

Working at Home

The Impacts of COVID 19 on Health, Family-Work-Life Conflict, Gender, and Parental Responsibilities

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Objective: To examine the impact of working at home on general health, pain, stress, and work-family and family-work conflict, and differences based on gender and parental responsibilities. **Methods:** A convenience sample of 658 adults completed an online questionnaire. Regression modeling examined the effects and interactions of gender and parental responsibility on general health, musculoskeletal discomfort/pain frequency and severity, stress, and work-family and family-work conflict. **Results:** Women reported more pain and discomfort, regardless of the presence of children, than men with children. Women with children experienced increased stress compared with men with children. Women without children experienced less work-family conflict, and those without children experienced less family-work conflict than men with children. **Conclusions:** The impact on pain, stress, and work-family and family-work conflict, due to mandated working at home, is gendered and influenced by parental responsibilities.

Keywords: COVID 19, family-work conflict, gender, parents, stress, work-family conflict, working at home

COVID 19 has disrupted and changed the way we work, with more people working at home (WAH) in response to government public health measures.¹ In March 2020 Australia went into its first COVID 19 lockdown which required people who could work at home to do so. By May many of the restrictions had been lifted although those who could work at home were encouraged to continue to do so. In July, Melbourne, Victoria, went into another lockdown, with strict movement restrictions and curfews in place, emerging 112 days later; at the end of the lockdown people were strongly encouraged to continue WAH. Most Victorian school students were able to return to onsite learning in October 2020² and by December 2020, the Victorian Chief Health Officer, finally announced a staged return of office workers.

Prior to the COVID 19 pandemic, research on working from premises other than traditional offices has been termed “telework,” “telecommuting,” “remote working,” “homeworking,” “virtual

Learning Objectives

- Discuss previous findings on the impact of working at home (WAH) on health, family-work-life conflict, and other outcomes.
- Summarize the findings of the new Australian survey study, including differences in the associations by gender and parental responsibilities.
- Identify any key factor or factors, in addition to WAH, that can influence work-family and family-work conflict.

work,” or “distributed work” to name but a few.^{3–5} Previous research has recognized telework arises in many different forms, including work based partly in the home and partly in the office, wholly home-based work, work carried out mainly from the home on a freelance basis for multiple employers, work carried out at several different sites, and work carried out at a distance from the employer’s premises.⁴ However, a clear definition of “telework” remains elusive and researchers have argued project-specific definitions of telework are required to take into account the large range of working arrangements, including contractual arrangements, employment status, and type of work, when examining work that occurs remotely.^{3,6}

Before the COVID 19 pandemic, telework was conceptualized as an agreed work arrangement to support flexible workload management and usually undertaken by choice and agreed between the worker and the employer.⁷ The pre-COVID 19 research on telework examined many diverse questions, including effects on outcomes such as family functioning,⁸ perceived career opportunities, satisfaction with teleworking, performance, and organizational commitment.⁹ Allen et al⁶ provide an overview of research on teleworking, reporting there is little empirical evidence to suggest telecommuting is effective in mitigating conflict that arises when attempting to manage both work and family (non-work/domestic) activities. Allen et al⁶ conclude from extant research there is a small association of telework with work-family conflict, that is, when workers telework, work interference with family activities is reduced, but family interference with work activities is increased. Thulin et al¹⁰ reported regular teleworking outside working hours increased time pressure, although this was reduced for those working full-time, but not part-time. Thulin et al¹⁰ also reported gender differences in perceived time pressure, with women and the presence of children at home increasing perceived time pressure compared with men and those without children. However, time pressure decreased with increasing age of the worker.

In terms of work-related outcomes, teleworking has been reported to have positive impacts on job satisfaction, organizational commitment, stress-related outcomes, performance, and firm-level metrics such as profitability; however, the relationship with job satisfaction may be curvilinear in the shape of an inverted U, such that as teleworking increases, so does job satisfaction, but only up to a point at which increasing telework leads to job satisfaction plateauing or slightly decreasing.^{6,11} Allen et al⁶ note much of

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Clinical significance: The study findings are important for occupational health practice in terms of employers establishing good policy to create optimal working environments for people while working at home, taking account of the impact of working at home across population groups identified as adversely affected by the COVID 19 pandemic.

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the research has utilized designs that preclude conclusions about causality of findings and many other factors, for example, control and autonomy, potentially influence the outcomes studied.

The current study focused on workers who were mandated to work at home, removing the choice workers generally have in the decision to change their work patterns. Similarly, the decision to close schools and childcare to all but essential workers meant many workers were forced to work at home in circumstances which included demands that were not necessarily conducive to effective work. The gendered impacts of COVID 19 and the associated public health measures quickly emerged,¹² with research suggesting gender gaps in work-related outcomes in the context of COVID 19. For example, a US study found women's perceived work productivity was less productive than men's, and women were less satisfied with their job than men, with the effect remaining after controlling for children. The authors posit the gender gap "emerges when dual-career parents are working from home and do not have access to childcare services."^(13 p726)

WAH has been considered a way to manage the interactions between work and other life responsibilities, particularly for parents,^{8,14} despite the emerging evidence regarding the gender impacts of WAH. However, during lockdowns those WAH who were also parents were required to combine and balance their work commitments with parental responsibilities including remote schooling. A study, to explore employees' views about the advantages and disadvantages of WAH in Lithuania, found men expressed more negative attitudes towards WAH when compared with women, due to factors such as work distractions by household members and role conflict. The authors posit: "men consider their career to be more successful when they have the opportunity for a traditional "masculine" life. When caught up in a stereotypically feminine situation (where it is necessary to combine home and work responsibilities and therefore allocate time productively to work and non-work responsibilities), men begin to feel the threat to their work success."^(15 p17) A survey conducted in the Netherlands, examining the perceived advantages and disadvantages of WAH during the COVID 19 pandemic, found for people without children under the age of 12 lack of social contact (64%), managing work-life balance (34%), and problems focusing (30%) were the main disadvantages. However, for those with children under the age of 12, an increase in domestic and caring responsibilities was the biggest disadvantage (67%).¹⁶ Research from Canada found, compared with those with children, average levels of work-life conflict decreased among those without children, and those with young children did not experience the same decrease in work-life conflict.¹⁷

A UK study that described WAH during COVID 19 lockdowns reported, in contrast to parents, non-parents were more likely to be able to secure time to focus on work with parents, particularly mothers, found it challenging to find the space and time to undertake their paid work due to additional domestic responsibilities including housework, childcare, and home schooling. However, the study also reported an increase in fathers' participation in domestic and care responsibilities.¹⁸ Similarly, a Canadian study found while mothers continue to disproportionately carry the burden for household responsibilities and child care, the fathers' share did increase slightly during COVID 19 lockdowns.¹⁹ An Italian study using a representative sample of women similarly found COVID 19 lockdowns increased domestic responsibilities and childcare for women, but not for men.²⁰ Chung et al¹⁸ found work-family (49%) and family-work (50%) conflict was more commonly reported by mothers, and to a lesser extent fathers. Del Boca et al²⁰ suggested work-family balance was more difficult to attain when WAH, due to job related workload, with mothers with children aged 0 to 5 years most likely to report difficulty with work-family balance due to domestic responsibilities.

A recent rapid review found there was very little known about the health and wellbeing of WAH in relation to gender and parental

status.²¹ Previous research which examined the health and wellbeing of WAH found high levels of work-family conflict, particularly among mothers, with mothers feeling rushed or time pressured (48%), nervous, and stressed (46%) more than half of the time during lockdown.¹⁸ Similarly, women without children also felt nervous and stressed (46%), however this was not the case for men without children. In contrast, WAH appeared to improve the mental and physical health of 30% of the study participants.¹⁸ Chung et al¹⁸ found for those without children, the most common negative experience of WAH was the blurring of the boundary between work and home. Additionally, those without children also reported increased stress, workload, or working hours.

There is little extant research which has addressed the gendered impacts of WAH, particularly in relation to parental responsibilities and subsequent health and wellbeing. This study examined the impact of WAH during the COVID 19 pandemic in Victoria, Australia, in relation to physical and mental health, and work-family and family-work conflict for people working at home. Specifically, this study aimed to examine the impact of WAH on general health, pain, stress, work-family and family-work conflict, and to identify differences based on gender and parental responsibilities.

METHODS

This paper draws on cross-sectional data from the Australian mixed methods Employees Working at Home (EWAH) study.(Oakman J, Kinsman N, Stuckey R, Graham M, Weale V. Working at home in Australia during the COVID-19 pandemic: Baseline results for the Employees Working at Home (EWAH) study. Under review) The EWAH study aimed to examine (1) the impacts of psychosocial and physical hazards on mental and physical health, and (2) to investigate differences in health outcomes between employees, based on gender, age, and job type. The current analysis focuses on data from Victoria, Australia during the height of Victoria's second wave of COVID 19 (84% of total sample). Lockdown and restrictions in place required those who could work at home to do so, while childcare and schools were available only to children of essential workers.

Ethics approval was obtained through La Trobe University Human Ethics Research Committee (HEC20388).

Sampling, Sample, and Recruitment

The sampling and recruitment strategy for the EWAH study have previously been detailed.(Oakman J, Kinsman N, Stuckey R, Graham M, Weale V. Working at home in Australia during the COVID-19 pandemic: Baseline results for the Employees Working at Home (EWAH) study. Under review) Briefly, in the absence of an appropriate sampling frame, a convenience sample of people WAH during Victoria's COVID 19 lockdown was recruited. Eligibility criteria to participate in the current analysis were: aged 18 years or more; working from home at least 2 days per week during the period following the declaration of the COVID 19 pandemic in Australia; and currently living in Victoria, Australia. Eligible participants were recruited via a Facebook advertisement, professional and personal networks of the research team, La Trobe University Facebook page, and LinkedIn.

Data Collection

Data were collected via an online questionnaire developed using validated instruments with supplementary measures constructed where validated instruments were not available. Details of the questionnaire construction for the EWAH study have been previously described.(Oakman J, Kinsman N, Stuckey R, Graham M, Weale V. Working at home in Australia during the COVID-19 pandemic: Baseline results for the Employees Working at Home (EWAH) study. Under review)

The main outcomes of interest were: general health; musculoskeletal discomfort/pain frequency and severity; stress; and work-family and family-work conflict. General health was measured with a single item (“in general, would you say your health is?”) and scored on a five-point scale ranging from poor (1) to excellent (5).²² Musculoskeletal discomfort/pain frequency and severity ratings were recorded separately for five body regions (neck/shoulders, hands/fingers, arms, middle to lower back, and hips/bottom /legs and feet).²³ Discomfort and pain were scored on a five-point scale from never (0) to almost always (4). Severity, if applicable, was scored using a three-point scale from mild (1) to severe (3). Participants were considered to have pain presence if they reported any pain. For those with pain presence, a Pain Score was derived by multiplication of frequency by severity for each body region and adding the resulting scores, creating a scale from 1 to 60.²³ Stress was measured using 13 items from the Copenhagen Psychosocial Questionnaire (COPSOQ)²² scored on a five-point scale ranging from not at all (1) to all the time (5). Work-family conflict and family-work conflict were measured using the 10-item scale developed by Netemeyer et al.²⁴ Items were scored using a seven-point scale ranging from strongly disagree (1) to strongly agree (7).

The interaction variables were gender and parental status. Gender was based on the item “Are you: Male, Female, Other.” Six respondents (0.74%) who reported their gender as “Other” were excluded from the current analysis. Parental status, that is, having dependent children, was based on the item “When you are (or were) working at home during COVID-19, are children usually at home with you?”

The covariates of interest were: age; work hours; workspace; and chore satisfaction. Age was based on the item “What is your age group?” 18 to 25 years; 26 to 35 years; 36 to 45 years; 46 to 55 years; 56 years and over. The categories were then collapsed to 18 to 35 years; 36 to 45 years; 46 to 55 years; 56 years and over. Work hours were calculated based on the item “When you are (or were) working at home during the COVID-19 pandemic, what are/were your usual working hours (average per week)?” Answers of or above 35 hours per week were considered full-time. Workspace was based on the item “When you are working at home, where do you usually work?” Three response options were provided and coded as follows: Wherever—“I just find a place somewhere that’s free, such as on the kitchen table or other place”; Separate—“I have my own place in a separate room by myself”; and Interruptions—“I have my own place but in a room that can be busy with other people.” Chore satisfaction was asked as “How satisfied are you with the way household tasks are divided between you and others in your household?” This item was scored on a five-point Likert scale ranging from very dissatisfied (1) to very satisfied (5).²⁵

Analysis

Data were grouped by gender and parental status. Difference in covariates by group were assessed by *k* proportion test, which consists of the calculation of a weighted sum of squared deviations between the observed proportions in each group and the overall proportion for all groups. Regression modeling was used to relate the effects of gender, children, and the interaction between gender and children on the six outcome variables. The form of regression was dependent on the nature of the outcome variable. Ordinal regression was performed for the outcome of general health, logistic for pain presence, negative binomial regression for pain score, and a generalized linear model was used for stress, work-family conflict, and family-work conflict. Corresponding coefficients and 95% confidence intervals (CI) are given. Models are presented unadjusted as well as adjusted for covariates of age, work hours, workspace, and chore satisfaction. Analysis was carried out in R version 4.0.3 “Bunny-Wunnies Freak Out.”²⁶

RESULTS

A total of 658 eligible Victorian participants completed the questionnaire. The majority of participants were women, non-parents, aged between 36 and 55 years, worked full-time, and had a separate workspace at home. Women with dependent children were the least likely to work full-time ($P < 0.001$), and most likely to work somewhere with frequent interruptions ($P = 0.002$). In general, men worked full-time with dedicated separate spaces to work, regardless of children’s presence (Table 1).

While general health and work-family conflict were similar between genders, women had greater odds of experiencing pain/discomfort (odds ratio: 2.06 95% CI: 1.38, 3.08) and were more likely to report high severity (β : 0.24 95% CI: 0.09, 0.39). Stress was gender dependent in univariate models, but accounting for workspace location and chore satisfaction attenuated associations. Women experienced lower family-work conflict (β : -0.63 95% CI: -0.92, -0.35; Table 2).

The presence of children in the home during work hours affects both work-family conflict and family-work conflict (Table 3). Increases in work-family conflict were associated with working full time, working in a location with interruptions, or location wherever. Work-family conflict was decreased by increasing satisfaction with the division of household tasks. Family-work conflict increased substantially with children present in the home (β : 1.28 95% CI: 1.01, 1.56).

Taking men with children as a reference category, women are more likely to report pain and discomfort, regardless of children (Table 4). All other groups reported more pain than men with children; the only other significant factor was a

TABLE 1. Potential Confounders by Gender and Children Present During Time Spent Working From Home ($n = 658$)

	Total ($n = 658$)	Male With Child ($n = 64$)	Male Without Children ($n = 95$)	Female With Children ($n = 155$)	Female Without Children ($n = 344$)
Age					
18–35 years	183 (28%)	7 (11%)	27 (28%)	15 (10%)	134 (39%)
36–45 years	199 (30%)	28 (44%)	17 (18%)	72 (46%)	82 (24%)
46–55 years	175 (27%)	27 (42%)	22 (23%)	63 (41%)	63 (18%)
56 years and over	101 (15%)	2 (3%)	29 (31%)	5 (3%)	65 (19%)
Work hours					
Part-time	196 (30%)	11 (17%)	12 (13%)	74 (48%)	99 (29%)
Full-time	462 (70%)	53 (83%)	83 (87%)	81 (52%)	245 (71%)
Workspace					
Separate space	387 (59%)	45 (70%)	68 (72%)	66 (43%)	208 (60%)
Interruptions	173 (26%)	12 (19%)	13 (14%)	58 (37%)	90 (26%)
Wherever	98 (15%)	7 (11%)	14 (15%)	31 (20%)	46 (13%)
Chore satisfaction	3.74 ± 1.20	4.17 ± 0.85	3.79 ± 1.18	3.37 ± 1.23	3.82 ± 1.21

TABLE 2. Effect of Gender

	General Health ^a	Pain Presence ^b	Pain Score ^c	Stress ^d	Work-Family Conflict ^d	Family-Work Conflict ^d
Unadjusted						
Male	Ref	Ref	Ref	Ref	Ref	Ref
Female	0.072 (−0.25, 0.39)	2.35 (1.60, 3.45)**	0.25 (0.08, 0.37)**	0.26 (0.13, 0.39)**	−0.01 (−0.31, 0.29)	−0.28 (−0.56, −0.01)*
Adjusted ^e						
Male	Ref	Ref	Ref	Ref	Ref	Ref
Female	0.144 (−0.19, 0.48)	2.06 (1.38, 3.08)**	0.24 (0.09, 0.39)**	0.13 (−0.002, 0.27)	−0.13 (−0.45, 0.19)	−0.63 (−0.92, 0.35)**

^aOrdinal regression (β).

^bLogistic regression (OR).

^cNegative binomial regression (β).

^dGLM (β).

^eAdjusted for age; full time versus part-time working hours; designated workspace; satisfaction with household task division.

* $P < 0.05$.

** $P < 0.01$.

reduction in pain with increased satisfaction with the division of household chores. Women with children experienced increased stress compared with men with children (β : 0.24 95% CI: 0.04, 0.45). Women without children experienced significantly less work-family conflict than men with children (β : −0.59 95% CI: −1.03, −0.16). Those without children experienced significantly less family-work conflict (men: −0.54 95% CI: −1.01,

−0.07; women: −1.35 95% CI: −1.74, −0.96) than men with children. Interestingly, in the unadjusted model women with children showed significantly higher levels of family-work conflict compared with men with children (β : 0.45 95% CI: 0.04, 0.86), but this was alleviated by the inclusion of workspace location and satisfaction with the division of household tasks in the adjusted model.

TABLE 3. Effect of Children (Any)

	General Health ^a	Pain Presence ^b	Pain Score ^c	Stress ^d	Work-Family Conflict ^d	Family-Work Conflict ^d
Unadjusted						
No children	Ref	Ref	Ref	Ref	Ref	Ref
Children	−0.16 (−0.45, 0.13)	0.79 (0.55, 1.13)	0.05 (−0.07, 0.17)	0.05 (−0.07, 0.17)	0.86 (0.60, 1.12)*	1.48 (1.26, 1.71)*
Adjusted ^e						
No children	Ref	Ref	Ref	Ref	Ref	Ref
Children	−0.18 (−0.52, 0.16)	0.75 (0.49, 1.15)	−0.01 (−0.15, 0.13)	0.04 (−0.09, 0.18)	0.67 (0.35, 0.99)*	1.28 (1.01, 1.56)*

^aOrdinal regression (β).

^bLogistic regression (OR).

^cNegative binomial regression (β).

^dGLM (β).

^eAdjusted for age; full time versus part-time working hours; designated workspace; satisfaction with household task division.

* $P < 0.01$.

TABLE 4. Effect of Gender and Children Present During Time Spent Working From Home

	General Health ^a	Pain Presence ^b	Pain Score ^c	Stress ^d	Work-Family Conflict ^d	Family-Work Conflict ^d
Unadjusted						
Male with children	Ref	Ref	Ref	Ref	Ref	Ref
Male without children	0.06 (−0.50, 0.62)	1.20 (0.62, 2.28)	0.48 (0.21, 0.75)**	0.08 (−0.15, 0.31)	−0.38 (−0.90, 0.13)	−0.72 (−1.16, −0.27)**
Female with children	−0.05 (−0.57, 0.47)	2.50 (1.34, 4.68)**	0.68 (0.41, 0.90)**	0.39 (0.18, 0.61)**	0.54 (0.06, 1.01)*	0.45 (0.04, 0.86)*
Female without children	0.17 (−0.30, 0.64)	2.66 (1.51, 4.65)**	0.49 (0.26, 0.72)**	0.26 (0.07, 0.46)**	−0.59 (−1.03, −0.16)**	−1.24 (−1.62, −0.87)**
Adjusted ^e						
Male with children	Ref	Ref	Ref	Ref	Ref	Ref
Male without children	0.12 (−0.46, 0.71)	1.11 (0.56, 2.20)	0.46 (0.18, 0.73)**	0.03 (−0.21, 0.26)	−0.30 (−0.85, 0.25)	−0.54 (−1.01, −0.07)*
Female with children	0.03 (−0.51, 0.57)	2.18 (1.14, 4.20)*	0.62 (0.37, 0.86)**	0.24 (0.04, 0.45)*	0.38 (−0.10, 0.86)	0.02 (−0.39, 0.43)
Female without children	0.27 (−0.21, 0.76)	2.19 (1.21, 3.94)**	0.51 (0.27, 0.74)**	0.10 (−0.09, 0.30)	−0.58 (−1.04, −0.13)*	−1.35 (−1.74, −0.96)**

^aOrdinal regression (β).

^bLogistic regression (OR).

^cNegative binomial regression (β).

^dGLM (β).

^eAdjusted for age; full time versus part-time working hours; designated workspace; satisfaction with household task division.

* $P < 0.05$.

** $P < 0.01$.

DISCUSSION

The aim of this study was to examine the gender and parental responsibility impacts of WAH during the COVID 19 pandemic in Victoria, Australia in relation to physical and mental health and work-family and family-work conflict. The public health response to COVID 19 in Victoria during the first and second waves included strict stay at home orders, particularly during the second wave, resulting in workers who were able to work at home doing so, with closures of school and childcare for all but children of essential workers, among other restrictions. This study provides new insights into the mental health and family-work conflict impacts of WAH among men and women and those with and without parental responsibilities during the strict stay at home orders in Victoria during the second wave of COVID 19.

Findings from this study suggest women experience greater frequency of pain and discomfort and rated their pain as more severe compared with men, and this effect remained after controlling for the presence of children. However, pain and discomfort were significantly reduced among women who were more satisfied with the division of household tasks. In Australia, like many countries across the world, the work of household chores disproportionately falls upon women^{27,28} and research suggests the gender inequality associated with household tasks continued during COVID 19 lockdowns.²⁹ Household labor has long been recognized as a source of physical activity that is often overlooked, with women expending more energy than men when household activities are taken into account.³⁰ Many household chores (eg, mopping, cleaning, and carrying laundry and groceries) require individuals to adopt awkward postures and forceful or repetitive actions that are known to lead to the development of musculoskeletal disorders.³¹ In addition to the physical aspects of household chores, household tasks impose a mental burden. For example, responsibility for organizing others, working to fixed deadlines, and having a high workload, are psychosocial hazards that have also been long been recognized as contributing to the development of musculoskeletal disorders.^{31–33} Thus, individuals with greater responsibility for household chores are exposed to both physical and psychosocial risk factors for musculoskeletal pain. When the chores are shared, the exposure, and hence the risk of pain, is reduced.

In line with previous research,¹⁸ we identified that women WAH with children reported significantly higher levels of stress in comparison to men WAH with children. It is possible the increased levels of stress experienced by women with children is a result of the disproportionate responsibility for household chores and caring responsibilities which consume more time and attention in the lives of women, particularly those with children compared with men. During COVID 19 lockdowns, other researchers found that women's domestic and childcare responsibilities and stress increased.^{20,29} Lee et al³⁴ reported increases in parenting stress was associated with supervision of remote schooling. Arguably, increased responsibility for childcare and domestic chores, along with home schooling, increased females' workload, contributing to perceptions of increased stress.

We found the presence of children significantly increased work-family conflict in both the unadjusted and adjusted models, suggesting women without children report less work-family conflict than men with children. This finding is not surprising given women without children may have more flexibility to accommodate their domestic or other caring responsibilities around work demands and as such experience less work-family conflict. These findings suggest work life is less likely to interfere with family life demands for women without children. Similarly, prior research suggests non-parents were more likely to be able to secure time to focus on work compared with parents¹⁸ and work-family balance can be more difficult to obtain for women with young children.²⁰ Furthermore,

our findings suggest work-life conflict increases with the presence of children in the home during work hours, full-time work, and working in a location with interruptions or location wherever. However, work-family conflict decreased with increasing satisfaction with the division of household tasks.

An unexpected finding was that women experienced lower family-work conflict than men. It is possible this finding can be attributed to men being less accustomed to household responsibilities and demands interrupting their daily work. Women, more so than men, carry the burden of domestic responsibilities, so men have been shielded to a degree from conflict that may arise when non-work demands interfere with work activities. During WAH, men may have no option but to be more involved in managing non-work demands, thus reporting higher family-work conflict. Family-work conflict increased substantially when children were present in the home, with both men and women without children experiencing less family-work conflict compared with men with children. The unadjusted model showed women with children had higher levels of family-work conflict than men with children, while both men and women without children had significantly lower family-work conflict. After controlling for workspace location and satisfaction with division of household tasks in the adjusted model, the gender difference in those with children was attenuated. The driving forces behind family-work conflict (from our results) are therefore presence of children, workspace location, and satisfaction with division of household tasks. Research conducted in Australia and the United State during May 2020 found men with children, while not engaging in more household chores, (ie, they were doing less than women with children), were doing more childcare; by September 2020 in Australia men with children were still doing fewer household chores but the childcare was more equally distributed.³⁵ This increased level of engagement in relation to childcare by men with children may explain the lower family-work conflict for women with children compared with men with children.

A key strength of the study is the unique insights into the experiences of WAH, particularly during the sustained lockdowns in Victoria where childcare and schools were closed except for children of essential workers. While a limitation of this cross-sectional study is the inability to draw inferences about causality, this study will form the basis for a longitudinal study as a part of the EWAH study enabling greater insights into the impacts of COVID 19 on health, family-work-life conflict, gender, and parental responsibilities. Another key strength is the use of previously validated instruments to examine general health, pain, stress, and work-family and family-work conflict. However, there was potential for recall bias in relation to the musculoskeletal discomfort/pain frequency and severity scales which asked participants to recall the last 6 months. The use of a convenience sample, due to the absence of a sampling frame of people WAH, is a limitation and as such the findings must be interpreted with caution. While it is not possible to generalize the findings from this study, the findings are likely to be indicative of the impacts of sustained lockdowns and forced working at home orders in similar jurisdictions and countries. As such, the findings of this study are likely to be of interest to policy makers, employers, employees, occupational health experts, and the broader public health community. Another potential limitation is the higher number of women than men who participated in this study; however, this is consistent with emerging research in COVID-19 studies.

CONCLUSION

This study contributes new insights into the impacts of WAH during COVID 19. Specifically, it demonstrates the impacts of WAH on health, pain, stress, and work-family and family-work conflict are gendered and influenced by parental responsibilities. Satisfaction with the division of household tasks appears to play a

substantial role in alleviating stress, and work-family and family-work conflict suggesting the way in which household tasks are divided can either negatively or positively impact physical and mental health. While WAH has been previously seen as a way to manage work-family conflict, and the current study suggests this is the case for most people, WAH appears to increase family-work conflict for men with children. It is likely that lockdowns requiring those who can work at home to do so will persist, and indeed many workers are yet to return to the office, as the COVID 19 pandemic continues. As such, understanding the impacts of WAH on health, pain, stress, and work-family and family-work conflict, and how this is influenced by gender and parental responsibilities, is essential for organizations and managers to support employee's health and wellbeing. Longitudinal research is required to determine if the impacts of WAH identified in the current study were a consequence of lockdown restrictions (such as childcare and school closures) and if they change when people are able to make choices about the location of their work.

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