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Reduce or Compress? Panel Evidence on Working Time Arrangements and Worker Wellbeing

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Abstract

The 4-day work week (4DW) has garnered much attention following recent high-profile trials; whereas the compressed work week (CWW) has made a concurrent comeback. The rise of two comparable working time arrangements (WTA) raises the question: which is best for workers? To compare, this article uses representative panel data from the UK observing both WTAs. Results unsurprisingly corroborate the 4DW is good for workers. In sharp contrast, the CWW is associated with declines in women's wellbeing. These possible harms are alleviated when coinciding with 'a lot' of schedule control, demonstrating the importance of worker control for individuals utilising WTAs. Yet these differences signal significant gender trade-offs. Overall, theory should not be so ambivalent about wellbeing and working time: working less is better. For organisational and public policy, divergent results emphasise equating working time reduction and compression is unhelpful for guiding interventions which support worker wellbeing.

Keywords: 4-day work week; Compressed working hours; Gender; Interventions; Wellbeing; Working time arrangements; Working time reduction

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Introduction

Working time arrangements (WTAs) are currently a topic of keen public and scientific interest. Such piquing is driven by recent policy experiments and new legislation on both flexible working and working time reduction. The four-day working week (4DW) is the most contentious and exciting. For campaigners, the ‘true’ 4DW requires working time reduction of 20% with no corresponding reduction in pay or expected levels of productivity (Lewis et al., 2023). The 4DW is positioned as a radical intervention for improving the wellbeing of workers and prosperity of society. The arrangement aims to reduce temporal job demands, improve organisational efficiency, bring greater leisure and recovery time, and increase capacity for balancing work and family responsibilities (Burchell et al., 2024; Fan et al., 2025; Lewis & Stronge, 2021; Veal, 2023).

Organisations shifting to the 4DW in pilot initiatives appear to experience it as a transformative change, prompting reflection on working practices across the organisation (Burchell et al., 2024; Lewis et al., 2023). Temporal shifts have long been viewed as enablers of organisational change, acting as triggers for additional resource reallocation, new coordinating mechanisms, or as symbolically meaningful interventions for workforce wellbeing or performance (Staudenmayer et al., 2002). The 4DW is thus viewed as a continuation of the ‘stalled’ reduction in standard working hours prophesised as economic productivity increased; a reduction that has been the target of centuries-long labour campaigns (Burchell et al., 2024; Lewis & Stronge, 2021; Spencer, 2024). In organisational trials across the Anglosphere, results demonstrate very positive effects on measures of burnout, mental health and job satisfaction (Fan et al., 2025). Elsewhere, results in public reports (e.g. Lewis et al., 2023) and a few small-scale field studies (e.g. Delaney & Casey, 2021; Mullens & Laurijssen, 2024; Pink et al., 2024) also reveal generally positive impact for firm productivity and recruitment.

Despite campaigns, rising cross-society interest, and the reported successes, working time reduction is regularly confused with other working time arrangements. Most notable is the compressed working week (CWW), which typically entails completing the same number of total working hours but in fewer working calendar days (Bolino et al., 2021). The most prominent case of this confusion is in recent legislative reform in Belgium which, in public media, was positioned as a right to a 4DW (e.g. J.

Kelly, 2022). However, with the same total number of hours expected of workers, the reform only entitled a right to request working time *compression*, not working time *reduction*.

Although the CWW has a longer history in management practice, the benefits for workers and organisations remains inconclusive (e.g. Bambra et al., 2008; Bolino et al., 2021). An initial flurry of research in the 70s and 80s provided only inconclusive findings (Baltes et al., 1999; Veal, 2023), while renewed interest with improved causal identification has only offered similarly mixed findings on the benefits for workers (Fevang et al., 2024; Mühl & Korunka, 2024). Belgium's compression policy has begun to receive academic evaluation, with suggestions that workers are receptive to the change as a means to wrestle control of long working hours (du Bois, Baert, Sterkens, et al., 2025; Dutordoir & Struyfs, 2024). The CWW also maintains positive perceptions in media and policy, remaining a popular organisational intervention for workplace flexibility.

The rise of two comparable WTAs raises the question: which is best for workers? Both WTAs require further research and a comparable sample to assess this question. In this article, I estimate the effect of both WTAs on worker wellbeing by using nationally representative panel data from the UK. Fixed-effects estimation evaluates within-person effects from moving from a standard working week (of 35-40 hours) to a reduced 27-34 hour week conditional on pay changes, or to a compressed schedule. I adopt a subjectivist approach to wellbeing which defines it as the overall quality of a person's life evaluation, experience, and functioning (Fabian, 2022; Martela & Sheldon, 2019). Empirically, I use a range of self-report outcomes to assess changes. This includes all-things-considered subjective wellbeing through evaluative, affective and eudaimonic dimensions (Fabian, 2022), and domain-specific work wellbeing (through the same dimensions) (Martela, 2025), health, and non-work domain satisfaction.

I make several contributions to the literature on working time, flexible work arrangements, and worker wellbeing. First, representative survey evidence generally contributes to the nascent and renewed empirical literature on both WTAs. Second, I evaluate more outcomes than previous studies to present a more developed picture of the effects on different wellbeing dimensions and domains. Third, I investigate heterogeneity in both WTAs, especially the role of gender and schedule control as moderators. These variables are discussed in extant research but are as yet understudied. Assessing both

policies with the same sample provides direct comparability to assess optimal interventions. Results offer evidence for which WTA is better for workers and provides guidance for organisational practice and public policy on working hours and wellbeing. These contributions are primarily empirical, but do suggest theories of working time and wellbeing ought not be so ambivalent: working less is slightly better for us.

Literature Review

Working time and wellbeing

Despite efforts to reduce and compress working time, theories of worker wellbeing are surprisingly ambivalent with regards to working time. For example, in the dominant job demands-resources theory, working hours were filtered out from the earlier job strain model (cf. Demerouti et al., 2001; Karasek & Theorell, 1990). ‘Time pressure’ and ‘time control’ do remain, with ‘recovery time’ mentioned as a key resource and working time alluded to in places (e.g. supervisor support for overtime (Demerouti & Bakker, 2023: 220)), but the overall time experiencing job demands is not fully accounted for. Older, more list-based psychological theories of work wellbeing (e.g. Warr’s (2007) vitamin model and Jahoda’s (1982) latent deprivation theory) have time commitment built into them, with an implied employment ‘dosage’ needed to gain the social and psychological benefits (Kamerāde et al., 2019). Yet these popular theories address neither excess or optimisation of working time.

The ambivalence and lack of development in theories of working time and wellbeing is perhaps the result of mixed empirical evidence (Bolino et al., 2021; Ganster & Rosen, 2013; Pak et al., 2022). Many discussions of working time take negative effects as given, painting a distinct picture of overwork as detrimental to wellbeing and performance (e.g. Cha & Weeden, 2014; Golden, 2009; Perlow, 1999; Schor, 1991), and there is strong evidence for the negative impact on physical health. Longer working hours increase risk of cardiovascular disease (Kivimäki et al., 2015; Rivera et al., 2020); and, in another meta-analysis, working hours are one of seven key occupational stressors with a consistent negative association with a range of physical health symptoms (Nixon et al., 2011). Longer working hours may

negatively affect physical health by reducing recovery time and thus increasing levels of fatigue, as well as prolonging exposure to physiological harms at work (Ganster et al., 2018).

However, the link to psychological domains of wellbeing is less clear. While there is some weak evidence supporting links to depression (Ng & Feldman, 2008; Sparks et al., 2013), the relationship is more nuanced with regard to the work-life interface. Psychological meta-analysis estimates suggest that when longer hours coincide with reduced energy levels, it brings greater work-family conflict; but, when longer hours are invigorating and cultivate self-esteem or personal management skills, they can actually enrich both work and family life (Pak et al., 2022). Such findings correspond with theories arguing for the non-pecuniary benefits of work, such as social purpose and relationships (De Neve & Ward, 2025; Jahoda, 1982; Warr, 2007). Over and underemployment appear stronger predictors of workers' wellbeing than any specific level of working time (Angrave & Charlwood, 2015; Bell & Blanchflower, 2019; De Moortel et al., 2017; Heyes & Tomlinson, 2021), and within those preferences, a significant proportion of this negative affect is explained by job quality (Ling et al., 2025). These findings demonstrate that the content of work, worker agency, and capabilities are all important moderators of the psychological impact of working hours. Job quality, content, and expectations appear more important than job quantity (Kamerāde et al., 2019; Wang et al., 2022). Further, when evaluating the effects of working time, different physical and psychological outcomes ought to be considered separately.

How should, then, compressing and reducing working time theoretically affect subjective wellbeing? Subjective wellbeing is most often considered along dimensions of evaluation (judging life to be going well), affect (experiencing positive and negative emotions), and eudaimonia (doing well) (Fabian, 2022; Martela, 2025; Martela & Sheldon, 2019), and lived-out in different life domains, such as work and health (Alexandrova, 2017; Hausman, 2015; Schimmack, 2008). Multiple dimensions and domain specificity are necessary for practical reasons, because interventions may impact each differently. In the context of working time, arrangements may affect the experience of a job, but also have significant spillover to the rest of a workers' life. Restructured working hours would likely provide more time for leisure, family, and personal health. Working time reduction might therefore be expected to increase wellbeing across all dimensions of subjective wellbeing. The only exception may be

workplace eudaimonia, with reduced time potentially granting less time for functional need satisfaction, combining Martela's (2025) theory of eudaimonic employee wellbeing with the empirical findings on the, at times, positive role of long working hours for self-esteem (Pak et al., 2021). Compression is similarly intended to improve non-work life domains for individuals, and as a result improve workers' evaluations of their jobs; but without a change in total working hours, there is presumed to be no reduction in job demands and, as a possible result, increase in the daily intensity and strain (Kelliher & Anderson, 2009). Therefore, compression may improve overall evaluative wellbeing, but perhaps not affective dimensions. Further, both WTAs are a type of flexible WTA which can be stigmatised in organisations (Chung, 2022), and so work evaluations may not necessarily improve even if overall evaluative wellbeing improves. In Table 3, I map these different dimensions and domains to the available measures. Based on these considerations, I test three hypotheses:

H1: Working time reduction, with reduced pay or with pay maintained, is better for employee wellbeing than a standard 5-day work week

H2: Working time compression is better for employee wellbeing than a standard 5-day work week

H3: The benefit of reduction is greater than compression

Both WTAs are intended as a benefit for workers and especially their ability to manage work and family. Therefore, it could be expected that both will improve subjective wellbeing outcomes, but there may be some trade-offs in terms of work and non-work life domains. *H1* and *H2* propose benefits from both reduction and compression, but the main motivation for this paper is the rise of comparable arrangements and the policy confusion between the two. *H3* provides a comparative test of the two. Working time reduction should reduce exposure to the demands of work and increase leisure time; whereas compression would only facilitate improvements in the latter. Testing these hypotheses is intended as an overall assessment of the multiple wellbeing outcomes. However, as already noted, a positive effect may not be likely in work-specific outcomes. Table 3 below provides a summary of the expected direction for each outcome and indication of where this is unclear.

Evidence for working time reduction

Debate on working time reduction was instigated by several high-profile, nationwide pilots of the 4DW in the likes of the UK (Lewis et al., 2023), Ireland (O. Kelly et al., 2022), and Iceland (Haraldsson et al., 2024), as well as openness to experimentation among more socially-liberal governments and municipal authorities (e.g. in Spain (Reuters, 2023); Portugal (Gomes & Fontinha, 2024), or Scotland (Scottish Government, 2021)). Pilots demonstrate very positive results, with improved worker wellbeing and at least maintained performance levels (e.g. Lewis et al., 2023). A pooled evaluation of the 4DW trial cohorts across Australia, Canada, New Zealand, UK and US shows significant improvements in burnout, job satisfaction, and both mental and physical health (Fan et al., 2025). These positive effects are mediated by an improved sense of ability, sleeping, and reduced fatigue, which all suggests the 4DW grants greater recovery time than standard working hours and allows workers to complete their jobs to a more satisfying level of quality. Positive findings make a strong case for the benefits of working time reduction for workers' wellbeing. As a result, they have been greeted with widespread media attention and political debate, including formal backlash from conservative politicians and media (e.g. Rowley, 2023).

Preceding and continuing to support these 4DW policy experiments is a stream of empirical work offering organisational case studies of experiences with the policy. For example, Mullens & colleagues (Mullens & Glorieux, 2023, 2024; Mullens & Laurijssen, 2024) detail one company's transition with only mixed results, or a trial in South Cambridgeshire District Council in England indicated a variety of performance indicators were maintained (Jörden & Alayande, 2023; Pink et al., 2024). Specific firms were pioneers, such as Microsoft Japan claiming productivity improvements (Paul, 2019), or Perpetual Guardian in New Zealand (Delaney & Casey, 2021) who spawned the campaign group and consultancy 4 Day Week Global. Both organisational case studies and evaluations of 4DW pilots corroborate earlier evidence on working time reduction, which demonstrates improvements across mental and physical health, outcomes relating to work-life balance, and productivity (Voglino et al., 2022)

An alternative stream of literature on working time reduction evaluates state intervention in the standard working week, using difference-in-difference estimation and event-studies to calculate the

impact for workers. These state reductions bring reduced job exits (Raposo & van Ours, 2010), improved job and leisure satisfaction (Lepinteur, 2019), and gendered lifestyle changes, with increased exercise and alcohol (especially for women and older workers), but decreased smoking (especially for men) (Ahn, 2016). Elsewhere, national working time protection policies also demonstrates benefits for workers, but again along a gender dynamic. Overtime restrictions in Japan were successful for women but less-so men (Burdin et al., 2024), whereas right-to-disconnect across Europe brought greater benefits for men (Regier, 2026).

While these results are all mostly very appealing for those concerned with worker welfare, there is continued debate on the merits, complexities, and potential limitations of implementing the 4DW in organisations, as well as the challenges to establishing it beyond organisations who select in (e.g. Burchell et al., 2024; Campbell, 2024; Hermann, 2015; Lewis & Stronge, 2021; Pullinger, 2014; Spencer, 2022, 2024; Veal, 2023). For example, dampening positivity, there is some suggestion that reduced working time can bring increased work intensity, performance pressure, monitoring, and less recovery time (Delaney & Casey, 2021; Mullens & Glorieux, 2023; Spencer, 2022). For employment relations, questions remain how to translate success in organisational trials to standard working hours in the wider economy. Research on individuals resisting and reducing work shows they must make many compromises (Balderson et al., 2021; Frayne, 2015). Whereas, prior research on statutory changes in working hours demonstrates that legislation can struggle to change institutional, organisational and household norms (Lehndorff, 2014). For employers, the major strategic questions are whether it aids retention, recruitment, and productivity. *H1* contributes to this evidence base on the worker outcomes of working time reduction.

Evidence for the compressed work week

While working time reduction is a renewed public debate, compression has been popular for decades, with research findings across five decades of scholarship (e.g. Allen & Hawes, 1979; Cunningham, 1981; Hodge & Tellier, 1975; Ronen & Primps, 1981). Compression can be either flexible work accommodations negotiated individually by an employee and manager, or may be organisation-wide shift patterns or policies. The most common approach is a shift to a four-day working week with

extended hours, often referred to as a ‘4/10’. The intention behind the CWW is that extended periods of time off-clock provides greater chance for recovery, leisure and caring responsibilities, even if leisure time is reduced on working days (Baltes et al., 1999; Bolino et al., 2021; du Bois, Baert, Sterkens, et al., 2025). The extended timeline of research on the CWW speaks to its heritage as a management-led experiment among US employers in the 1970s, but inconclusive results and a failure to spark wider reform or excitement entailed little long-term traction (Veal, 2023). Nevertheless, the CWW is still widely available to workers at many organisations.

The early evaluations of the CWW provide inconclusive and ambiguous results from underpowered samples. Employees did tend to report positive attitudes towards the CWW because of greater leisure time (Cunningham, 1981; Hodge & Tellier, 1975; Ronen & Primps, 1981), but when it came to outcomes, there were no changes in health and absenteeism, inconclusive support for performance, and negative effects on fatigue levels (Baltes et al., 1999). A later review of compressed hours among shift workers was again inconclusive, but also assessed the quality of evidence to be poor (Bambra et al., 2008). More recently, where sentiments are assessed, most workers are satisfied with the arrangement and enjoy further time off, but there remains conflicting findings on outcomes relating to fatigue and energy (Bolino et al., 2021; Deery et al., 2017; Hyatt & Coslor, 2018; Mühl & Korunka, 2024). However, more robust causal identification strategies find no improvements in absenteeism rates (Fevang et al., 2024), and demonstrates that, while workers state they are better able to detach from work, there are no changes in measures of burnout or exhaustion (du Bois, Baert, Lippens, et al., 2025). Testing *H2* with household panel data contributes to this evidence base.

Gender and working time

As with other flexible work arrangements, WTAs are especially relevant for gender inequality. Both working time compression and reductions are positioned as beneficial for gender equality at work and home (Burchell et al., 2024; du Bois, Baert, Sterkens, et al., 2025; Jacobs & Gerson, 2004; Kossek et al., 2023; Mullens & Glorieux, 2023). In fact, working time arrangements are sometimes even defined as ‘work-family support policies’ (e.g. Butts et al., 2013). The basis is common knowledge: women on average do more unpaid work at home in the form of childcare and housework, regardless of whether

they are in full-time employment, famously described as the ‘second shift’ (Hochschild & Machung, 2012). Yet women are also more likely to be underemployed or involuntarily part-time (Pech et al., 2021), whereas men are more likely to overwork, a contributing factor to the gender wage gap (Cha & Weeden, 2014). Further, the relationship between working hours and wellbeing is stronger for men than women, likely because men’s sense of identity is traditionally more entwined with career (Ng & Feldman, 2008), and they are considered to have stronger preference for workplace competition (Miller et al., 2024). These trends are propelled by discourses of ‘flexibility’ which are taken-for-granted as positive, but which for both genders can bring increased exploitation, stigmatisation, or increased working hours through an intensified subjectivation and a failure to fulfil ideal worker norms (Chung, 2022; Noback et al., 2016; Padavic et al., 2020).

Commentators and campaigners propose that working time reduction will enable men to take up a greater share of domestic labour, granting women a fairer share and benefiting men by possibly improving familial relationships. There are some early signs of benefits from the 4DW in this regard (Burchell et al., 2024; Mullens & Glorieux, 2023). While promising, the risk remains that isolated working time reduction with no corresponding change in gender norms may extend domestic labour divisions. This was the case with work-at-home experiences during the pandemic, which can harm wellbeing and increase work-family conflict (Beaufils & Chung, 2026; Yang et al., 2023). Other flexible work arrangements have been shown to accentuate more traditional gender roles through childcare responsibilities and housework (Chung & Booker, 2023; Hilbrecht et al., 2008; Lott & Chung, 2016), and flexible work policies can have the perverse effect of hurting women’s career advancement (cf. Noback et al., 2016; Padavic et al., 2020). However, competing findings indicate that taking advantage of working time reduction arrangements such as job shares is beneficial for women’s stress (Chandola et al., 2019). In contrast, men may find benefits from WTAs in the long-term through strategic utilisation of newly-acquired leisure time. When reducing hours, men are more likely to engage in skills, job training, approaching retirement, or when unable to find full-time employment; whereas women more often do so to more easily manage domestic demands (Beham et al., 2019; Boll & Bublitz, 2018). Whether reducing or compressing work, WTAs may bring additional exertion. For men there may not be the same expectations.

Despite the relevance and tradition of gendered analyses of working hours, as well as flexible working policies, neither working time nor compression have been evaluated with specific attention to gendered differences. In the following analysis, I test two gender hypotheses:

H4: The benefits of both WTAs will be greater for men than women.

H5: On both WTAs, women will do more housework; whereas men will not.

Schedule control

Working hours are also intimately entwined with other dimensions of working conditions in ‘constellations’ of the two (Fan et al., 2019). While WTAs can be organisational policies, individual work arrangements are a point of negotiation between employees and managers (E. L. Kelly & Kalev, 2006), subject to deal-making (Hornung et al., 2008), and can often be viewed negatively by managers (Bourdeau et al., 2019). Schedule control, i.e. workers’ control over frequency and time allocation, is a working time resource crucial for managing job strain (Karasek & Theorell, 1990; E. L. Kelly et al., 2011; E. L. Kelly & Moen, 2020). Previous evidence does suggest that worker choice over CWW scheduling affects how it is experienced, with voluntary choice unsurprisingly found to be better for workers (Deery et al., 2017; Hyatt & Coslor, 2018). With recent commentary pointing towards the need to look further on the experiences of flexible work arrangements (Kossek et al., 2023), Mayo et al. (2026) show that perceived schedule control can be a mediator through which flexible working policies can improve workers’ job satisfaction. However, an alternative perspective could investigate whether benefits of WTAs are actually conditional on the level of schedule control, i.e. as a moderator. Indeed, participation and, to a lesser extent, outcomes of the CWW are linked with employees’ ability to use the policy to take greater control of working hours (du Bois, Baert, Sterkens, et al., 2025). Likewise, the more positive results linking longer working hours with psychological vigour (Pak et al., 2022) seem likely to depend on the extent to which the worker is in control of working time.

Both WTAs may be used by a worker with heterogenous levels of control. For instance, both WTAs may be contained by the organisation to specific and fixed working hours, or could be at the discretion of the individual fitting in a fixed number of working hours personal circumstances. The possible role of schedule control as a moderator for the benefits for wellbeing has not been explored in

extant literature, and is important for considering WTAs when they are led by individual selection. Prior literature and these reflections prompt the following hypothesis:

H6: Schedule control will moderate the effect of both WTAs, with increased control associated with greater benefit

[TABLE 1 HERE]

Materials and Method

Data

The hypotheses listed in Table 1 were tested with longitudinal panel data from the UK's Household Longitudinal Survey 'Understanding Society' (UKHLS) (University of Essex, Institute for Social and Economic Research, 2024). UKHLS is an ongoing, nationally representative social survey of the UK. Annual wave samples vary between 27,000 and 55,000 individuals across 14 waves for a total sample of 562,117 person-year observations. I initially included all 14 waves from 2009-2023, the most recent wave available at the time of writing.

The analytical sample for this study includes respondents in employment at the time of the survey. This was selected as those who reported working hours more than zero to the question 'how many hours, excluding overtime and meal breaks, are you expected to work in a normal week?'. The second sample condition was the requirement of responses to the UKHLS's biennial working conditions module which include the WTA items. As a result, the analytical sample in regressions consists only of a biennial UKHLS. This is a limitation of the study: with a two-year window between responses there is greater chance of unobserved endogenous change. The final analytical sample, after UKHLS is restricted to this biennial sample of working adults, is 47,873 unique respondents with 136,036 person-year observations. However, once missingness is accounted for, regression models average 28,062 respondents with 79,757 person-year observations.

As recommended by the survey administrators, I used the UKHLS individual-level longitudinal weights to provide a representative sample which adjusts for survey design, differential nonresponse,

unequal selection probabilities, and wave attrition. Table 2 contains frequency counts for the main variables used.

Variables

4DW and CWW variables

The key dependent variables are the indicators for the two WTAs. First, to build an item for working time reduction, weekly working hours were cut into categories: anyone working between 27 and 34 hours is designated as a 4DW; 35-40 hours as 5-day working week; and above 40 is coded as greater than five. Cutting the hours variable is common practice (e.g. Kamerāde et al., 2019), but it is important to note that although I describe these levels as ‘work days’, these hours could be spread unevenly across calendar days. This specification aligns with the 4DW pilot initiatives, where the intervention targeted 80% of working hours, regardless of calendar spread. In those pilots, stopping operation on one calendar day was the most popular arrangements but not exclusively (e.g. Lewis et al., 2023). A risk is that workers change only one-hour across cut-offs, but this would produce more conservative estimates if it were the case. The estimand here is therefore downward movement between weekly working hour ranges, i.e. weekly working hours reduction, not a reduction in calendar working days.

The main challenge in identifying working time reduction in observational data is distinguishing between those who are merely engaged in part-time work and those who are practicing the type of working time reduction campaigners argue for, which requires working time-reduction *with* maintained pay. To include this in my working time reduction item, I constructed a version of working time that is conditional on pay change from the previous survey wave. Lagged income is subtracted from current income, and recoded into a dummy category for either ‘decreased’ ($< \pounds$) or ‘same & higher’ ($\geq \pounds$) if current wage falls no less than 5% of the lagged value. 5% accommodates some response noise.

$$C = \begin{cases} 1 & \text{if } -0.05 < \Delta \leq \infty \\ 0 & \text{if } \Delta \leq -0.05 \end{cases}$$

The resulting item is a categorical variable with possible values of 35-40 hours (5 days), 27-34 hours with lower wage (4DW $< \pounds$), 27-34 hours with same or higher wage (4DW $\geq \pounds$), over 40 hours (> 5 days), or less than 27 hours (< 4 days). See Table 2.

For working time compression, two questions are asked as part of the biennial working conditions module. Respondents are, first, asked whether they have a series of different working arrangements available at their workplace, and, second, whether they work in that way. CWW^{Use} is a binary response yes to ‘working compressed hours’ that workers select in to.

[TABLE 2 HERE]

Outcomes

UKHLS includes several measures of general and domain-specific subjective wellbeing which I analysed here in a multiple outcomes approach. Multiple outcomes are necessary because of conflicting prior literature, as well as potentially divergent effects. For example, prior research indicates working hours have different effects on physical and mental health, and that WTAs may improve general wellbeing measures (Shifrin & Michel, 2022), but provoke stigma at work (Chung, 2022). Focussing on a specific outcome like job or life satisfaction would have missed crucial insights for practices that are designed to improve wellbeing in and out of work. Assessment of support for the hypotheses is made through a general evaluation of all outcomes.

Wellbeing, how good one’s life for them, is generally theorised on a general, ‘all-things-considered’ basis or through specific life domains (Alexandrova, 2017; Fabian, 2022; Hausman, 2015; Schimmack, 2008). Both all-things-considered wellbeing and work wellbeing have been theorised to have three primary dimensions: evaluative, affective, and eudaimonic (De Neve & Ward, 2025; Fabian, 2022; Martela, 2025; Martela & Sheldon, 2019), with the affective dimensions both positive and negative (Follmer & Jones, 2018). Using secondary data brings limitations when matching measures with theory, and so some dimensions of worker wellbeing cannot be measured, notably work-specific eudaimonic and conative wellbeing (Martela, 2025). Table 3 details the UKHLS measures I analyse and how they map to the domains and dimensions of subjective wellbeing. Table 3 also includes the hypothesised directional effect from literature review. Outcomes were used as formatted in the UKHLS survey materials and then, to ensure comparability, reordered (higher values, greater wellbeing) and standardised.

More unorthodox, I segmented the General Health Questionnaire (GHQ-12) because of its useful inclusion of multiple constructs. I extracted the happiness and unhappiness items to measure positive and negative affective wellbeing. The remaining items, excluding sleep, I used as a measure of eudaimonic wellbeing. Following self-determination theory, eudaimonia is the satisfaction of needs, achieved through ‘doing’ and functioning, contributing to the perception of wellbeing (Abdallah & Mahoney, 2024; Fabian, 2022; Martela, 2025; Martela & Sheldon, 2019). The GHQ-12 includes several items covering individuals’ functional capacity, so I considered it a reasonable selection within the multiple outcome approach ($\alpha = 0.88$).

Conceptually, physical and mental health are best considered a constitutive domain of overall wellbeing (Hausman, 2015). In the analysis they are measured with the SF-12 physical and mental component summary scores as derived by the UKHLS survey designers. As a standalone aspect of health, I include the sleep item from the GHQ-12 because of prior positive evidence on working time reduction and sleep (Fan et al., 2025),

For testing *H5*, housework is a continuous response to the question ‘About how many hours do you spend on housework in an average week, such as time spent cooking, cleaning and doing the laundry?’.

[TABLE 4 HERE]

Moderator variables

A binary gender variable was used to conduct separate analyses for all models and for specifically testing *H4* and *H5*. Splitting analyses is common practice in research relating to working time and schedules (e.g. Chung & Booker, 2023; Kamerāde et al., 2019; Lott & Chung, 2016) and, post-hoc, is justified by the results.

To test *H6*, schedule control is measured using the question ‘in your current job, how much influence do you have over the time you start or finish your working day?’ with four response options (Table 2). This item has been used elsewhere as a measure of schedule control (e.g. Chung & Booker, 2023).

Control variables

Controlled for in all model estimations were several time-variant variables with theoretical associations with both working hours and wellbeing. Personal characteristics included were: occupational class; a dummy for degree-level education; a dummy for illness or disability; marital status (three categories of married, separated or single); a same job check; and (log) monthly household income. Caring responsibilities would theoretically reduce ability to work longer hours and increase likelihood of taking up flexible WTAs, so two dummy measures, one for childcare responsibilities, and one for other caring responsibilities, were included as binary measures in the wellbeing models. I controlled for job autonomy as a central component of job quality (e.g. Green, 2006; E. L. Kelly & Moen, 2020) that is well measured in UKHLS. I calculated mean of four questions on autonomy ($M = 2.12$; $SD = 0.83$; $\alpha = 0.87$) which ask whether respondents had influence over what tasks they do, the pace of work, how they do their work, and the order they complete tasks. Job quality is a broader category than just autonomy, but measurement is difficult (Osterman, 2013). Appendix A Table A1 provides cross-tabulations of the WTAs with control variables.

Analytic Strategy

First, to test $H1$, $H2$, $H3$, and $H4$, I used fixed-effects regression models to estimate within-person differences in wellbeing over time from changing to the CWW and the 4DW.

$$WB_{it} = \beta_1 WD_{it} + \beta_2 CWW_{it} + X_{it}\gamma + \alpha_i + \lambda_t + \epsilon_{it}$$

Where WB_{it} are the wellbeing outcomes for individual i at time-point t , β_1 and β_2 are the estimates for the two working hours arrangements (WD = Working days; CWW = Compressed Work week), X_{it} γ a vector of controls, and α_i and λ_t the person and wave fixed effects respectively. This regression model was developed stepwise with incremental inclusion of controls, and estimates provided for all specifications below.

Step 1 – CWW: [1a] $WB_{it} = \beta_1 CWW_{it} + \alpha_i + \epsilon_{it}$

Step 1 – 4DW: [1b] $WB_{it} = \beta_1 WD_{it} + \alpha_i + \epsilon_{it}$

Step 2: [2] $WB_{it} = \beta_1 WD_{it} + \beta_2 CWW_{it} + \alpha_i + \epsilon_{it}$

Step 3: [3] ... + $\beta_3 NSSEC_{it}$ + $\beta_4 Same\ job_{it}$ + $\beta_5 Health\ condition_{it}$ + $\beta_6 Marital\ Status_{it}$ + $\beta_7 Caring\ status_{it}$ + $\beta_8 Childcare_{it}$ + $\beta_9 \log(household\ income)_{it}$

Step 4: [4] ... + $\beta_{10} Work\ Autonomy_{it}$

Step 5: [5] ... + $\beta_{11} Job\ satisfaction^{t-1}_{it}$

Step 4 is the preferred specification because lagged job satisfaction overfits job satisfaction estimates. Results are presented as heatmaps in Figures 1 and 2 for readability. Estimates for controls are not shown in the heatmaps. Estimates for working time reduction are exclusively plotted, with other working hours patterns not presented.

H4 and *H5* address the role of gender in both WTAs. For *H4*, all analysis is conducted separately for men and women. This is common practice in research on working hours due to enduring differences in hours worked, expectations of working hours, caring responsibilities, and occupations (e.g. Angrave & Charlwood, 2015; Chandola et al., 2019; Chung & Booker, 2023; Kamerāde et al., 2019; Ng & Feldman, 2008). Gender difference in WTAs is also a gap in the evidence (Bambra et al., 2008). For *H5*, a Step 4 model is tested with hours of housework.

To test *H6*, the moderating relationship between schedule control and both WTAs, I estimate two separate interaction models ($\beta_5(WD_{it} \times ScheduleControl_{it})$ and $\beta_6(CWW_{it} \times ScheduleControl_{it})$) and plotted the standardised predictions.

Lacking experimental or quasi-experimental discontinuities, within-person effects are the strongest option for assessing the casual impact of changing working practices. While this analytical strategy does account for individuals' changes in circumstances and time-invariant unobserved heterogeneity, the analysis does not fully isolate the effects of formally implemented WTAs. Effects are from self-reported within-person transitions into the WTAs and not exogenous flexible working policies. Transitions may reflect endogenous life-course or labour-market changes, including caring responsibilities, changes in household income, employer-driven reductions in hours, health-related adjustments to work intensity. To partially account for these sources of selection, the models include time-varying controls, and Appendix C presents two-way fixed effects linear probability models examining how these observable characteristics are associated with participation in each WTA.

Especially, in Appendix D I report post-hoc robustness check for women's CWW estimates using interactions with both childcare responsibilities and long term illness/disability. Neither of these variables accounts for the results.

Nevertheless, unobserved time-varying factors like organisational policies or other personal life circumstances may still influence both transitions into reduced-hour arrangements and wellbeing outcomes. Results may also be best understood as the outcome of working time preference satisfaction, and so in Appendix D I estimate plotted interaction effects for the two 4DW configuration and hours preferences ($\beta_5(WD_{it} \times HoursPreferred_{it})$) to explore underemployment (Figure A6). Considering the low methodological quality of the CWW literature (Bambra et al., 2008) and nascent 4DW literature (Voglino et al., 2022), the empirical contribution of the fixed-effects approach outweighs these limitations, but results must be considered with respect to them.

Results

Comparing wellbeing outcomes

Figures 1 and 2 present the coefficient estimates for the 4DW and CWW, respectively, on the set of wellbeing outcomes. Providing support for *HI*, the 4DW estimates indicate benefits across many but not all outcomes. For both genders, changing to a 4DW with maintained pay ($4DW \geq \pounds$) corresponds with improvements in eudaimonic wellbeing, general negative affect, mental health, and leisure satisfaction. For men only, there are also improvements in life satisfaction as well as in physical health; whereas women see improvements in work-related affective wellbeing on both anxiety and depression scales, as well as improvements in sleep. However, women experience declines in physical health (PCS and health satisfaction) at 10% alpha level, possibly indicating remaining selection. When pay is reduced in the 4DW in a part-time WTA ($4DW < \pounds$), both genders experience declines in job satisfaction but improvements in leisure satisfaction. Men still see improvements in eudaimonia and physical health, and women still experience improvements in job-related depression, general negative affect and sleep, without the declines in physical health. In summary this offers support for wellbeing along certain dimensions and domains through gendered differences.

On the other hand, results do not offer support for H2 on the benefits of working time compression (Figure 2). In fact, CWW estimates for women provide a series of negative associations across a range of wellbeing outcomes. Except for physical health, women's wellbeing declines as they change to a CWW. For men, results are less concerning, with mostly null estimates for the multiple outcomes, but with improved job satisfaction, sleep and leisure satisfaction. Addressing the primary research question, the effect of working time reduction appears divergent and better than working a compression, supporting H3. Gender is crucial to these findings, with the support for H3 stronger for women. Overall, these results support H4, that both WTAs will be more beneficial for men. Men have larger betas than women from the 4DW and do not show the associated declines from the CWW that women do.

[FIGURE 1 HERE]

[FIGURE 2 HERE]

WTAs and domestic labour

An important finding from the analysis so far is that the benefits of both WTAs seem to be larger for men than women. For working time reduction, effect sizes are larger, and for compression women have negative coefficients. One possible explanation for these findings is that the WTAs bring changes to what workers do during leisure time. As discussed in the literature review, it may be there are associated changes with the gendered division of domestic labour. Investigating this further I considered whether WTAs entail changes in the amount of housework (H5). Table 4 provides regression estimates for the two WTAs with hours of housework as the outcome.

For housework, gender difference are clear. The 4DW on is associated with significant increase in the hours of housework for women, whereas for men there is no significant change until working time falls below 27 hours per week ($b = 0.961$; $s.e. = 0.382$). For a 4DW with pay-maintained, women's housework increases on average 48 minutes per week ($b = 0.803$; $s.e. = 0.244$), whereas on a part-time 4DW housework increases by approximately 40 minutes on average ($b = 0.661$; $s.e. = 0.296$).

The CWW does not entail any significant changes in hours of housework for either gender, indicating the added strain from this WTA is not caused by additional housework outside of working hours. These results support *H5* for working time reduction, but not compression.

[TABLE 4 HERE]

Schedule control

Figure 3 and 4 present predicted wellbeing outcomes from interaction effects between the WTAs and schedule control. These interactions test *H6* to evaluate the moderation effect of schedule control. Overall, results provide mixed evidence, with gender again central to the findings.

For the 4DW, schedule control does not appear to moderate the effects of either 4DW configuration for women. Predictions across each WTA suggest a relatively flat relationship between schedule control and wellbeing generally, with the exception of job and income satisfaction. However for men there is a more complex picture. In a pay-maintained 4DW, schedule control has a positive moderating effect on physical health effects, but surprisingly a negative one for GHQ functioning, job-related depression, and mental health. When pay and working hours drops, relative to a 5DW, greater schedule control coincides with higher job satisfaction and physical health, maintained job-related anxiety, as well as higher health and leisure satisfaction. These inconclusive results are surprising and to an extent counter to *H6*, with working hours an exposure to job demands and schedule control a resource for managing it. Regardless of working schedule, increased schedule control brings increased job satisfaction for both genders, indicating that the relationship between autonomy and employee wellbeing is not in doubt, but that the moderating role of schedule control in working time reduction is not clear.

In contrast, the CWW predictions in Figure 3 reveal a more consistent moderating role of schedule control. For women, estimated across several wellbeing outcomes (job-related affective wellbeing, life satisfaction, eudaimonic, affective and sleep dimensions of the GHQ, mental health, and leisure satisfaction), there is an upwards curve in the point predictions from levels ‘none’ to ‘a lot’. These results suggest that when participation in the CWW aligns with higher levels of schedule control, the previously estimated harms of the CWW are mitigated. Puzzlingly, physical health is lower for the

CWW when schedule control is greater. For men, a similar positive schedule control moderation is seen for CWW participants in job satisfaction, positive affect, mental health, and health satisfaction. While not all significant, judging by overlap of confidence intervals, there is a discernible trend in predictions for several outcomes. Schedule control moderation of the CWW does appear to be greater for women.

Overall, these moderation results offer partial and gendered support for *H6*, especially with regards to women working a CWW. However, men's mixed results on different outcomes and negative moderation for women's physical health are counter the hypothesised benefits of schedule control.

[FIGURE 3 HERE]

[FIGURE 4 HERE]

Discussion

Results provide evidence on the impact of two WTAs, working time reduction and compression, and test six hypotheses. In line with Fan et al. (2025) and other public evidence, the 4DW with maintained pay is associated with improvements in workers' wellbeing. *H1* is therefore supported by several, but not all, subjective wellbeing outcomes for both men and women. These outcomes include eudaimonic wellbeing, general negative affect, mental health, and leisure satisfaction. All significant outcomes measure all-things-considered wellbeing, rather than workplace-specific experiences, suggesting the benefits are primarily for improvements in life outside of work rather than changes to the experiences of employment itself. This pattern is especially evident for men, who also see benefits in evaluative wellbeing and physical health, but no workplace outcomes. Such a finding is perhaps unsurprising given the content of work may remain unchanged, but working time reduction would increase leisure time to support relationships, health-related lifestyles, and recovery. It may also be the case that benefits in workplace evaluative wellbeing are offset by countervailing negative experiences in the form of flexibility stigma, with men possibly facing negative backlash for not meeting ideal worker norms if these WTAs are individually-motivated changes (Chung, 2022). In contrast, women's experiences of work do seem to improve with the 4DW bringing positive changes to the affective work wellbeing

measures when pay is maintained, but declines when the 4DW is only part-time work. It is only for women too that the benefits of the 4DW for sleep are replicated from Fan et al. (2025).

It is worth noting effect sizes across all outcomes are small, with all estimates below 0.3 standard deviations. The effects are larger for men and, signalling gendered differences in the size of the effect (*H4*), but this may be a feature of the weakened power of the male sample and thus greater uncertainty. Results here may be weaker than in Fan et al.'s (2025) 4DW trials due to a weaker causal identification strategy, including a lack of quasi-experimental conditions and the extended biennial measurement window of UKHLS's working conditions module. Crucially, the weaker effects also emphasise that organisational working time reduction policies will likely bring greater benefit than individually-motivated change, the latter which can be driven by selection from prior poor wellbeing or other personal circumstances. For optimal worker wellbeing, the 4DW should entail organisation or economy-wide working time reduction, rather than individual labour market decisions or internal idiosyncratic employer deals. Removing the requirement for personal agency in decisions over working time reduction could alleviate many issues such as pay compromises, colleague and manager expectations, and work-family conflict.

In sharp contrast to the generally positive effects of working time reduction, there is little support for the benefits of the CWW. In fact, for women results are striking, with negative changes associated with the CWW across most of the subjective wellbeing outcomes analysed. For women, these results reject *H2* and emphatically support working time reduction over compression for wellbeing (*H3*). Extant evidence on the CWW was mixed, and these results put further doubt on the utility of compressed hours as an organisational wellbeing intervention or labour-friendly reform. While some studies argue benefits from the CWW, these new results concur with null effects in field studies (du Bois, Baert, Lippens, et al., 2025; Fevang et al., 2024) and negative effects reported in evidence reviews (Baltes et al., 1999; Bambra et al., 2008). These negative findings echo critical appraisals of flexible working schedules which counterintuitively harm women's experience in work by hindering career advancement (Padavic et al., 2020) and inflicting flexibility stigma (Chung, 2022). Further explanations could include increased work intensity and exhaustion, as some prior studies suggest (Bambra et al., 2008), or an increased 'second shift' in the form of childcare, despite no change in the housework

measure used here. However, additional analysis shows that women with childcare responsibilities do not have the same declines in wellbeing, compounding the sense that negative estimates are tied to experiences of work. The findings emphasise recent concern with the limitations of HR policies which place emphasis on individuals managing their personal resources rather than organisational design (Fleming, 2024; Wynn & Rao, 2020). Finally, considering the limitations in the identification strategy, negative estimates for the CWW may reflect null effects from the WTA and selection into the CWW motivated by poor levels of wellbeing.

Offering some mitigation for these distinctive results, evidence for H6 shows that when the CWW coincides with a higher level of schedule control, this increased autonomy *does* appear to alleviate the harm of the CWW for some of women's wellbeing outcomes. These results echo recent findings that the compressed work week can act as a strategic tool for taking control of working time (du Bois, Baert, Sterkens, et al., 2025). However, even when schedule control is high, the CWW is no better than a standard working week. These suggest the CWW is only net neutral when coinciding with worker control.

For men, results for the CWW are very different. Changing to a CWW coincides with improved job satisfaction, sleep, leisure satisfaction and a reduction in negative affect, and no negative effects across the range of outcomes. This offers gendered support for H2, but on fewer outcomes than the 4DW, again supporting H3. For H6, schedule control does not have a consistent significant moderating role, but does appear to maximise the benefits for those changing to part-time work.

Divergent outcomes for men and women is a central finding of this analysis. For the WTAs in general, men benefit from the 4DW more and across more outcomes, and do not suffer from the CWW as women do, offering strong support for H4. That men can even benefit from the CWW indicates gendered trade-offs in the provision of working time compression. In the case of working time reduction and the 4DW, it is notable that women can actually benefit more in terms of their workplace wellbeing outcomes. However, these findings are slightly offset by the increase in housework that women do that is not replicated by men (H5), and the lack of improvements in physical health that men experience. The results for increases in women's housework offers a partial explanation for weaker effects for

working time reduction, with the persistent ‘second shift’ possibly constraining the wellbeing gains associated with working time reduction.

Limitations

Before concluding with the contributions and context of these findings, it is necessary to summarise limitations. Mostly, these are the result of using household survey data to answer these research questions. As noted already, selection remains an issue for causal identification. Individuals may select in to 4DW arrangements based on prior levels of wellbeing, for example reducing working hours as a recovery strategy or because they are dissatisfied with their current working arrangements. Alternative personal motivations, such as further caring responsibilities or educational opportunities may also prompt selection into these WTAs which could in turn bring heterogeneity. Supplementary analysis suggest that, at least for the surprising CWW results for women, selection from childcare and health conditions is not the cause. Nevertheless, both part-time and full-time 4DW tends to bring benefits, especially for men.

There are further limitations relating to the choice of data. First, the moderation effects for schedule control are under-powered despite UKHLS’s large panel sample. This is the result of within-person fixed effects which entails these interactions provide predictions from within-person changes in schedule control, rather than testing between-person differences in the amplitude of the WTAs’ effects. Between person may be more intuitive, but would entail further limitations. Second, while UKHLS contains useful variables in the working conditions module, more information on organisational environment and work relations would improve the explanatory power. Relying solely on self-reported data leaves much unobserved about how these practices were enacted, such as whether they were the results of organisational policies or idiosyncratic deals. Third, specific to the biennial design of the UKHLS working conditions module, two years between survey waves may mean adaptation processes have already begun. Subjective wellbeing is prone to hedonic adaptation especially, often in a matter of weeks for major changes (Anicich et al., 2020; Clark et al., 2008). Finally, the inconclusive results for the moderation in *H6* and in the supplementary analysis also suggest measurement limitations.

These empirical limitations are all unavoidable when testing these hypotheses with secondary data from a representative panel, a choice which adds to the existing evidence base of case study research on these questions. Analysis of movements by individuals into these WTAs contributes to our understanding of the consequences for workers.

Conclusion

The article highlights that the importance of distinguishing between reducing working time and merely compressing it. Public and organisational policy must avoid conflating the two arrangements, as they have divergent effects. Working time reduction does benefit worker wellbeing, whereas compression risks negative outcomes for women. While there may be benefits for autonomy (e.g. du Bois et al., 2025), these do not progress to improvements in wellbeing over sustained periods. These results support increasingly critical literature around women's actual outcomes from flexible working and working time compression (Bambra et al., 2008; Chung, 2022; du Bois, Baert, Lippens, et al., 2025; Fevang et al., 2024; Padavic et al., 2020). These results demonstrate significant gender trade-offs on working time arrangements. The policies which work for men may not work for women.

The contrast between the two WTAs emphasises that wellbeing gains arise not from schedule flexibility, but from reductions in overall labour time and the expansion of discretionary time available for recovery, family life, and other non-work activities. Theoretically, these findings demonstrate that prevailing theories of working time can afford to be less cautious in targeting optimal levels of working time for wellbeing. Working less is better.

While there is nuance to be held in considering different subjective wellbeing dimensions and domains, taken generally, these further strengthen the welfare argument for working time reduction (e.g. Burchell et al., 2024). Yet results do only partially strengthen the strategic case for employers who might only be motivated by productivity and financial concerns. Employers may be most interested in job and income satisfaction as indicators of quit intentions, but these two outcomes are notable in remaining null for both genders and the 4DW regardless of changes in pay. The lack of improvements found for job satisfaction does not align with evaluations of national working time reduction policies (e.g.

Lepinteur, 2019). However, with robust links between workplace wellbeing and productivity (e.g. De Neve & Ward, 2025), the improvements in women's affective work wellbeing outcomes should be of some interest. The welfare case is clear, but to achieve strategic success with employer adoption, future research on working time reduction will likely need to make productivity central to its empirical approach.

Finally, WTAs do not operate in isolation. They are embedded within broader constellations of working conditions, such as schedule control, job demands, and bundles of HR policies (Fan et al., 2019; Kossek et al., 2023). Results in this paper show that the benefits or otherwise of WTAs are tied to whether they simultaneously bring increased worker autonomy. Moreover, increases in women's domestic labour, reveal these policies are socially embedded beyond the organisation in terms of gender norms, which appear to be extended when WTAs are the result of individual change. Benefits for gender equality from working time reduction should therefore neither be taken-for-granted nor addressed singularly. Future research should explore these dimensions of WTAs more: how working time changes operate in constellations with other aspects of working and personal life, including organisational structures and family responsibilities. Relatedly, these results emphasise why working time reduction ought to be a widespread change, and not merely individualised. This article adds to the growing literature on WTAs, their outcomes and mechanisms, gendered experiences of flexible work arrangements, and the role for both public and organisational strategy on workers' wellbeing.

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Table 1. Summary of hypotheses

#	WTA	Hypothesis
H1	4DW	Working time reduction, with reduced pay or with pay maintained, is better for employee wellbeing than a standard 5-day work week.
H2	CWW	Working time compression is better for employee wellbeing than a standard 5-day work week.
H3	Both	The benefit of working time reduction is greater than compression.
H4	Both	The benefit of both WTAs will be greater for men than women.
H5	Both	On both WTAs, women will do more housework; whereas men will not.
H6	Both	Schedule control will moderate the effect of both WTAs, with more control corresponding to greater benefit.

Table 2. Pooled frequency counts by gender

		Women		Men	
		N	(%)	N	(%)
Work days	<i>5 days (35-40hrs)</i>	64,074	45.1	82,467	67.0
	<i>4DW ≥ £ (27-34hrs)</i>	13,239	9.3	3,452	2.8
	<i>4DW < £ (27-34hrs)</i>	4,633	3.3	1,443	1.2
	<i>< 4 days (<27hrs)</i>	54,193	38.1	15,627	12.7
	<i>> 5 days (>40hrs)</i>	6,051	4.3	20,023	16.3
CWW	<i>Not available</i>	59,402	85.7	48,209	86.7
	<i>Available not use</i>	8,507	12.3	6,539	11.8
	<i>Use</i>	1,401	2.0	852	1.5
Schedule control	<i>None</i>	27,808	38.7	18,925	31.9
	<i>A little</i>	13,511	18.5	11,010	17.9
	<i>Some</i>	16,678	21.7	15,803	23.6
	<i>A lot</i>	19,836	21.1	23,659	26.6

Table 3. Subjective wellbeing domains, dimensions, measures and hypotheses

Domain	Dimension	Measure	Scale	Mean	SD	α	Hypothesised direction	
							Compress	Reduce
All-things considered	Evaluative	Life sat.	1-7	4.2	1.36		+	+
	Positive Affective	GHQ-happy	0-3	1.93	0.56		- +	+

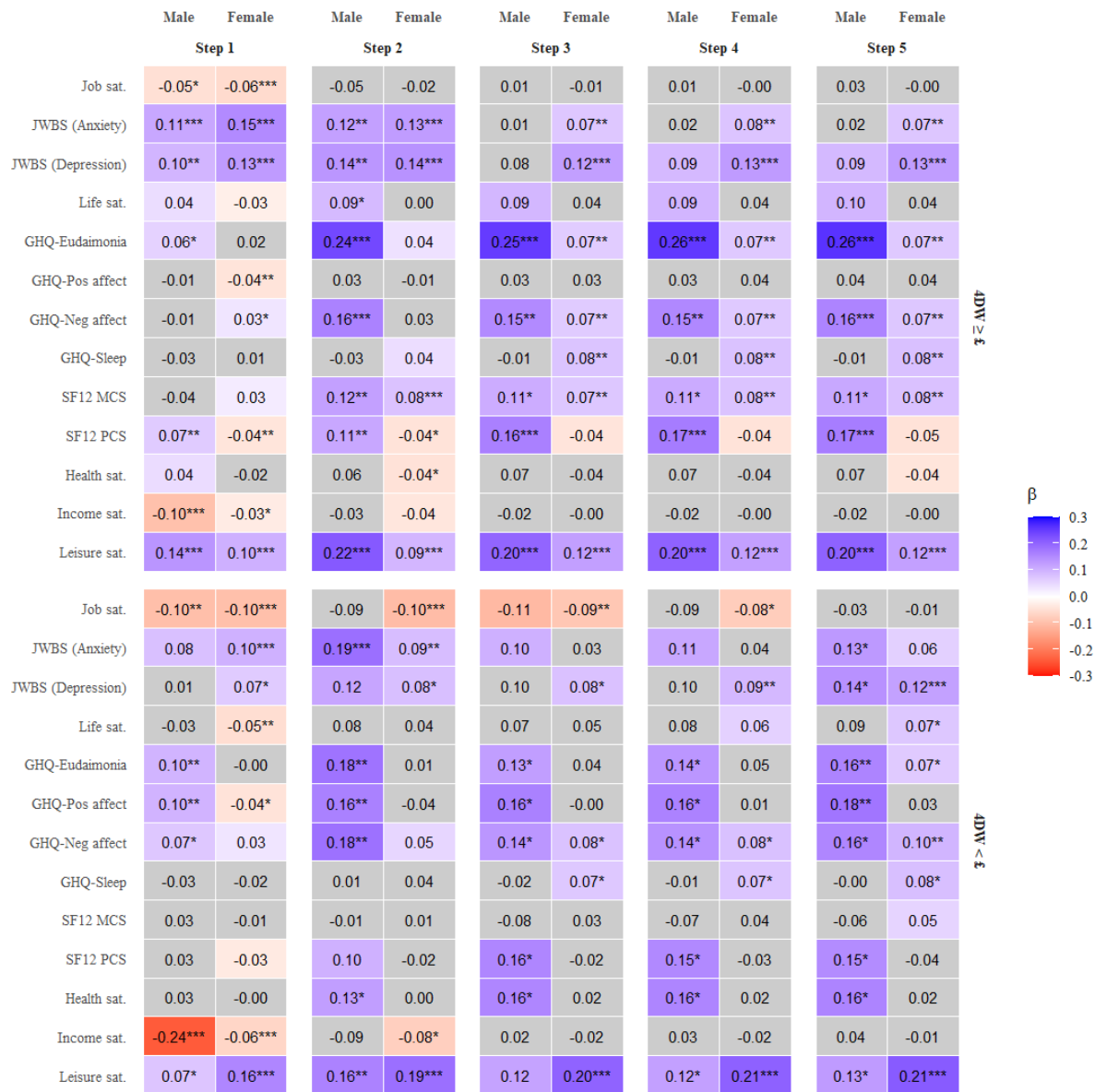
	Negative Affect	GHQ-unhappy	0-3	2.15	0.82		- +	+
	Eudaimonic	GHQ ^a	0-27	18.5	4.05	0.88	+	+
	Sleep	GHQ-sleep	0-3	2.16	0.79		- +	+
	Overall	Health sat.	1-7	3.96	1.59		+	+
Health	Physical hlth	PCS	0-100	52.89	8.1		+	+
	Mental hlth	MCS	0-100	48.8	9.7		+	+
	Evaluative	Job sat.	1-7	5.36	1.38		+	+
	Positive affect	-	-	-	-		- +	+
Work	Negative Affective	JWBS depression ^c	3-15	13.2	2.6	0.91	- +	- +
		JWBS anxiety ^c	3-15	11.9	2.7	0.86	- +	- +
	Eudaimonic ^b	-					- +	- +
Other non-work		Leisure sat.	1-7	3.5	1.5		+	+
		Financial sat.	1-7	3.7	1.5		- +	- +

Note: | = or; i.e. theoretical uncertainty in direction. 'hlth' = health. ^a GHQ includes remaining items after the exclusion of happiness (GHQ-L), unhappiness or depression (GHQ-I), and loss of sleep (GHQ-B). ^b There is no appropriate measure of eudaimonic work wellbeing in UKHLS, regardless of whether theorised as work meaningfulness (e.g. De Neve & Ward, 2025) or functional need satisfaction (Martela, 2025). ^c Job-related Wellbeing Scale (Warr, 1990).

Table 4. Regression results for 4DW and CWW on hours of housework (*H5a*)

		Hours housework	
		Women	Men
<i>CWW</i>	<i>Yes</i>	0.350 (0.345)	0.041 (0.406)
<i>Days work</i>	<i>4 ≥ £</i>	0.803*** (0.244)	-0.431 (0.428)
	<i>4 < £</i>	0.661* (0.296)	0.994 (0.542)
	<i>< 4</i>	1.403*** (0.213)	0.961*** (0.382)
	<i>> 5</i>	-0.541 (0.348)	0.036 (0.287)
Controls		Yes	Yes
Fixed effects		Two-way	Two-way
Weighted		Yes	Yes
Person-wave Obs.		17,321	9,457

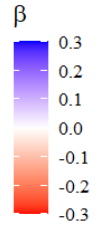
*p<0.1; **p<0.05; ***p<0.01.

Figure 1. 4DW regression estimates

Note: Plots have coloured cells when $p < 0.1$. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Figure 2. Compression regression estimates

	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	Step 1		Step 2		Step 3		Step 4		Step 5	
Job sat.	0.10*	-0.10*	0.09	-0.10*	0.15**	-0.10*	0.17**	-0.09*	0.03	-0.03
JWBS (Anxiety)	-0.01	-0.11**	-0.01	-0.08*	0.06	-0.08	0.08	-0.08	0.04	-0.06
JWBS (Depression)	-0.06	-0.09*	-0.06	-0.07	-0.01	-0.06	0.01	-0.06	-0.04	-0.03
Life sat.	-0.06	-0.11**	-0.05	-0.11*	0.07	-0.12**	0.08	-0.12**	0.07	-0.11*
GHQ-Eudaimonia	-0.10	-0.20***	-0.09	-0.20***	-0.02	-0.18***	-0.01	-0.18***	-0.03	-0.17***
GHQ-Pos affect	-0.13*	-0.05	-0.14*	-0.06	-0.08	-0.10*	-0.07	-0.10*	-0.09	-0.08
GHQ-Neg affect	0.02	-0.17***	0.02	-0.17***	0.10	-0.18***	0.11	-0.18***	0.08	-0.17***
GHQ-Sleep	0.02	-0.07	0.02	-0.08	0.12*	-0.09*	0.13*	-0.09*	0.12*	-0.09*
SF12 MCS	-0.07	-0.19***	-0.07	-0.19***	-0.01	-0.19***	0.00	-0.20***	-0.03	-0.18***
SF12 PCS	0.09	0.09*	0.10*	0.09*	0.11*	0.08	0.10	0.07	0.12*	0.07
Health sat.	-0.05	-0.20***	-0.05	-0.20***	-0.05	-0.19***	-0.05	-0.19***	-0.05	-0.19***
Income sat.	-0.03	-0.05	-0.02	-0.06	0.03	-0.06	0.04	-0.07	0.03	-0.06
Leisure sat.	0.09	-0.19***	0.08	-0.18***	0.13*	-0.15***	0.13*	-0.15***	0.12*	-0.15***



Note: Plots have coloured cells when $p < 0.1$. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

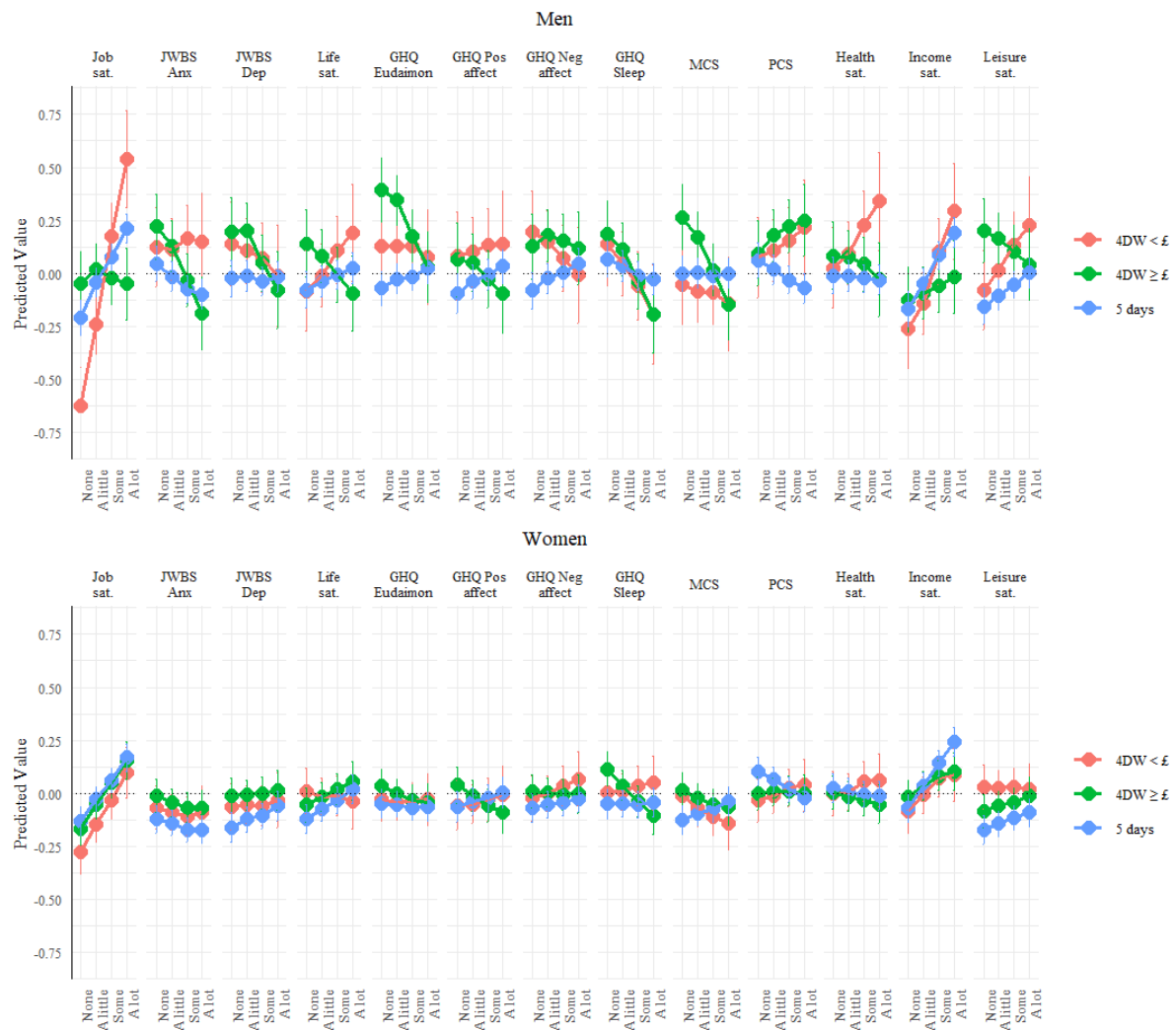
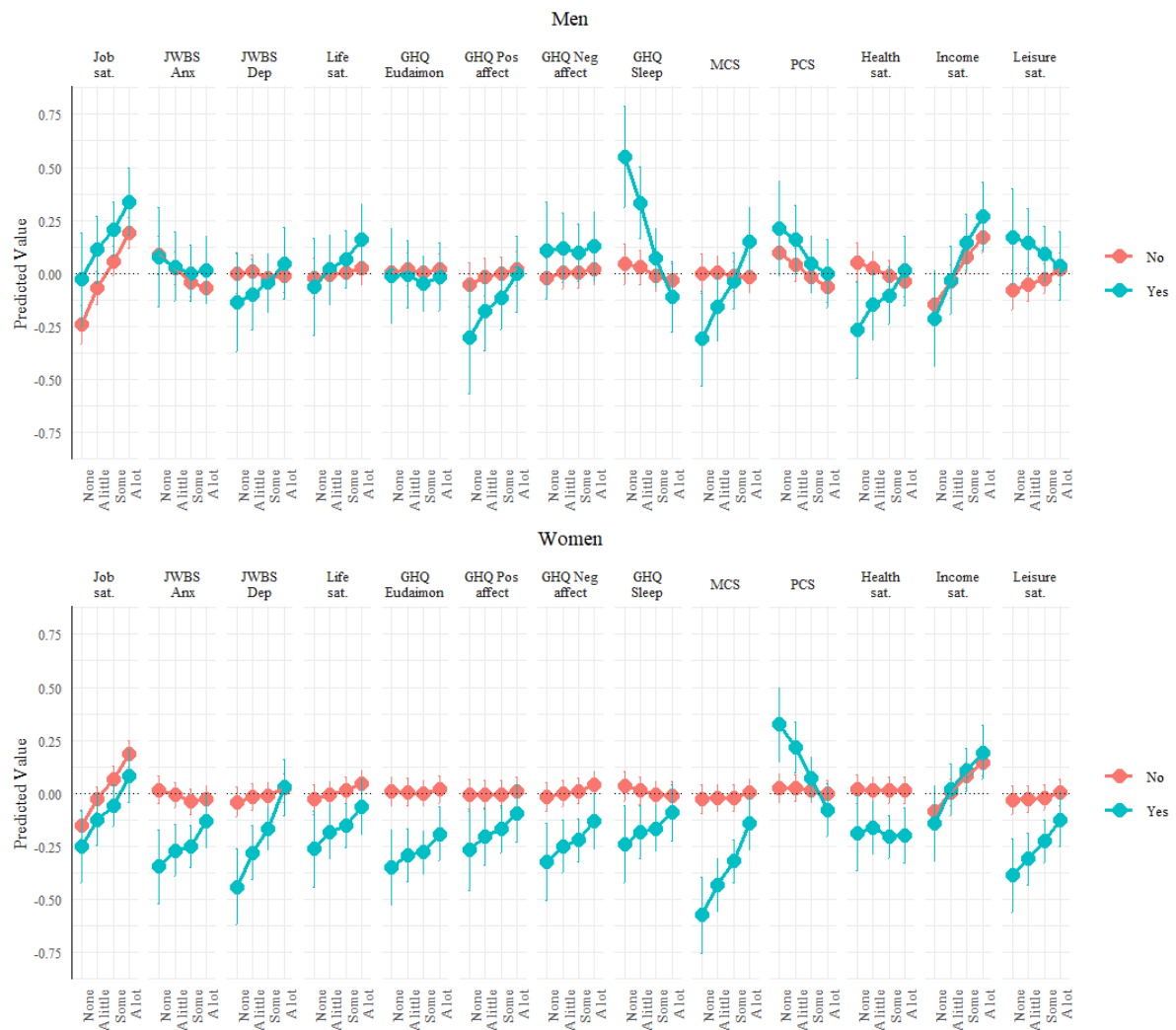
Figure 3. Schedule control & 4DW interaction predictions

Figure 4. Schedule control & CWW interaction predictions

Appendices – Reduce or Compress?

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Appendix A. Working time arrangements and controls

Table A1. Pooled frequency counts WTAs and controls

		CWW		Working time				
		No	Yes	4 < £	4 ≥ £	5 days	< 4 days	> 5 days
Year	2010	17,649 (97.8%)	389 (2.2%)	477 (1.8%)	1,214 (4.7%)	14,364 (55.4%)	7,168 (27.7%)	2,683 (10.4%)
	2011			544 (2.3%)	1,570 (6.6%)	12,870 (57.3%)	6,517 (27.2%)	2,464 (10.3%)
	2012	15,567 (97.8%)	340 (2.1%)	563 (2.5%)	1,566 (6.9%)	12,342 (54.1%)	6,082 (26.6%)	2,283 (10.0%)
	2013			594 (2.7%)	1,479 (6.8%)	11,907 (53.4%)	5,742 (26.2%)	2,201 (10.0%)
	2014	13,137 (97.5%)	332 (2.5%)	457 (2.2%)	1,374 (6.7%)	11,279 (54.6%)	5,408 (26.2%)	2,140 (10.0%)
	2015			556 (2.7%)	1,494 (7.4%)	10,967 (54.0%)	5,290 (26.1%)	1,993 (9.8%)
	2016	13,511 (98.1%)	257 (1.9%)	509 (2.7%)	1,369 (7.3%)	10,164 (54.4%)	4,844 (25.9%)	1,796 (9.6%)
	2017			441 (2.6%)	1,253 (7.4%)	9,050 (53.6%)	4,475 (26.5%)	1,663 (9.9%)
	2018	11,927 (97.7%)	280 (2.3%)	456 (2.9%)	1,201 (7.6%)	8,579 (54.9%)	4,093 (25.8%)	1,531 (9.7%)
	2019			436 (3.0%)	1,134 (7.7%)	8,124 (55.1%)	3,689 (25.0%)	1,355 (9.2%)
	2020	10,151 (97.3%)	278 (2.7%)	385 (2.9%)	1,055 (7.9%)	7,522 (56.5%)	3,183 (23.9%)	1,156 (8.7%)
	2021			344 (2.8%)	1,017 (8.2%)	6,962 (56.3%)	3,014 (24.4%)	1,029 (8.3%)
	2022	11,968 (96.9%)	378 (3.1%)	316 (2.0%)	9,66 (6.2%)	9,151 (59.0%)	3,801 (24.5%)	1,281 (8.3%)
Gender	Women	57,432 (97.6%)	1,401 (2.4%)	4,633 (3.3%)	13,239 (9.3%)	64,074 (45.1%)	54,193 (38.1%)	6,051 (4.3%)
	Men	36,473 (97.7%)	852 (2.3%)	1,443 (1.2%)	3,452 (2.8%)	48,264 (67.0%)	15,627 (12.7%)	20,023 (16.3%)
Schedule control	None	30,182 (98.8%)	373 (1.2%)	1,274 (2.9%)	3,717 (8.4%)	20,603 (46.5%)	14,451 (32.6%)	4,272 (9.6%)
	A little	17,341 (98.3%)	300 (1.7%)	550 (2.4%)	1,547 (6.9%)	12,343 (54.4%)	6,252 (27.6%)	1,974 (8.7%)
	Some	22,573 (97.3%)	633 (2.7%)	648 (2.3%)	1,724 (6.1%)	17,137 (61.1%)	6,203 (22.1%)	2,340 (8.3%)
	A lot	23,709 (96.2%)	948 (3.8%)	604 (2.1%)	1,537 (5.2%)	18,193 (61.9%)	6,128 (20.8%)	2,949 (10.0%)
Childcare	No	73,425 (97.8%)	1,654 (2.2%)	4,099 (2.0%)	10,816 (5.3%)	121,997 (59.8%)	44,763 (21.9%)	22,281 (10.9%)
	Yes	20,485 (97.2%)	600 (2.8%)	1,802 (3.8%)	5,541 (11.6%)	16,003 (33.5%)	22,974 (48.2%)	1,391 (2.9%)

Illness/ disability	No	70,818 (97.6%)	1,734 (2.4%)	4,377 (2.2%)	12,461 (6.1%)	114,232 (56.2%)	51,797 (25.5%)	20,401 (10.0%)
	Yes	22,998 (97.8%)	519 (2.2%)	1,697 (2.8%)	4,215 (6.8%)	32,184 (52.2%)	17,954 (29.1%)	5,652 (9.2%)
NSSEC	Higher manager	4,919 (95.6%)	227 (4.4%)	174 (1.3%)	402 (3.1%)	10,177 (77.6%)	799 (6.1%)	1,560 (11.9%)
	Higher Professi	8,273 (96.3%)	318 (3.7%)	325 (1.5%)	892 (4.1%)	15,706 (72.6%)	2,394 (11.1%)	2,313 (10.7%)
	Lower manager	30,234 (97.0%)	929 (3.0%)	1,849 (2.3%)	4,937 (6.1%)	51,421 (64.0%)	13,611 (17.0%)	8,469 (10.5%)
	Interme- diate	15,750 (97.7%)	371 (2.3%)	1,015 (2.3%)	2,710 (6.1%)	23,178 (56.6%)	12,118 (29.6%)	1,939 (4.7%)
	Lower supervisi	5,665 (98.0%)	116 (2.0%)	419 (2.6%)	1,051 (6.6%)	13,088 (35.9%)	3,178 (38.5%)	3,491 (7.7%)
	Semi- routine	18,949 (99.1%)	175 (0.9%)	1,675 (2.0%)	4,974 (5.0%)	17,181 (41.7%)	24,638 (41.7%)	3,789 (7.3%)
	Routine	8,181 (99.2%)	65 (0.8%)	491 (1.7%)	1,329 (9.5%)	11,622 (40.6%)	11,438 (39.9%)	3,775 (13.2%)

Table A2. Pooled WTA overlap frequency counts

CWW	Working time				
	<i>5 days</i>	<i>4DW < £</i>	<i>4DW ≥ £</i>	<i>< 4 days</i>	<i>> 5 days</i>
	<i>(35-40hrs)</i>	<i>(27-34hrs)</i>	<i>(27-34hrs)</i>	<i>(<27hrs)</i>	<i>(>40hrs)</i>
No	47,504	2,527	6,990	29,301	5,824
Yes	1,594	84	199	223	111

Appendix B. Linear probability prediction model for WTAs

Table B1		CWW	4DW Reduced	4DW Same
NSSEC (ref: 1)	2	0.007 (0.005)	-0.002 (0.005)	0.012 (0.008)
	3	-0.021*** (0.004)	-0.007* (0.004)	0.014** (0.006)
	4	-0.025*** (0.005)	-0.010** (0.005)	0.021*** (0.007)
	5	-0.049 (0.037)	-0.044 (0.041)	-0.014 (0.06)
	6	-0.011* (0.006)	0.013** (0.005)	0.048*** (0.008)
	7	-0.024*** (0.005)	0.010** (0.005)	0.051*** (0.007)
	8	-0.028*** (0.006)	0.001 (0.006)	0.021** (0.008)
Same job	Yes	0.008*** (0.003)	-0.0003 (0.002)	0.012*** (0.004)
Health condition	Yes	-0.002 (0.002)	0.002 (0.002)	0.001 (0.003)
Marital status (ref: married/cohabiting)	Separated	-0.010** (0.004)	-0.018*** (0.004)	0.012** (0.006)
	Single	-0.013*** (0.003)	-0.005* (0.003)	0.015*** (0.004)
Caring respons.	Yes	-0.001 (0.002)	0.002 (0.002)	-0.001 (0.003)
Childcare	Yes	0.012*** (0.003)	0.008*** (0.003)	0.006 (0.004)
Household income (log)		0.001 (0.002)	-0.019*** (0.002)	0.024*** (0.003)
Work autonomy		-0.002* (0.001)	0.0005 (0.001)	0.005*** (0.002)
Lagged job satisfaction		0.0004 (0.001)	-0.001* (0.001)	-0.001 (0.001)
Obs.		76,900	99,699	99,699
R ²		0.001	0.002	0.002

Note: *p < 0.05 **p<0.01 ***p<0.001

Appendix C. Robustness checks for working time reduction estimates

Further specifications of the 4DW item are tested as a robustness check for the item used in analysis: a 4DW part-time or full-time item, and working hours preference.

1. I ran similar analysis as the main specification, but this time including a yes/no binary item whether respondents self-report part-time work. The resulting item is a three-option categorical variable: 5DW, 4DW full-time, and 4DW part-time. Estimates are in Figure A1.
2. Then I evaluated underemployment. In only the most recent three waves (2021-2023), UKHLS asks whether respondents would prefer to work fewer hours, the same, or more hours than they do: ‘If you could choose the number of hours you work each week for this job, and taking into account how that would affect your income, would you prefer to work: fewer hours than you do now? About the same hours as you do now? Or more hours than you do now?’. The specification of ‘taking into account how that would affect your income’ implies that reduction in working time would entail reduction in income. A similar item has previously been used to investigate under- and overemployment (e.g. Angrave & Charwood, 2015). This item is limited by the multiple interpretations respondents may make. Some may respond considering an ideal world, whereas others may wish to work more but would not respond as such if they have further responsibilities such as unpaid care work. Results are plotted Figure A2.

Figure C1. Part-time work & 4DW predictions

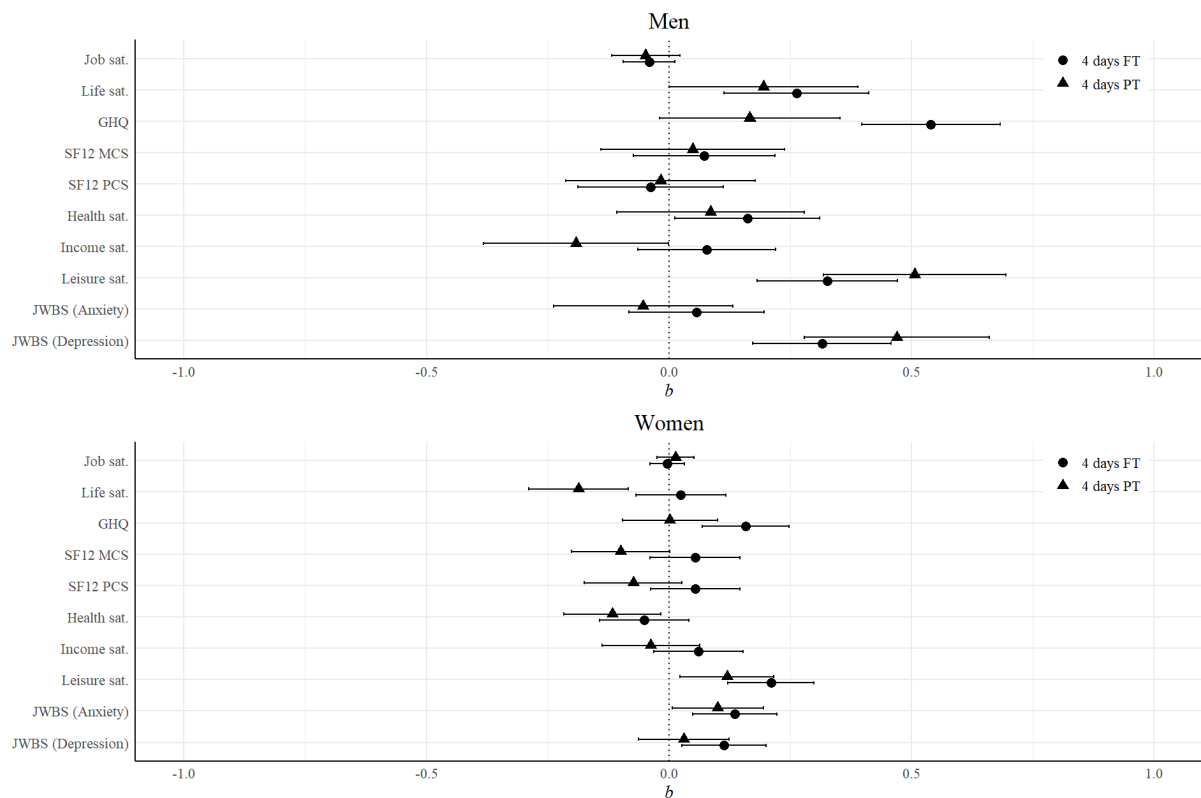
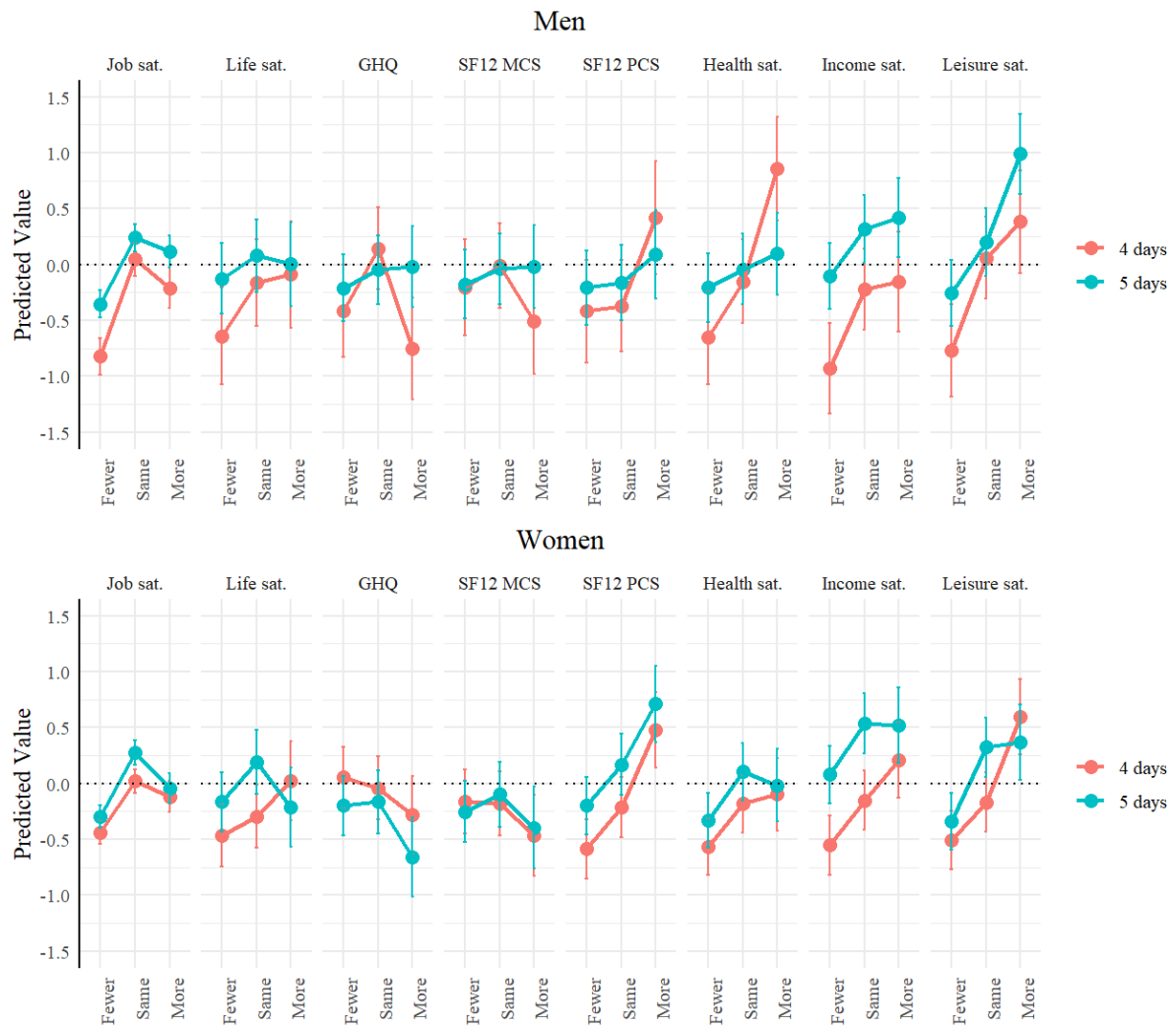
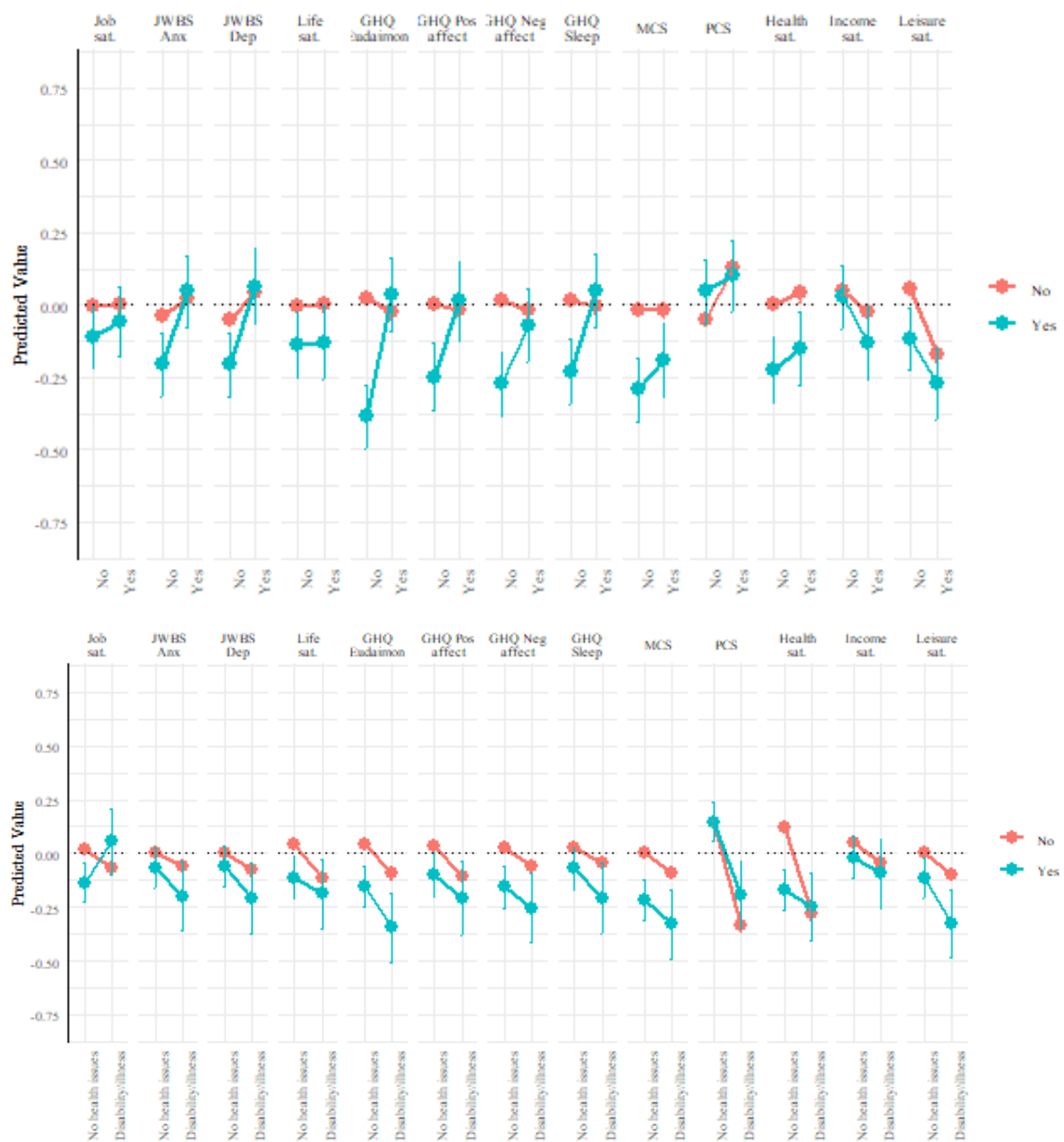


Figure C2. 4DW x Hours preference interaction predictions

Appendix D. Selection and women's CWW results

To inspect whether the negative effects of the CWW on women's wellbeing was a result of selection into the WTA based on new childcare responsibilities or new illness/disability, I estimate interactions with CWW use and these variables as dummies. In fact results suggest the alternative than may be theorised. For women with childcare responsibilities, estimates for the CWW reveal null effects on the wellbeing outcomes when compared with no CWW. However, those working a CWW without childcare responsibilities were those with negative effects. Those working the CWW were also lower than those not, regardless of health status. Both of these results suggest that the negative estimates for CWW are not driven by selection through childcare or illness/disability.

Figure D1. Women's predicted outcomes: childcare responsibilities & illness/disability



Appendix E. Effect of WTAs on caring responsibilities

For women's caring responsibilities, working time reduction is only associated with any change when the reduction is greater than the 4DW. However, men do undertake greater caring responsibilities when reducing hours. When moving to a pay-maintained 4DW, men's caring significantly increases to greater than 10 hours, but there is no significant difference at higher levels. When the 4DW is part-time, i.e. pay is also reduced, men are significantly more likely to be undertaking over-20 and over-35 hours of caring. As with housework, the CWW is not associated with any changes.

Table E1. Regression results for 4DW and CWW on hours of caring responsibilities

		Hours caring responsibility							
		Women				Men			
		> 0 hrs	> 10 hrs	> 20 hrs	> 35 hrs	> 0 hrs	> 10 hrs	> 20 hrs	> 35 hrs
CWW	<i>Yes</i>	-0.006 (0.019)	-0.006 (0.013)	-0.1 (0.009)	-0.004 (0.006)	0.003 (0.023)	0.016 (0.012)	-0.004 (0.009)	<0.001 (0.006)
Days work	$4 \geq \pounds$	0.001 (0.011)	-0.002 (0.007)	-0.006 (0.005)	-0.004 (0.004)	0.032 (0.02)	0.029** (0.011)	0.011 (0.008)	0.008 (0.005)
	$4 < \pounds$	0.021 (0.015)	0.017 (0.01)	0.001 (0.007)	-0.004 (0.005)	0.004 (0.025)	0.024 (0.013)	0.047*** (0.01)	0.0318*** (0.007)
	< 4	0.023 (0.01)	0.018** (0.006)	0.014** (0.004)	0.008* (0.003)	0.014 (0.017)	0.018* (0.009)	0.007 (0.006)	-0.003 (0.005)
	> 5	0.027 (0.019)	0.009 (0.012)	0.008 (0.008)	<0.001 (0.006)	-0.015 (0.014)	-0.006 (0.007)	-0.008 (0.005)	<0.001 (0.004)
	Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects		Two-way	Two-way	Two-way	Two-way	Two-way	Two-way	Two-way	Two-way
Weighted		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>i-t</i> Obs.		17,484	17,485	17,486	17,487	9,538	9,539	9,540	9,541

*p<0.1; **p<0.05; ***p<0.01