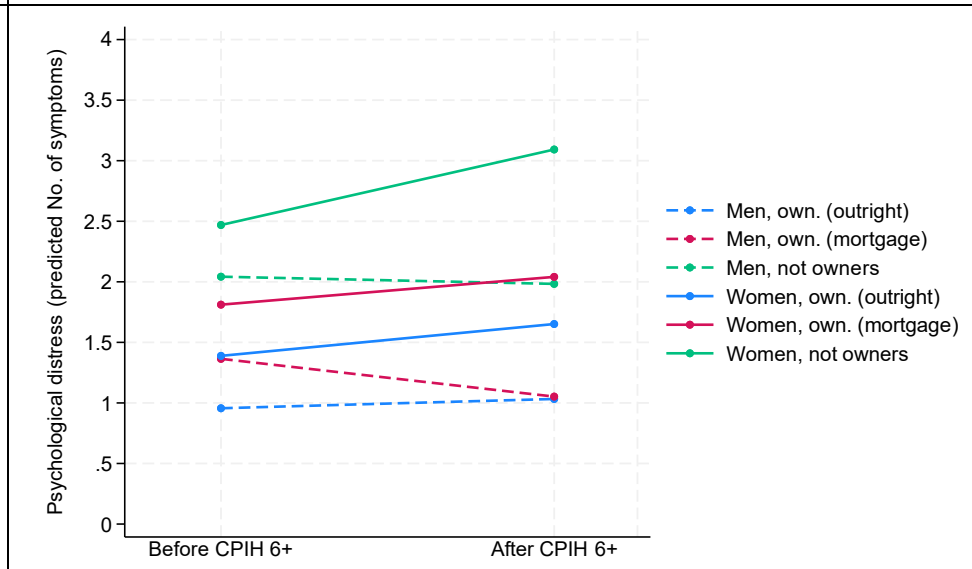


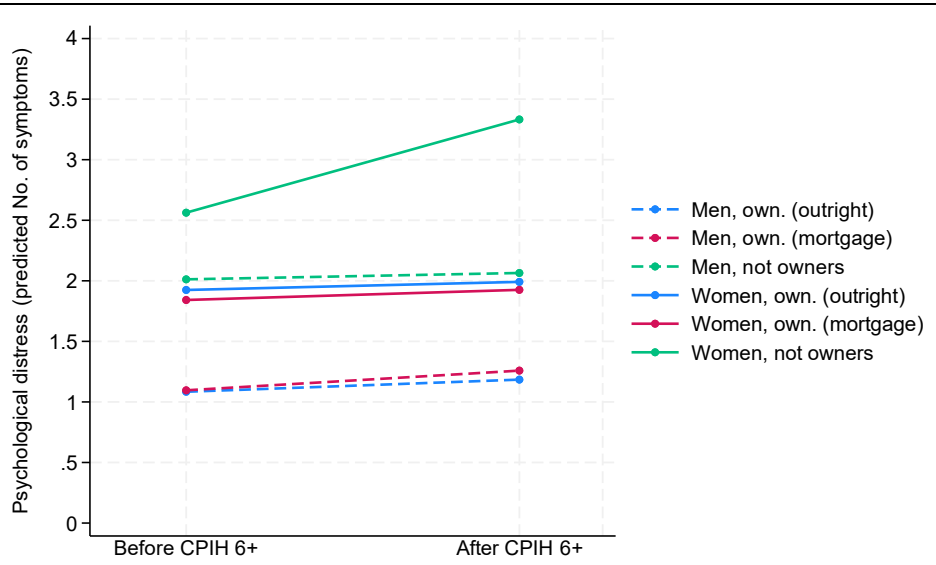
By gender and self-rated financial situation





By gender and housing tenure





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