



Appendices: Impact of changes in flexible working during lockdown on gender equality in the workplace

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Appendices

Appendices

Appendix A: Sample characteristics

Table A1: Sample characteristics in comparison with the UK population inemployment

Characteristic	Sample	UK employed population
Gender (Men) ¹	49.9%	52.3%
Age (compared with the UK 18-65 working age population regardless of employment) ²	18-35: 32% 36-55: 47% 56+: 21%	18-35: 38% 36-55: 43% 56+: 19%
Higher education ³	62.8%	43.9%
Dependent children ⁴	52.7%	38.1%
Full-time employment ⁵	82.5%	73.9%
Ethnicity ⁶	White: 89.3% Asian: 5.1% Black: 2.0% Mixed: 1.9% Other: 0.8% Prefer not to say: 0.8%	White: 87.7% Asian: 6.6% Black: 3.0% Mixed: 1.1% Other: 1.6%

Table A2: Sample size per industry (NA denotes industries excluded from the sample)

Sector	Industry	Sample number
Accommodation and food services	Hotel and accommodation services	NA
	Food and hospitality services	NA
Agriculture, forestry and fishing	Agriculture, forestry and fishing	27
Arts, entertainment and recreation	Arts, entertainment and recreation	NA
Construction	Construction	NA

¹ ONS: <u>EMP01 SA: Full-time, part-time and temporary workers (seasonally adjusted)</u>

² ONS: Population estimates for the UK, England and Wales, Scotland and Northern Ireland: mid-2019

³ ONS: <u>UK employment with higher education or post-graduate qualifications</u>, UK, 2017

⁴ ONS: Families and the labour market, England: 2020

⁵ ONS: <u>EMP01 SA: Full-time, part-time and temporary workers (seasonally adjusted)</u>

⁶ ONS: Employment by occupation & Ethnicity United Kingdom 2004-2018

Education	College, university, and adult education	248
	Primary/secondary (K-12) education	404
	Other education industry	69
Electricity, gas, steam and conditioning supply	Electricity, gas, steam and conditioning supply	39
Human health and social work	Medical and healthcare	515
	Residential care and social work	149
Information and communication	Broadcasting	9
	Information services and data processing	94
	Publishing	24
	Telecommunications	79
	Other information industry	30
Manufacturing	Computer and electronics manufacturing	37
	Food manufacturing	58
	Other manufacturing	264
Mining and quarrying	Mining and quarrying	2
Oil and gas	Oil and gas	29
Other service activities	Religious and membership organisations	19
Professional, scientific and technical activities	Administrative and support services	150
	Graphic design	10
	Finance and insurance	298
	Head office and management consultancy	35
	Legal services	74
	Market research	3

	Product development	9
	Research laboratories	21
	Scientific or technical services	67
	Software	92
	Veterinary	4
	Other professional, scientific and technical activities	74
Public administration and defence	Government and public administration	458
	Military	18
	Police	63
Real estate activities	Real estate, rental and leasing	46
Transportation and storage	Air transport	NA
	Transportation and warehousing	148
	Other transportation and storage	63
Water, sewerage and waste	Water, sewerage and waste	31
Wholesale and retail trade	Grocery and food retail	182
	Retail (excluding grocery and food)	NA
	Wholesale	NA
Other industry / none of the above	Other industry / none of the above	431

Appendix B: Implementation challenges

Despite adjustments made after the soft run, some survey items were not interpreted as expected and included self-contradictory responses (e.g. earning more than your household income) that could potentially affect the results. Some constructs that we expected to form an index were not confirmed by Principal Component Analysis and had to be analysed separately. To account for that we cleaned some of the variables.

Variable	Reason for correction	Correction
Hourly income	The distribution of hourly income revealed the presence of unlikely billionaires in the sample, as well as people earning much below Minimal National Wage per hour, possibly skewing the results. This could have been the result of either inputting one or more of contracted hours, income or income frequency (respondents could choose to give their income in annual, monthly or weekly terms) incorrectly.	We exclude outliers below or above 1.5x quartile range from the analysis involving income but included them for all other analyses.
Household income	Some respondents reported earning more than their household income.	In the case where a person earned more than their household income, their household income is made equal to their earnings.
Days of leave	The survey pre-screened people who took the entire previous week off from work prior to the survey. Nevertheless, some people reported that they took off a number of days equal to or greater than the number of days they are contracted for, while reporting that they did not take the entire week off.	Respondents who took off a number of days greater than or equal to the number of their contracted days were excluded from the analysis.
Contracted hours	The survey pre-screened people who were currently unemployed, not in work or on furlough. However, some people reported that they had 0 contracted hours or actual hours worked.	Respondents who reported 0 contracted or actual hours worked were excluded from the analysis. Although it is possible that some of the people who reported 0 contracted hours, worked on

Table B1: Det	tails of correction	ns used each ^v	variable corrected

		1
		zero-hours contracts, excluding them was necessary due to our focus on hourly income and hours overtime, which couldn't be correctly estimated in such cases. People who reported 0 hours constitute only 0.5% of the sample, so removing them should not substantially affect the results.
Income	The survey pre-screened people who were currently unemployed, not in work or on furlough. However, some people reported that they had no income.	Respondents who reported 0 income were excluded from the analysis.
Flexible work norms index	We assumed that items related to flexibility stigma, ideal worker norms, and remote work uptake would form a unitary construct. The results of Principal Component Analysis suggested that this was not the case.	We now define indices as: Flexibility stigma index, being the first component from PCA; consisting of two questions about stigma towards remote and part-time workers, and one question about the expectation of a quick response outside normal working hours Flexible work uptake index, being the second component from PCA, consisting of two questions about remote and part-time work uptake, and one question about the proportion of colleagues that regularly work beyond contracted hours
Internal career outcome index	We assumed that items related to career development and performance would form a unitary construct. The results of Principal Component Analysis suggest that this was not the case.	As the index consisted initially from 3 items and PCA is informative only at 3+ items, we just separated it into the two measures instead: Self-rated performance Career development behaviour, being a sum of two items
Relationship status	The 'partner's employment status' variable if blank	To overcome this problem, we created a new variable
employment status	'Single'. Due to this overlap,	'Relationship status' (3

	the effect of these variables couldn't be correctly estimated.	levels) and 'Partner's employment status' (6 levels), with the exception of 'Single' category. The newly created variable has 11 categories (2x5 + 1). E.g. 'Married, cohabiting, partner Full-time employed', 'Married, cohabiting, partner Part-Time employed', etc.
Number of remote working days	In the trial protocol we overlooked the fact that the number of remote working days is directly related to and correlated with the number of contracted hours. As we're interested in the effect of these two variables separately, we decided to use an alternative measure of remote work.	Instead of the number of remote working days, we use a percentage of working days performed remotely, i.e. number of remote working days over number of working days

Based on the above criteria, we excluded 574 people from the analysis, based on a report of no income (30), no actual hours worked (4), no contracted hours (24), or taking leave in the past week (524), leaving a total of 4,426 people in the sample.

We additionally excluded 264 outliers from the analysis of hourly income, but included them in all other analyses.

The 'Mediation' package in R can only evaluate a model with two mediators when the main independent variable is binary. In our case, all the independent variables in models with two mediators are continuous. To overcome this problem, we estimate the influence of each mediator separately, rather than jointly, and control for the other mediator while doing so. This increases the number of comparisons by one for each model.

Appendix C: Survey questions

First survey: May 2020

103 questions

- 1. Filter questions (14 questions)
- 2. Work life conflict and wellbeing (6 questions)
- 3. Ways of working (8 questions)
- 4. Unpaid caring responsibilities (18 questions)
- 5. Career outcomes & work design factors (34 questions)
- 6. Organisational flexible working norms (12 questions)
- 7. Demographics (11 questions)

1. Filter questions

Pre-screening

[Answers formatted in red are screened out from the survey]

- 1. **Recontact.** It is really important that participants in this survey can respond to a follow-up survey in a few months' time. Are you willing to complete a follow-up survey?
 - a. Yes, no (exclude 'no')
- 2. Gender. What is your gender?
 - a. Man, woman, prefer to self-describe another way, prefer not to say (exclude 'prefer to self-describe another way' and 'prefer not to say')
- 3. Age. What is your age in years?
 - a. Years []⁷
- 4. Employment status. What is your current employment status?

⁷ Questions in this and the demographics sections that require a numerical entry cannot include a 'prefer not to say' option, but respondents are not forced to provide an answer

- a. Self-employed, On furlough, Employed full-time (and not on furlough), Employed part-time (and not on furlough), Unemployed (and looking for work), Not in work (e.g. retired, full-time parent) (exclude self-employed, on furlough, unemployed and not in work)
- 5. **Industry.** What is the industry that you currently work in? (*exclude industries highlighted in red*)
 - a. Accommodation and food services
 - i. Hotel and accommodation services
 - ii. Food and hospitality services

b. Agriculture, forestry and fishing

- i. Agriculture, forestry and fishing
- c. Arts, entertainment and recreation
 - i. Arts, entertainment and recreation

d. Construction

i. Construction

e. Education

- i. College, university, and adult education
- ii. Primary/secondary (K-12) education
- iii. Other education industry

f. Electricity, gas, steam and conditioning supply

i. Electricity, gas, steam and conditioning supply

g. Human health and social work

- i. Medical and healthcare
- ii. Residential care and social work

h. Information and communication

- i. Broadcasting
- ii. Information services and data processing
- iii. Publishing
- iv. Telecommunications
- v. Other information industry

i. Manufacturing

i. Computer and electronics manufacturing

- ii. Food manufacturing
- iii. Other manufacturing

j. Mining and quarrying

i. Mining and quarrying

k. Oil and gas

i. Oil and gas

I. Other service activities

i. Religious and membership organisations

m. Professional, scientific and technical activities

- i. Administrative and support services
- ii. Graphic design
- iii. Finance and insurance
- iv. Head office and management consultancy
- v. Legal services
- vi. Market research
- vii. Product development
- viii. Research laboratories
- ix. Scientific or technical services
- x. Software
- xi. Veterinary
- xii. Other professional, scientific and technical activities

n. Public administration and defence

- i. Government and public administration
- ii. Military
- iii. Police

o. Real estate activities

i. Real estate, rental and leasing

p. Transportation and storage

- i. Air transport
- ii. Transportation and warehousing

- iii. Other transportation and storage
- q. Water, sewerage and waste
 - i. Water, sewerage and waste
- r. Wholesale and retail trade
 - i. Grocery and food retail
 - ii. Retail (excluding grocery and food)
 - iii. Wholesale

s. Other industry / none of the above

- i. Other industry / none of the above
- 6. **Time off.** Did you take any days of leave (paid or unpaid) from work **last week**, for example, annual leave, sick leave, or parental leave?
 - a. Yes, no
- 7. (*Display* Q7&8 *if answer is 'yes'*) How many total days of leave did you take from work **last week**? Sum any half days of leave and provide your answer to the nearest day.
 - a. Dropdown 1, 2, 3, 4, 5, 6 (shift and weekend workers), 7 (shift and weekend workers)
- 8. Were you on leave from work every day you normally work last week?
 - a. Yes, No (exclude 'yes')

Conditional logic

- 9. Relationship status. What is your relationship status?
 - a. Single, In a relationship/married and living apart, In a relationship/married and cohabiting (only display 'share with partner' care questions for those in a relationship and cohabiting)
- 10. Children. How many children do you have?
 - a. Dropdown 0,1,2,3+
- 11. Children at home. How many children are living with you in the household?
 - a. Dropdown 0,1,2,3+
- 12. Children age. Are your children all aged 19 years and older?
 - a. Yes, No (only display childcare questions for people with at least one child aged 18 or younger who is either their own or living in the household)

- 13. **Dependent adults.** How many dependent adults do you provide unpaid care for, or used to before the UK government introduced coronavirus (COVID-19) stay-at-home measures, including elderly and disabled adults?
 - a. Dropdown 0,1,2,3+ (only display adult care questions for those with dependent adults)
- 14. Partner. Is your partner a dependent adult you care for?
 - a. Yes, No. (do not display adult care share questions to those for whom their dependent adult is their partner)

2. Work-life conflict and wellbeing

Before lockdown

The UK government introduced coronavirus (COVID-19) measures that required all nonessential workers to work from home if possible on the 17th March and further stay-at-home measures on the 24th March. This survey will refer to the period since these measures have been in place as "**lockdown**".

Different people will have changed how they work at different times. Consider lockdown to begin from when *you* made changes to where or how you work, or from the 17th March if you have not made any changes.

Answer the following questions thinking about **before lockdown**:

- 15. Wellbeing. Taking all things together, how happy would you say you were before lockdown?
 - a. Scale 0-10; 0 Not at all to 10 Extremely

Work-life conflict.⁸ How far do you agree with the following statements:

16. Before lockdown, the demands of my work interfered with my personal or family life

⁸ Adapted from Work-to-Family and Family-to-Work conflict scales in Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work–family conflict and family–work conflict scales. *Journal of applied psychology*, *81*(4), 400.

- a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 17. Before lockdown, things I wanted to do at work didn't get done because of the demands of my family or personal life
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree

Now

18. Wellbeing. Taking all things together, how happy would you say you are now?

a. Scale 0-10; 0 - Not at all to 10 - Extremely

Work-life conflict. Answer the following questions thinking about last week.

How far do you agree with the following statements:

19. Last week, the demands of my work interfered with my personal or family life

- a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 20. Last week, things I wanted to do at work didn't get done because of the demands of my family or personal life
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree

3. Ways of working

<We repeat each set of questions twice (before lockdown and now) as above. To prevent repetition, we now only report the first set of questions for each set>

Answer the following questions thinking about a typical week before lockdown:

- 21. **Contracted hours.** How many hours were you contracted to work per week in a typical week **before lockdown**?
 - a. Hours per week []
- 22. **Contracted days.** In a typical week **before lockdown**, how many days of the week were you contracted to do any amount of work?

- a. 0-7
- 23. **Remote working.** How many days did you work from home in a typical week **before lockdown**?⁹
 - a. 0-7 (in half day increments)
- 24. **Hours worked.** How many hours total did you actually work in a typical week **before lockdown** (including overtime)?
 - a. Hours per week []

Answer the following questions thinking about last week.

<repeat questions>

4. Unpaid caring responsibilities

Before lockdown

- 25. Hours of care. In a typical working week (across seven days) before lockdown, how much time did you spend (unpaid) on the following activities? If you do not remember the exact amount, please provide your best estimate.
 - a. (Only display if they have at least one child aged 18 or younger who is either their own or living in the household) **Childcare:** any tasks that involve looking after children to support their health, development and wellbeing (e.g. feeding, dressing, washing and preparing children for bed, supervising, accompanying to activities and appointments, helping with schoolwork, home-schooling, playing with and entertaining):
 - i. Hours per week []
 - b. **Housework:** any tasks that involve maintaining and managing the household and its members (e.g. preparing food, cooking and baking, food shopping, washing the dishes, cleaning, tidying, disposing of waste, laundry, ironing, gardening, pet care, repairs):
 - i. Hours per week []
 - c. (Only display if they have indicated they have dependent adults) Adult care: any tasks that involve looking after dependent adults to support their health, welfare, maintenance and protection, especially elderly and disabled adults

⁹ Sherman, E. L. (2020). Discretionary Remote Working Helps Mothers Without Harming Non-mothers: Evidence from a Field Experiment. *Management Science*, *66*(3), 1351-1374.

(e.g. feeding, washing, dressing and preparing them for bed, buying groceries or other provisions, supervision, accompanying to appointments, managing carers, providing administrative, technical or social support):

- i. Hours per week []
- 26. (Only display for those who have indicated that they are in a relationship and cohabiting) Share with partner. In a typical working week (across seven days) before lockdown, what proportion of the following activities did you do compared to your partner?¹⁰
 - a. Childcare:
 - i. Sliding scale 0-100% My partner did all of it (0%) / We shared equally (50%) / I did all of it (100%)
 - b. Housework:
 - i. Sliding scale 0-100% My partner did all of it (0%) / We shared equally (50%) / I did all of it (100%)
 - c. (Only display if they have not indicated their dependent adult is their partner) Adult care:
 - i. Sliding scale 0-100% My partner did all of it (0%) / We shared equally (50%) / I did all of it (100%)
- 27. (Only display for those who have indicated that they are in a relationship and cohabiting) **Satisfaction with share.** Before lockdown, how did you feel about how the following activities were divided between you and your partner?
 - a. Childcare:
 - i. I wanted to take on more, I was satisfied with the division, I wanted my partner to take on more
 - b. Housework:
 - i. I wanted to take on more, I was satisfied with the division, I wanted my partner to take on more
 - c. (Only display if they have not indicated their dependent adult is their partner) Adult care:
 - i. I wanted to take on more, I was satisfied with the division, I wanted my partner to take on more

¹⁰ Nameda, A. (2013). Sense of fairness in the division of labor in close relationships: Procedure and gender role ideology. *Japanese Psychological Research*, *55*(1), 33-44.

Now

Last week (across seven days)... < repeat questions>

5. Career outcomes

Before lockdown

Organisational support for career development.¹¹ Thinking about the **three weeks leading up to lockdown**, how far do you agree with the following statements:

- 28. In the three weeks leading up to lockdown, I was given training to help develop my career
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 29. In the three weeks leading up to lockdown, I was given work that developed my skills for the future
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 30. In the three weeks leading up to lockdown, my manager gave me clear feedback on my performance
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 31. In the three weeks leading up to lockdown, I was given impartial career advice when I needed it
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree

Career development behaviour.¹² To what extent did you engage in the following behaviours at work in the **three weeks leading up to lockdown**:

¹¹ Adapted from OSCD items in Sturges, J., Guest, D., Conway, N., & Davey, K. M. (2002). A longitudinal study of the relationship between career management and organizational commitment among graduates in the first ten years at work. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 23*(6), 731-748.

¹² Bindl et al. (2019), highest loading items from the promotion-oriented skill crafting and promotion-oriented task crafting scales

- 32. In the three weeks leading up to lockdown, I actively explored new skills to do my overall job
 - a. Not at all, slightly, moderately, considerably, a great deal
- 33. In the three weeks leading up to lockdown, I changed my tasks so that they were more challenging
 - a. Not at all, slightly, moderately, considerably, a great deal
- 34. **Self-rated performance.**¹³ In the **week before lockdown**, how would you evaluate your job performance with respect to the quality of your work output?
 - a. Needed much improvement, Needed some improvement, Satisfactory, Good, Excellent

6. Work design factors to support flexible working

Before lockdown

How far do you agree with the following statements:

Before lockdown

- 35. Working pattern control. Contracted hours. I could change the number of hours I was contracted for if I wanted to
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 36. *Remote working.* I could work from home as much as I wanted to
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 37. Hours worked. I could determine how many hours I spent working each day
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 38. *Flexitime*. I could determine at what time I worked each day, including when I started and finished
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree

¹³ Sherman (2019)

39. **Autonomy.**¹⁴ I could decide how to carry out my work

- a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 40. Trust (antecedent of autonomy).¹⁵ My manager trusted me to work independently
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 41. **Social worth¹⁶ (competence).** My manager valued my contributions at work
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree

42. My team valued my contributions at work

- a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 43. **Social support (relatedness).**¹⁷ I had the opportunity to interact with and get to know other people at work
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 44. Belonging (relatedness).¹⁸ I felt a strong sense of belonging to my organisation
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree

Now

Thinking about the last three weeks... <repeat questions 28-33>

Last week, <*repeat question 34*>

How far do you agree with the following statements:

¹⁴ Adapted from Grant (2008)

¹⁵ Self-developed item

¹⁶ Grant (2008)

¹⁷ Adapted from Morgeson & Humphrey (2006)

¹⁸ Allen, N. J., & Meyer, J. P. (1990).

Today <repeat questions from section 6>

7. Flexible work norms

Before lockdown

Perceived organisational flexible working uptake. **Before lockdown**, what proportion of employees at your organisation...

- 45. Worked remotely most of the time
 - a. No-one, a small minority, less than half, half, more than half, the vast majority, everyone
- 46. Worked part-time
 - a. No-one, a small minority, less than half, half, more than half, the vast majority, everyone
- 47. Regularly worked beyond their contracted hours
 - a. No-one, a small minority, less than half, half, more than half, the vast majority, everyone

Flexibility stigma.^{19,20} Thinking about **before lockdown**, how far do you agree with the following statements:

- 48. Before lockdown, if I were to work remotely, I would be seen as less committed to my career
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 49. Before lockdown, if I were to work part-time, I would be seen as less committed to my career
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 50. Before lockdown, I felt my colleagues expected a quick response from me outside of my standard work hours²¹

¹⁹ Adapted from Cech & Blair-Loy (2014)

²⁰ Described by Chung & van der Lippe (2018) as a combination of working long hours and being available to your employer all the time

²¹ Please note, this item formed one of two items with Q47 as representative of ideal worker norms. According to Principal Component Analysis, these did not form one flexible work index, and flexibility stigma and organisational flexible work uptake formed two constructs. However, Q50 does not fit conceptually with the other two stigma items and so for the most part in the analysis is excluded from the flexibility stigma index.

a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree

Now

Today, ... <repeat questions>

8. Demographics

51. Please provide your broad ethnicity:

- a. Asian, Black, Mixed, White, Other, prefer not to say
- 52. Please provide your highest level of education:
 - Postgraduate degree, undergraduate degree or professional qualification, Alevels or equivalent (at school until aged 18), post-16 vocational course, GCSEs or equivalent (at school until aged 16), no qualifications, prefer not to say
- 53. (Only display if they have not indicated they are single) Please provide your **partner's** gender:
 - a. Man, woman, prefers to self-describe another way, prefer not to say
- 54. Please provide your **partner's** employment status:
 - a. My partner is on furlough, my partner is employed full-time (and not on furlough), my partner is employed part-time (and not on furlough), my partner is unemployed (and looking for work), My partner is not in work (e.g. retired, full-time parent)
- 55. (Only display if they have indicated they have children living with them) Regarding the **children living in your household**, please indicate their age by completing how many children belong to each age category:
 - a. 0-2 years old; 3-5 years old; 6-11 years old; 12-18 years old, 19+ years old
- 56. **Income.** Please provide your **personal** pre-tax income from employment both before lockdown and now:
 - a. Before lockdown: Number [], Dropdown per year/month/week
 - b. Now: Number [], Dropdown per year/month/week
- 57. **Household income.** Please provide your household pre-tax income both before lockdown and now:
 - a. Before lockdown: Number [], Dropdown per year/month/week

- b. Now: Number [], Dropdown per year/month/week
- 58. (Only display if they are in a relationship and cohabiting) **Relative income.** What was your relative income to your partner's **before lockdown**?
 - a. I earned all the household income, I earned more than my partner, We earned the same, My partner earned more than me, My partner earned all the household income, prefer not to say
- 59. What is your relative income to your partner's now?
 - a. I earn all the household income, I earn more than my partner, We earn the same, My partner earns more than me, My partner earns all the household income, prefer not to say

Second survey: October 2020

54 questions

- 1. Filter questions (9 questions)
- 2. Work life conflict and wellbeing (3 questions)
- 3. Ways of working (4 questions)
- 4. Unpaid caring responsibilities (9 questions)
- 5. Career outcomes & work design factors (17 questions)
- 6. Organisational flexible working norms (6 questions)
- 7. Demographics (6 questions)

1. Filter questions (9 questions)

Pre-screening

- 1. Employment status. What is your current employment status?
 - a. Self-employed, On furlough, Employed full-time (and not on furlough), Employed part-time (and not on furlough), Unemployed (and looking for work), Not in work (e.g. retired, full-time parent) (exclude self-employed, furloughed, unemployed and not in work)
- 2. **Time off.** Did you take any days of leave (paid or unpaid) from work **last week**, for example, annual leave, sick leave, or parental leave?
 - a. Yes, no (exclude 'yes')
- 3. **Job change.** (Only display if they are employed) Have you started a new job since 1 June 2020?
 - a. No; Yes, in the same industry; Yes, in a different industry
- 4. **Industry.** (Only display if answered 'Yes, in a different industry' to the job change question) What is the industry that you currently work in? (exclude industries highlighted in red)
 - a. Accommodation and food services
 - i. Hotel and accommodation services
 - ii. Food and hospitality services
 - b. Agriculture, forestry and fishing

i. Agriculture, forestry and fishing

c. Arts, entertainment and recreation

i. Arts, entertainment and recreation

d. Construction

i. Construction

e. Education

- i. College, university, and adult education
- ii. Primary/secondary (K-12) education
- iii. Other education industry

f. Electricity, gas, steam and conditioning supply

i. Electricity, gas, steam and conditioning supply

g. Human health and social work

- i. Medical and healthcare
- ii. Residential care and social work

h. Information and communication

- i. Broadcasting
- ii. Information services and data processing
- iii. Publishing
- iv. Telecommunications
- v. Other information industry

i. Manufacturing

- i. Computer and electronics manufacturing
- ii. Food manufacturing
- iii. Other manufacturing

j. Mining and quarrying

- i. Mining and quarrying
- k. Oil and gas
 - i. Oil and gas
- I. Other service activities
 - i. Religious and membership organisations

m. Professional, scientific and technical activities

- i. Administrative and support services
- ii. Graphic design
- iii. Finance and insurance
- iv. Head office and management consultancy
- v. Legal services
- vi. Market research
- vii. Product development
- viii. Research laboratories
- ix. Scientific or technical services
- x. Software
- xi. Veterinary
- xii. Other professional, scientific and technical activities

n. Public administration and defence

- i. Government and public administration
- ii. Military
- iii. Police

o. Real estate activities

i. Real estate, rental and leasing

p. Transportation and storage

- i. Air transport
- ii. Transportation and warehousing
- iii. Other transportation and storage

q. Water, sewerage and waste

i. Water, sewerage and waste

r. Wholesale and retail trade

- i. Grocery and food retail
- ii. Retail (excluding grocery and food)
- iii. Wholesale
- s. Other industry / none of the above

i. Other industry / none of the above

Conditional logic

- 5. Relationship status. What is your relationship status?
 - a. Single, In a relationship/married and living apart, In a relationship/married and cohabiting
- 6. **Children.** How many children do you have? (only display childcare questions for people with children not all older than 19 or children at home)
 - a. Dropdown 0,1,2,3+
- 7. Children at home. How many children are living with you in the household?
 - a. Dropdown 0,1,2,3+ (only display childcare questions for people with children not all older than 19 or children at home)
- 8. **Children age.** (Only display if they have at least one child and none at home) Are your children all aged 19 years and older?
 - a. Yes, no (only display childcare questions for people with children not in the household if under 19)
- 9. **Dependent adults.** How many dependent adults do you provide unpaid care for, or would do if there were no coronavirus (COVID-19) restrictions mandated by the UK government, including elderly and disabled adults?
 - a. Dropdown 0,1,2,3+ (only display adult care questions for those with dependent adults)

2. Work-life conflict and wellbeing (3 questions)

Wellbeing.

- 10. Taking all things together, how happy would you say you are now?
 - a. 0 Not at all, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Extremely

Work-life conflict.²² Answer the following questions thinking about last week.

How far do you agree with the following statements:

²² Adapted from Work-to-Family and Family-to-Work conflict scales in Netemeyer, McMurrian & Boles (1996)

- 11. Last week, the demands of my work interfered with my personal or family life
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 12. Last week, things I wanted to do at work didn't get done because of the demands of my family or personal life
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree

3. Ways of working (4 questions)

- 13. Contracted hours. How many hours were you contracted to work last week?
 - a. Hours per week []
- 14. **Contracted days. Last week**, how many days of the week were you contracted to do any amount of work?
 - a. 1,2,3,4,5,6,7
- 15. Remote working.²³ How many days did you work from home last week?
 - a. 0,0.5,1,1.5,2,2.5,3,3.5,4,4.5,5,5.5,6,6.5,7
- 16. **Hours worked.** How many hours total did you actually work **last week** (including overtime)?
 - a. Hours per week []
- 17. **Onsite access. Last week**, was your physical workplace (outside the home) open for use?
 - a. Yes, for everyone
 - b. Yes, for a limited number of staff including me
 - c. Yes, for a limited number of staff not including me
 - d. No, my physical workplace was closed to everyone
 - e. I do not have a physical workplace outside the home
- 18. **Remote working access.** (Only display if they worked 0 days from home) Can you work from home in your job at least some of the time?
 - a. Yes
 - b. No

²³ Sherman (2019)

- 19. Remote working desire. (Only display if 'yes' to previous question or worked from home > 0 days) How many days per week would you like to work from home if there were no COVID-19 government measures and COVID-19 no longer posed a risk?
 - a. 0,0.5,1,1.5,2,2.5,3,3.5,4,4.5,5,5.5,6,6.5,7

4. Unpaid caring responsibilities (9 questions)

20. Hours of care. Last week (across seven days), how much time did you spend (unpaid) on the following activities?

If you do not remember the exact amount, please provide your best estimate.

- a. **Childcare:** any tasks that involve looking after children to support their health, development and wellbeing (e.g. feeding, dressing, washing and preparing children for bed, supervising, accompanying to activities and appointments, helping with schoolwork, home-schooling, playing with and entertaining):
 - i. Hours per week []
- b. **Housework:** any tasks that involve maintaining and managing the household and its members (e.g. preparing food, cooking and baking, food shopping, washing the dishes, cleaning, tidying, disposing of waste, laundry, ironing, gardening, pet care, repairs):
 - i. Hours per week []
- c. **Adult care:** any tasks that involve looking after dependent adults to support their health, welfare, maintenance and protection, especially elderly and disabled adults (e.g. feeding, washing, dressing and preparing them for bed, buying groceries or other provisions, supervision, accompanying to appointments, managing carers, providing administrative, technical or social support):
 - i. Hours per week []

5. External childcare

- 21. Children age. (Only display if they have indicated they have children living with them) Regarding the children living in your household, please indicate their age by completing the number of children belonging to each age category:
 - a. 0-2 years old; 3-4 years old; 5-11 years old; 12-18 years old, 19+ years old
- 22. School access (one child). (Only display for people with one child 5-18) Last week, did the child in your household aged 5-18 years old physically go into school?
 - a. Yes, they went into school all week Monday to Friday
 - b. They went into school for at least one day Monday to Friday, but not all week
 - c. They did not go into school all week
- 23. Early years (one child). (Only display for people with one child 0-4) Last week, did the child in your household aged 4 years or younger physically go into nursery or pre-school?
 - a. Yes, they went to nursery/pre-school for 15 hours or more
 - b. Yes, they went to nursery/pre-school for less than 15 hours
 - c. They did not go into nursery/pre-school all week
- 24. School access (2+ children). (Only display for people with 2+ children 5-18) Last week, did the children in your household aged 5-18 years old physically go into school?
 - a. Yes, they all went into school all week Monday to Friday
 - b. At least one of them went into school for at least one day Monday to Friday (but not all of them all week)
 - c. None of them went into school all week
- 25. Early years (2+ children). (Only display for people with 2+ children 0-4) Last week, did the children in your household 4 years or younger physically go into nursery or pre-school?
 - a. Yes, they all went to nursery/pre-school for 15 hours or more each
 - b. Yes, they all went to nursery/pre-school for less than 15 hours each
 - c. At least one of them went into nursery/pre-school, but not all
 - d. None of them went into nursery/pre-school all week
- 26. Childcare access. (Only display for children under 19) Last week (across seven days), for how many hours were your children looked after by someone not from your household, not including school or nursery/pre-school? If you have made no use of childcare, please complete with '0'

- a. Formal (paid) childcare, e.g. childminder, nanny: Hours per week []
- b. Informal (unpaid) childcare, e.g. family, friends: Hours per week []
- 27. **Childcare access desire.** (Only display for children in the household under 19) If there were no COVID-19 government measures and COVID-19 no longer posed a risk, would you like to have more formal (paid) or informal (unpaid) childcare hours?
 - a. Yes
 - b. No
- 28. **Childcare access barrier.** (Only display if 'yes' to previous question) What is your primary barrier to using more formal (paid) or informal (unpaid) childcare?
 - a. My preferred childcare provider is closed or unavailable
 - b. Concern about the safety of using formal (paid) or informal (unpaid) childcare
 - c. The formal (paid) childcare available is too expensive or I cannot afford it
 - d. The childcare available does not fit with my working hours
 - e. I have not been able to secure a place in suitable formal (paid) childcare for my child or children
 - f. Concern about using public transport to get to a childcare provider
 - g. Other

6. Career outcomes & work design factors (17 questions)

Organisational support for career development. Thinking about the **last three weeks**, how far do you agree with the following statements:

29. In the last three weeks, I was given training to help develop my career

- a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 30. In the last three weeks, I was given work that developed my skills for the future
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 31. In the last three weeks, my manager gave me clear feedback on my performance
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 32. In the last three weeks, I was given impartial career advice when I needed it
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree

Career development behaviour. To what extent did you engage in the following behaviours at work in the **last three weeks**:

33. In the last three weeks, I actively explored new skills to do my overall job

- a. Not at all, slightly, moderately, considerably, a great deal
- 34. In the last three weeks, I changed my tasks so that they were more challenging
 - a. Not at all, slightly, moderately, considerably, a great deal
- 35. **Self-reported performance. Last week**, how would you evaluate your job performance with respect to the quality of your work output?
 - a. Needed much improvement, Needed some improvement, Satisfactory, Good, Excellent

How far do you agree with the following statements:

- 36. Working pattern control. Contracted hours. I can change my number of hours I am contracted for if I want to
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 37. Remote working. I can work from home as much as I want to
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 38. Hours worked. I can determine how many hours I spend working each day
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 39. *Flexitime.* I can determine at what time I work each day, including when I start and finish
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 40. Autonomy. I can decide how to carry out my work
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 41. Trust (antecedent of autonomy). My manager trusts me to work independently

- a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 42. **Social worth (competence).** My manager values my contributions at work
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 43. My team values my contributions at work
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 44. **Social support (relatedness).** I have the opportunity to interact with and get to know other people at work
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 45. Belonging (relatedness).²⁴ I feel a strong sense of belonging to my organisation
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree

7. Organisational flexible working norms (6 questions)

Perceived flexible working uptake. What proportion of employees at your organisation currently...

- 46. Work remotely most of the time
 - a. No-one, a small minority, less than half, half, more than half, the vast majority, everyone
- 47. Work part-time
 - a. No-one, a small minority, less than half, half, more than half, the vast majority, everyone
- 48. **Ideal worker norms.**²⁵ Regularly work beyond their contracted hours
 - a. No-one, a small minority, less than half, half and half, more than half, the vast majority, everyone

²⁴ Allen, N. J., & Meyer, J. P. (1990).

²⁵ Described by Chung & van der Lippe (2018) as a combination of working long hours and being available to your employer all the time

Flexible working stigma.²⁶ How far do you agree with the following statements:

- 49. If I were to work remotely, I would be seen as less committed to my career
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 50. If I were to work part-time, I would be seen as less committed to my career
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree
- 51. **Ideal worker norms.** I feel my colleagues expect a quick response from me outside of my standard work hours
 - a. Strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree

8. Demographics (6 questions)

- 52. **Partner gender.** (Only display if they have not indicated they are single) Please provide your **partner**'s gender:
 - a. My partner is a man, my partner is a woman, my partner prefers to selfdescribe another way, prefer not to say
- 53. Partner employment status. Please provide your partner's employment status:
 - a. My partner is on furlough, my partner is employed full-time (and not on furlough), my partner is employed part-time (and not on furlough), my partner is unemployed (and looking for work), my partner is not in work (e.g. retired, full-time parent)
- 54. **Income.** Please provide your **personal** pre-tax income from employment. Exclude any pay from overtime:
 - a. Personal income: Pre-tax income [], Dropdown per year/month/week
- 55. Overtime. Are you paid for overtime (hours of work beyond your contracted hours)?
 - a. Yes, no
- 56. **Household income.** Please provide your **household** pre-tax income: (Validation that this has to be greater than or equal to personal income)
 - a. Household income: Pre-tax income [], Dropdown per year/month/week

²⁶ Adapted from Cech & Blair-Loy (2014)

- 57. **Relative income.** (Only display if they are in a relationship and cohabiting) What is your relative income to your partner's?
 - a. I earn all the household income, I earn more than my partner, We earn about the same, My partner earns more than me, My partner earns all the household income, prefer not to say

Appendix D: Analytical strategy

All dependent variables will be continuous variables, and are expected to be normally distributed. To analyse the dataset, we will use a series of OLS regression models, with heteroskedasticity-robust standard errors. All these models will follow a general form of:

$$Y = \alpha + \beta x + \Psi \Gamma + \epsilon$$

Where *Y* is the dependent variable, α is the intercept, *x* is a vector of independent variables, β is a corresponding vector of regression coefficients, Γ is a vector of control variables, Ψ is a vector of corresponding regression coefficients, and ϵ is a vector of residual errors. All models will include a vector of the following control variables: age, number of children, relationship status, partner's employment status, ethnicity, industry number of days off in the last week. All models, except model 1 that focuses on external career outcomes, will also include household income as a control variable.

To test moderation effects, we will use the following form of the model:

$$Y = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$$

Where z is a vector of moderating variables, β_1 is a vector of coefficients of the independent variables, β_2 is a vector of coefficients of the moderating variables, and β_3 is a vector of coefficients for the moderation effects.

To test mediation effects, we will follow approach used in the Mediation package for R²⁷. Estimation of the mediation effect requires estimation of two OLS regression models.

The outcome model:

$$Y = \alpha + \beta x + \beta \widehat{M} + \Psi \Gamma + \epsilon$$

The mediator model:

$$\widehat{M} = \alpha + \beta x + \Psi \Gamma + \epsilon$$

Where \widehat{M} is the mediating independent variable.

A specific breakdown of all models is presented in the table below.

Variables

Following research on gender differences in under/over reporting of hours spent on unpaid/paid work by parents²⁸, we will test if there are differences between the reported distribution of hours spent on different activities and the distribution that would be expected based on reported % share of activities between partners. If we do find a significant

²⁷ Tingley, D., Yamamoto, T., Hirose, K., Keele, L., & Imai, K. (2014b). Mediation: R package for causal mediation analysis. *Journal of Statistical Software, 59*(5), 1–38.

²⁸ Yavorsky, J. E., Dush, C. M. K., & Schoppe-Sullivan, S. J. (2015). The Production of Inequality: The Gender Division of Labor Across the Transition to Parenthood. *Journal of Marriage and Family*, 77(3), 662–679. <u>https://doi.org/10.1111/jomf.12189</u>

difference, we will investigate if our results are robust to using a bias corrected measure of hours spent on caring and work responsibilities:

 $t_m = (s_m t_w)/s_w$

Where t_m is the bias corrected total of hours spent by men on a specific responsibility (either work or caring), t_w is the total hours spent by women on a specific responsibility, and s_w is the share of time spent by women on a specific responsibility and s_m is the share of time spent by men on a specific responsibility, calculated separately for hours spent on paid work, caring for children, caring for adults and housework.

Work environment index and flexible work norms index will be constructed out of several items, based on the first component from the Principal Component Analysis. If any of the items is not strongly related to other items within the construct, we will consider it as a separate moderating variable, as a part of an exploratory analysis.

Model specification

Table: Tests. (Y): dependent variable, (x): independent variable, (M): mediating variable; (z): moderating variable. During-Pre: difference between the value of the variable During the lockdown and Pre-lockdown. Post-During: difference between the value of the variable Post-lockdown and During the lockdown.

Test	Variables	
Model 1. Change in working patterns and external career outcomes due to COVID-19		
Primary 1 : Main effect of gender on income change	(Y): Income During-Pre (x): Gender	
	$Y = \alpha + \beta x + \Psi \Gamma + \epsilon$	
Exploratory 1 : Main effect of gender on organisational support for career development change	(Y): Organisational support for career development During-Pre(x): Gender	

	$Y = \alpha + \beta x + \Psi \Gamma + \epsilon$
Secondary 1: Mediation of the	(Y): Income During-Pre
income change by remote	(x): Gender
working	(M): Remote working
	$Y = \alpha + \beta x + \beta \widehat{M} + \Psi \Gamma + \epsilon$
	$\widehat{M} = \alpha + \beta x + \Psi \Gamma + \epsilon$
Secondary 2: Mediation of the	(Y): Income During-Pre
relationship between gender and income change by contracted	(x): Gender
hours	(M): Contracted hours
	$Y = \alpha + \beta x + \beta \widehat{M} + \Psi \Gamma + \epsilon$
	$\widehat{M} = \alpha + \beta x + \Psi \Gamma + \epsilon$
Exploratory 2: Madiation of the	(V): Organizational support for sprear
relationship between gender and	development During-Pre
organisational support for career	(x): Gender
working	(M): Remote working
	$Y = \alpha + \beta x + \beta \widehat{M} + \Psi \Gamma + \epsilon$
	$\widehat{M} = \alpha + \beta x + \Psi \Gamma + \epsilon$
Exploratory 3 : Mediation of the relationship between gender and	(Y): Organisational support for career development During-Pre
organisational support for career	(x): Gender
development change by contracted hours	(M): Contracted hours During-Pre
	$Y = \alpha + \beta x + \beta \widehat{M} + \Psi \Gamma + \epsilon$
	$\widehat{M} - \alpha \pm R\gamma \pm \Psi\Gamma \pm c$
	$m = u + \rho_{\lambda} + r_{I} + \epsilon$

Model 2. Gender-dependent change in internal career outcomes due to COVID-19 related changes in flexible working patterns.		
Primary 2 : Main effect of remote working on internal career	(Y): Internal career outcomes index During- Pre	
outcomes index change	(x): Remote working During-Pre	
	$Y = \alpha + \beta x + \Psi \Gamma + \epsilon$	
Primary 3 : Main effect of contracted hours on internal	(Y): Internal career outcomes index During- Pre	
career outcomes index change	(x): Contracted hours During-Pre	
	$Y = \alpha + \beta x + \Psi \Gamma + \epsilon$	
Secondary 3: gender moderated mediation of the relationship	(Y): Internal career outcomes index During- Pre	
between remote working and internal career outcomes change	(x): Remote working During-Pre	
by hours caring and actual hours	(M1): Hours caring During-Pre	
working	(M2): Actual hours working During-Pre	
	(z): Gender	
	$Y = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \beta_4 \widehat{M1} + \beta_5 \widehat{M2}$	
	$+\beta_6 \widehat{M1}z + \beta_7 \widehat{M2}z + \Psi\Gamma + \epsilon$	
	$\widehat{M1} = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$	
	$\widehat{M2} = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$	
	Code in R to evaluate the mediation effect using the Mediation Package: multimed(outcome = Y, med.main = $M1$, med.alt = $M2$, treat = x, covariates = z, data = data, sims = 10000)	
Secondary 4 : gender moderated mediation of the relationship between contracted hours and	(Y): Internal career outcomes index During- Pre	

internal career outcomes change	(x): Contracted hours During-Pre			
by hours caring and actual hours working	(M1): Hours caring During-Pre			
	(M2): Actual hours working During-Pre			
	(z): Gender			
	$Y = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \beta_4 \widehat{M1} + \beta_5 \widehat{M2}$			
	$+\beta_6 \widehat{M1}z + \beta_7 \widehat{M2}z + \Psi\Gamma + \epsilon$			
	$\widehat{M1} = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			
	$\widehat{M2} = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			
	Code in R to evaluate the mediation effect using the Mediation Package: multimed(outcome = Y, med.main =			
	M1, med.alt = $M2$, treat = x , covariates = z , data = data, sims = 10000)			
Exploratory 4: moderation of the	(Y): Hours caring During-Pre			
effect of remote working on change in hours caring by gender	(x): Remote working During-Pre			
	(z): Gender			
	$Y = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			
Exploratory 5: moderation of the	(Y): Hours caring During-Pre			
effect of contracted hours on change in hours caring by gender	(x): Contracted hours During-Pre			
	(z): Gender			
	$Y = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			
Exploratory 6: moderation of the	(Y): Actual hours working During-Pre			
effect of remote working on change in actual hours working	(x): Remote working During-Pre			
by gender	(z): Gender			
	$Y = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			

Exploratory 7: moderation of the effect of contracted hours on	(Y): Actual hours working During-Pre			
change in actual hours working	(x): Contracted hours During-Pre			
by gender	(z): Gender			
	$Y = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			
Exploratory 8: moderation of the effect of actual hours working on	(Y): Internal career outcomes index During- Pre			
change in internal career outcomes index by flexible work	(x): Actual hours working During-Pre			
norms index	(z): Flexible work norms index			
	$Y = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			
Model 3. Gender-dependent char	nge in work-life conflict due to COVID-19			
related changes in flexible working patterns.				
Exploratory 9: gender	(Y): Work-life conflict index During-Pre			
moderated mediation of the	(x): Remote working During-Pre			
working and change in work-life	(M1): Hours caring During-Pre			
conflict index by hours caring and	(M2): Actual hours working During-Pre			
actual hours working	(z): Gender			
	$Y = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \beta_4 \widehat{M1} + \beta_5 \widehat{M2}$			
	$+\beta_6 \widehat{M1}z + \beta_7 \widehat{M2}z + \Psi\Gamma + \epsilon$			
	$\widehat{M1} = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			
	$\widehat{M2} = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			
	Code in R to evaluate the mediation effect using the Mediation Package: multimed(outcome = Y, med.main =			
	M1, med.alt = $M2$, treat = x , covariates = z , data = data, sims = 10000)			
Exploratory 10: gender moderated mediation of the	(Y): Work-life conflict index During-Pre			

relationship between contracted	(x): Contracted hours During-Pre			
hours and change in work-life conflict index by hours caring and actual hours working	(M1): Hours caring During-Pre			
	(M2): Actual hours working During-Pre			
	(z): Gender			
	$Y = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \beta_4 \widehat{M1} + \beta_5 \widehat{M2}$			
	$+\beta_6\widehat{M}1z + \beta_7\widehat{M}2z + \Psi\Gamma + \epsilon$			
	$\widehat{M1} = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			
	$\widehat{M2} = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			
	Code in R to evaluate the mediation effect using the Mediation Package: multimed(outcome = Y, med.main =			
	M1, med.alt = $M2$, treat = x , covariates = z , data = data, sims = 10000)			
Exploratory 11: Moderation of	(Y): Work-life conflict index During-Pre			
the relationship between remote working and change in work-life	(x): Remote working During-Pre			
conflict index by work environment index	(z): Work-environment index			
	$Y = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			
Exploratory 12: Moderation of	(Y): Work-life conflict index During-Pre			
the relationship between contracted hours and change in	(x): Contracted hours During-Pre			
work-life conflict index by work environment index	(z): Work-environment index			
	$Y = \alpha + \beta_1 x + \beta_2 z + \beta_3 x z + \Psi \Gamma + \epsilon$			
Model 4. Moderating factors of sustained uptake of flexible working post- lockdown.				
Primary 4: Main effect of gender	(Y): Change in remote working During-Post			
on change in remote working pre- post lockdown	(x): Gender			

	$Y = \alpha + \beta x + \Psi \Gamma + \epsilon$
Secondary 5 : Main effect of gender on change in contracted hours pre-post lockdown	(Y): Change in contracted hours During-Postlockdown(x): Gender
	$Y = \alpha + \beta x + \Psi \Gamma + \epsilon$
Primary 5 : Main effect of flexible work norms index on change in remote working pre-post lockdown	(Y): Change in remote working During-Post(x): Flexible work norms index
	$Y = \alpha + \beta x + \Psi \Gamma + \epsilon$
Secondary 6 : Main effect of flexible work norms index on change in contracted hours prepost lockdown	(Y): Change in contracted hours During-Post(x): Flexible work norms index
	$Y = \alpha + \beta x + \Psi \Gamma + \epsilon$
Primary 6 : Main effect of work environment index on change in remote working pre-post lockdown	(Y): Change in remote working During-Post(x): Work environment index
	$Y = \alpha + \beta x + \Psi T + \epsilon$
Secondary 7 : Main effect of work environment index on change in contracted hours pre-post lockdown	(Y): Change in contracted hours During-Post(x): Work environment index
	$Y = \alpha + \beta x + \Psi \Gamma + \epsilon$

Appendix E: Change in time results

Table E1: Summary statistics for outcome variable before and during lockdown, by gender and parental status.

The statistical significance of gender gaps is based on pairwise tests, not controlling for other factors. 'With controls' indicates the coefficient extracted from a regression model accounting for control variables. Significant results are in bold, * p < 0.05 and ** p < 0.01.

Gender	Before	During T1	During T2	Diff. T1 - before	Diff. T2 - T1	Diff. T2 - before
Hourly income (£)						
Both	15.99	16.47	16.68	0.48**	0.21	0.69**
Men	18.22	18.53	18.96	0.31	0.44*	0.75**
Women	14.07	14.64	14.67	0.57**	0.03	0.60**
Gender gap (Both)	4.15**	3.89**	4.30**	-0.26**	0.41	0.15
With controls	2.77**	3.24**	3.07**	0.47	-0.17*	0.29
With controls (industry)	3.11**	3.60**	3.43**	0.49*	-0.17**	0.31
Fathers	19.39	19.62	19.88	0.23	0.26	0.49
Mothers	13.81	14.48	14.24	0.67**	-0.23	0.44*
Men (non parent)	16.82	17.19	17.84	0.37	0.64**	1.02**
Women (non parent)	14.33	14.79	15.08	0.46**	0.29	0.75**
Organisational support for career development						

Both	3.50	3.45	3.22	-0.05**	-0.23**	-0.28**
Men	3.50	3.43	3.16	-0.07**	-0.27**	-0.34**
Women	3.49	3.46	3.27	-0.03	-0.19**	-0.22**
Gender gap (Both)	0.01	-0.04	-0.12**	-0.05	-0.08	-0.13**
With controls	0.03	-0.01	-0.09*	-0.07	-0.14**	-0.14**
With controls (industry)	0.00	-0.05	-0.14**	-0.09*	-0.15**	-0.15**
Fathers	3.54	3.44	3.13	-0.10**	-0.32**	-0.42**
Mothers	3.52	3.44	3.19	-0.07	-0.25**	-0.32**
Men (non parent)	3.44	3.41	3.2	-0.03	-0.21**	-0.24**
Women (non parent)	3.47	3.48	3.35	0.02	-0.13**	-0.11*
Percentage	e remote wo	rk				
Both	0.20	0.65	0.51	0.46**	-0.14**	0.31**
Men	0.21	0.64	0.53	0.43**	-0.11**	0.32**
Women	0.18	0.66	0.48	0.48**	-0.18**	0.30**
Gender gap (Both)	0.03**	-0.01	0.05**	-0.05**	0.06**	0.02

With controls	0.02	-0.04**	-0.03	-0.05**	-0.01	-0.04*
With controls (industry)	0.03**	-0.06**	-0.03*	-0.07**	-0.04	-0.05**
Fathers	0.23	0.62	0.50	0.39**	-0.12**	0.27**
Mothers	0.20	0.60	0.41	0.41**	-0.20**	0.21**
Men (non parent)	0.18	0.67	0.57	0.49**	-0.10**	0.39**
Women (non parent)	0.16	0.71	0.55	0.55**	-0.16**	0.39**
Contracted	hours					
Both	34.67	33.91	34.66	-0.76**	0.75**	-0.01
Men	36.58	35.99	36.54	-0.59**	0.55**	-0.04
Women	32.77	31.84	32.79	-0.94**	0.95**	0.02
Gender gap (Both)	3.81**	4.15**	3.75**	0.35*	-0.41*	-0.06
With controls	3.35**	3.42**	3.60**	0.10	-0.02	-0.02
With controls (industry)	2.82**	2.90**	3.04**	0.12	-0.05	-0.07
Fathers	36.59	35.98	36.32	-0.61**	0.35	-0.26
Mothers	30.10	29.02	30.57	-1.09**	1.55**	0.46*

Men (non parent)	36.57	36.01	36.82	-0.56**	0.81**	0.25	
Women (non parent)	35.35	34.56	34.94	-0.79**	0.38*	-0.42*	
Self-rated performance							
Both	3.88	3.77	3.83	-0.11**	0.06**	-0.05**	
Men	3.84	3.75	3.83	-0.09**	0.08**	-0.01	
Women	3.93	3.79	3.84	-0.13**	0.05*	-0.09**	
Gender gap	-0.09**	-0.05	-0.01	0.04*	0.04	0.08**	
(Both)							
With controls	-0.10**	-0.08**	-0.04	0.04	0.07*	0.06*	
With controls (industry)	-0.09**	-0.07**	-0.03	0.04	0.07*	0.06*	
Fathers	3.86	3.78	3.84	-0.09**	0.06*	-0.03	
Mothers	3.93	3.76	3.82	-0.17**	0.06*	-0.11**	
Men (non parent)	3.80	3.71	3.81	-0.10**	0.11**	0.01	
Women (non parent)	3.92	3.82	3.85	-0.10**	0.03	-0.07*	
Hours cari	ng						
Both	17.16	20.70	16.23	3.55**	-4.47**	-0.92**	
Men	13.67	16.01	13.93	2.34**	-2.08**	0.26	

Women	20.63	25.37	18.52	4.75**	-6.85**	-2.10**
Gender gap (Both)	-6.96**	-9.37**	-4.59**	-2.41**	4.78**	2.37**
With controls	-5.69**	-7.36**	-3.57**	-2.00**	2.38**	2.43**
With controls (industry)	-4.75**	-6.48**	-2.84**	-2.07**	2.22**	2.30**
Fathers	17.48	21.03	18.31	3.55**	-2.72**	0.83
Mothers	32.51	41.22	28.81	8.71**	-12.41**	-3.71**
Men (non parent)	8.55	9.27	8.06	0.71**	-1.21**	-0.50
Women (non parent)	9.16	10.08	8.6	0.93**	-1.48**	-0.55
Overtime h	ours		<u> </u>	<u> </u>	<u> </u>	<u> </u>
Both	2.12	0.78	2.80	-1.33**	2.02**	0.68**
Men	2.33	1.27	3.25	-1.06**	1.99**	0.93**
Women	1.91	0.30	2.35	-1.61**	2.05**	0.44
Gender gap (Both)	0.42	0.96**	0.91**	0.55	-0.06	0.49
With controls	0.72**	0.67*	1.88**	-0.15	0.28	0.28

With controls (industry)	0.70**	0.65*	1.95**	-0.16	0.46	0.45
Fathers	2.57	1.28	3.58	-1.29**	2.30**	1.01**
Mothers	1.27	-0.06	2.02	-1.33**	2.09**	0.76*
Men not parent	2.00	1.25	2.82	-0.76**	1.57**	0.81*
Women non parent	2.53	0.65	2.66	-1.88**	2.01**	0.13
Work-life c	onflict					
Both	3.46	3.11	3.16	-0.36**	0.05*	-0.31**
Men	3.46	3.09	3.11	-0.37**	0.02	-0.35**
Women	3.47	3.12	3.2	-0.34**	0.08*	-0.26**
Gender gap (Both)	0.00	-0.03	-0.09*	-0.03	-0.06	-0.09
With controls	-0.02	-0.05	-0.01	-0.09*	-0.05	-0.04
With controls (industry)	-0.02	-0.04	-0.02	-0.08	-0.05	-0.04
Fathers	3.54	3.18	3.16	-0.36**	-0.02	-0.38**
Mothers	3.59	3.40	3.31	-0.19**	-0.09	-0.28**
Men (non parent)	3.36	2.98	3.04	-0.38**	0.07	-0.31**

Women (non parent)	3.34	2.85	3.10	-0.49**	0.25**	-0.25**	
Career dev	Career development behaviour						
Both	4.11	4.15	3.90	0.05	-0.25**	-0.20**	
Men	4.04	4.05	3.87	0.01	-0.18**	-0.17**	
Women	4.17	4.26	3.94	0.08	-0.32**	-0.23**	
Gender gap (Both)	-0.13	-0.20**	-0.07	-0.07	0.13	0.06	
With controls	-0.08	-0.08	-0.01	-0.02	-0.09	0.06	
With controls (industry)	-0.16*	-0.15*	-0.09	-0.02	-0.08	0.06	
Fathers	4.09	4.13	3.89	0.03	-0.24**	-0.21*	
Mothers	4.12	4.28	3.96	0.16*	-0.32**	-0.16	
Men (non parent)	3.97	3.96	3.85	-0.02	-0.11	-0.12	
Women (non parent)	4.22	4.23	3.92	0.01	-0.32**	-0.30**	

Additional variables not included in the main report Table E2: Additional variables

Variable

Definition

Hourly income	Hourly income was calculated by dividing total income per week by number of contracted hours per week. We were not able to tell from our data whether an individual was paid for overtime. If an individual was paid for overtime, then their hourly income is an overestimate.
Career outcomes	
Organisational support for career development	How far the organisation creates opportunities for career development. Examples of items include providing training, work that develops skills, clear feedback and impartial career advice. ²⁹
Career development behaviour	Career development behaviour refers to the extent to which the individual has engaged in behaviours that would develop their career, taken from the subscales of promotion-seeking skill crafting and promotion-seeking task crafting within the job crafting index. ³⁰

Additional outcomes' results Hourly income

Overall: Hourly income increased from before (\pounds 15.99) to early lockdown (\pounds 16.47) and was sustained in tiered lockdown (\pounds 16.68), resulting overall in an increase from before to tiered lockdown.

Gender gap: While the gender gap in hourly income previously in favour of men (£4.15) decreased during early lockdown (£3.89), it increased by tiered lockdown (£4.30), resulting overall in an unchanged gender gap. This gap in tiered lockdown remains significant when controlling for other factors.

Table E3: Average values for hourly income in GBP

Before lockdown (March 20	Early lockdown 20) (May 2020)	Tiered lockdown (Oct 2020)	Difference Oct - March
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²⁹ Adapted from OSCD items in Sturges, J., Guest, D., Conway, N., & Davey, K. M. (2002). A longitudinal study of the relationship between career management and organizational commitment among graduates in the first ten years at work. Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 23(6), 731-748.

³⁰ Highest loading items from the promotion-oriented skill crafting and promotion-oriented task crafting scales in Bindl, U. K., Unsworth, K. L., Gibson, C. B., & Stride, C. B. (2019). Job crafting revisited: Implications of an extended framework for active changes at work. Journal of Applied Psychology, 104(5), 605.

Overall sample	15.99	16.47	16.68	0.69**
Gender gap	4.15**	3.89**	4.30**	0.15
Gender gap with controls	2.77**	3.24**	3.07**	0.29

Organisational support for career development

Overall: Organisational support for career development decreased from before (3.50 on a 7-point Likert scale) to early lockdown (3.45) and then decreased in tiered lockdown (3.22), resulting overall in a decrease from before to tiered lockdown.

Gender gap: Organisational support for career development decreased more for men from before to tiered lockdown, resulting in an emerging gender gap in favour of women (0.12 on a 7-point Likert scale) by tiered lockdown. The gender gap in tiered lockdown remains significant when controlling for other factors.

Table E4: Average values for organisational support for career development (7-pointLikert scale)

	Before lockdown (March 2020)	Early lockdown (May 2020)	Tiered lockdown (Oct 2020)	Difference Oct - March
Overall sample	3.50	3.45	3.22	-0.28**
Gender gap	0.01	-0.04	-0.12**	-0.13**
Gender gap with controls	0.03	-0.01	-0.09*	-0.14*

Career development behaviour

Overall: Career development behaviour did not change from before (4.11 on a 7-point Likert scale) to early lockdown (4.15) and then decreased in tiered lockdown (3.90), resulting overall in a decrease from before to tiered lockdown.

Gender gap: There was no gender gap in career development behaviour before lockdown. A gap emerged in early lockdown but closed by tiered lockdown. The gender gap in tiered lockdown remains insignificant when controlling for other factors.

Table E5: Average values for career development behaviour (7-point Likert scale

Before lockdown (March 2020)	Early lockdown (May 2020)	Tiered lockdown (Oct 2020)	Difference Oct - March
------------------------------------	---------------------------------	----------------------------------	---------------------------

Overall sample	4.11	4.15	3.90	-0.20**
Gender gap	-0.13	-0.20**	-0.07	0.06
Gender gap with controls	-0.08	-0.08	-0.01	0.06

Appendix F: Further results

Remote work access

Table F1: Remote work access and desire

Onsite access	Overall	Men	Women
I do not have a physical workplace outside the home	4.8%	4.7%	4.8%
No, my physical workplace was closed to everyone	10.9%	11.6%	10.3%
Yes, for a limited number of staff including me	24.2%	26.5%	21.8%
Yes, for a limited number of staff not including me	19.2%	19.9%	18.5%
Yes, for everyone	41.0%	37.3%	44.6%
Remote access overall			
Yes	66.5%	68.0%	65.1%
No	33.5%	32.0%	33.9%
Remote working des	ire		
0 (none)	16.0%	15.6%	16.5%
1 (combined 0.5, 1, 1.5)	13.3%	13.4%	13.2%
2 (combined 2, 2.5)	16.8%	17.1%	16.4%
3 (combined 3, 3.5)	18.9%	18.6%	19.3%
4 (combined 4, 4.5)	7.4%	7.8%	7.0%
5 (full)	27.6%	27.5%	27.7%

Predictors of flexible work change Table F2: Predictors of remote work retention

Logistic regression using a subsample that increased their remote work in the initial stage of lockdown. Ethnicity, relationship status, age, and industry controls were included, but omitted from the table.

Predictor	Coefficient
Gender (woman)	-0.15
Household income (z-score)	0.09*
Being a parent	-0.30*
Control over contracted hours	-0.02
Control over remote work	0.12**
Control over workload	0.03
Autonomy	-0.03
Competence	-0.04
Relatedness	0.01
Organisational stigma around remote work	-0.14**
Organisational stigma around part-time work	0.03
Organisational expectation of responsiveness outside working hours	0.07
Organisational remote work uptake	0.12**
Organisational part-time work uptake	0.01
Organisational work in excess of contracted hours	-0.07

Positive coefficient indicates a higher probability of retaining or increasing further the percentage remote work among those who increased their remote work at the initial stage of lockdown (56.3% of the initial sample).

Table F3: Predictors of remote work change.

Ethnicity, relationship status, age, and industry controls were included, but omitted from the table.

Predictor	Coefficient
Gender (woman)	-0.13*
Household income	0.00
Being a parent	-0.39**
Work environment index	0.14**
Stigma index	-0.07**
Organisational flexible work uptake index	0.38**

Table F4: Predictors of remote work change

Linear regression. Ethnicity, relationship status, age, and industry controls were included, but omitted from the table.

Predictor	Coefficient
Gender (woman)	-0.11
Household income	0.00
Being a parent	-0.21**
Control over contracted hours	-0.03
Control over remote work	0.28**
Control over workload	0.02
Autonomy	-0.02
Competence	-0.01
Relatedness	0.00
Organisational stigma around remote work	-0.05*
Organisational stigma around part-time work	0.04
Organisational expectation of responsiveness outside working hours	-0.01
Organisational remote work uptake	0.17**

Organisational part-time work uptake	-0.05*
Organisational work in excess of contracted hours	-0.07**

Table F5. Predictors of reduced hours retention

Logistic regression using a subsample that decreased their hours in the initial stage of lockdown.

Positive coefficient indicates a higher probability of retaining or decreasing further the contracted hours among those who decreased their contracted hours in the initial stage of lockdown (10.5% of the initial sample). Ethnicity, relationship status, age, and industry controls were included in the analysis (along with other control variables mentioned in the table), but were omitted from the table.

Predictor	Coefficient
Gender	0.41
Household income (z-score)	0.09
Being a parent	-0.13
Control over contracted hours	0.03
Control over remote work	-0.19*
Control over workload	0.05
Autonomy	0.06
Competence	-0.15
Relatedness	0.07
Organisational stigma around remote work	-0.07
Organisational stigma around part-time work	0.21
Organisational expectation of responsiveness outside working hours	-0.02
Organisational remote work uptake	-0.05
Organisational part-time work uptake	-0.18
Organisational work in excess of contracted hours	-0.16

Table F6: Predictors of working hours change.

Ethnicity, relationship status, age, and industry controls were included, but omitted from the table.

Predictor	Coefficient
Gender	0.07
Household income	0.00
Being a parent	0.43*
Work environment index	-0.08
Stigma index	-0.09
Organisational flexible work uptake index	0.06

Table F7: Predictors of working hours change.

Ethnicity, relationship status, age, and industry controls were included in the analysis (along with other control variables mentioned in the table), but were omitted from the table.

Predictor	Coefficient
Gender	0.07
Household income	0.00
Being a parent	0.38
Control over contracted hours	0.04
Control over remote work	-0.09
Control over workload	0.02
Autonomy	-0.06
Competence	0.06
Relatedness	-0.07
Organisational stigma around remote work	-0.12
Organisational stigma around part-time work	0.02
Organisational expectation of responsiveness outside working hours	0.01
Organisational remote work uptake	-0.01
Organisational part-time work uptake	0.09

Organisational work in excess of contracted hours	0.00
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Models used in analysis

Model 1: Overview of the relationships between gender, flexible working and external career outcomes.





From early to tiered lockdown



From before to tiered lockdown



Model 2. Overview of the relationships between flexible working, overtime hours, caring hours and self-rated performance.





From early to tiered lockdown



From before to tiered lockdown



Model 3. Overview of the relationships between flexible working, overtime hours, caring hours and work-life conflict.



From before to early lockdown

From early to tiered lockdown



From before to tiered lockdown



Model 4. Overview of the relationships between gender, flexible working and career development behaviour.

From before to early lockdown



From early to tiered lockdown



From before to tiered lockdown





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