

# Emotional and financial health during COVID-19: The role of housework, employment and childcare in Australia and the United States

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## Abstract

During the first few months of the COVID-19 pandemic, the world witnessed major economic, school, and daycare closures. We sampled respondents in Australia and the US during the height of the first restrictions to understand how the first quarantine structured their emotional strain and financial worry (825 Australians and 835 Americans aged between 18 and 65; May 2–3, 2020; source YouGov). We apply structural equation modeling to demonstrate that the *emotional well-being* impacts of COVID-19 are not only gendered but also vary between childless people and parents. Specifically, we show that compared to Australians, Americans were more impacted by changes in their financial circumstances. Further, while the financial worry and emotional strain impacts were similar between childless people and parents in Australia, significant differences existed between the two groups in the United States. In particular, we identify American mothers as the most disadvantaged group—feeling the most anxious and financially worried about both employment and domestic changes under COVID-19. Policy wise, we argue that COVID-19 is exacerbating gender inequality in emotional health. To slow down this trend, more adequate mental health supports are needed, particularly for mothers.

## KEYWORDS

COVID-19, emotional strain, financial worry, gender, work

## 1 | INTRODUCTION

COVID-19 has introduced dramatic global challenges with important gendered consequences. As the novel coronavirus began to spread, workplaces, schools, and daycare centers closed overnight, making homes the primary site of production for work, childcare, and school. These major changes had gendered effects, with women assuming a larger share of childcare and housework and reporting less time in employment (Carlson et al., 2020; Collins et al., 2020; Craig & Churchill, 2021). This article investigates how changes in work and domestic demands impacted financial worry and emotional strain during the height of the first COVID-19 lockdown in Australia and the United States to understand these experiences by gender, country, and family structure.

We speak directly to theoretical arguments that gender remains a central lens through which we understand our lives. We draw upon Ridgeway's (2011) concept of *gendered frames* that posits sex and gender remain a primary frame through which we organize our daily lives and interactions with others. In this regard, we understand our social experiences first through a gender frame and their associated norms, a process that reinforces these gender frames through social interaction. Importantly, Ridgeway (2011: p. 3) argues, "gender inequality is rewritten into new economic and social arrangements as they emerge, preserving that inequality in modified form over socioeconomic transformations." We test whether financial worry and emotional strain under the COVID-19 pandemic are being viewed through gender frames for US and Australian respondents experiencing economic and domestic turmoil at the height of the first lockdown. We integrate this theoretical argument into an *exposure theory* approach, which posits that individuals' perceptions change after exposure to major events. Here, we test whether increases in housework and job loss impacted feelings of financial worry and emotional strain and, importantly, whether these patterns varied by gender. Identifying these relationships helps illuminate whether gender frames were reinforced or eroded during this time of crisis.

To understand these relationships, we included several questions about emotional strain, financial worry, and changes in employment and domestic workloads in a survey fielded on the YouGov US and Australian online panels over May 2–3, 2020. Our analytical sample included 825 Australians and 835 Americans aged between 18 and 65. We use two latent constructs—one for financial worry and another for emotional strain—and estimate how changes in employment and domestic arrangements are associated with these experiences. Our results demonstrate that emotional strain and financial worry are indeed structured by exposure to job loss and greater domestic demands, but gender also played a critical role. The findings thus lend support to both the exposure and gender frames perspectives but, importantly, point to their integration and to the importance of country and family contexts. In particular, US mothers carried greater financial worry and emotional strain associated with their changing employment and domestic demands under the first lockdowns of the COVID-19 pandemic than any other group.

## 2 | EXPOSURE VS GENDER FRAMES: THEORIZING LIFE UNDER COVID-19

To understand how changes in domestic and paid employment under the first COVID-19 lockdowns are associated with financial worry and emotional strain, we weigh two theoretical arguments: exposure theory and gender frames. Exposure theory implies gender neutrality—those who were exposed to larger domestic demands or who lost employment should report the greatest financial worry and emotional strain regardless of gender. We integrate an exposure theory approach with a gender frames perspective that assumes that we interpret our daily lives through a gender prism. While exposure theory is inherently gender neutral, we expect job loss and housework increases at the start of the COVID-19 pandemic to have distinct gendered impacts on financial worry and emotional strain. Specifically, we expect women's financial worry and emotional strain may be more intimately tied to their domestic demands and men's to employment. Since the transition into parenthood reinforces traditional expectations of gender and traditional divisions of paid and unpaid labor (Baxter et al., 2015; Maume, 2008; Stone, 2007), we would expect these relationships to be the most salient for parents for whom men breadwinning and women homemaking are particularly

salient (Berk, 1985). We expect mothers' financial worry and mental strain will be more impacted by changes in their domestic loads and fathers by their employment disruptions. Thus, we combine the exposure and gender frames approaches to understand the gendered experiences of financial loss and domestic increases during a critical moment—the start of the pandemic. We summarize these theoretical predictions in more detail below.

## 2.1 | Exposure effects

Exposure-based approaches posit that direct exposure to an experience shifts an individuals' perceptions, attitudes, and sentiments (Lerman & McCabe, 2017). Personal exposure to a social issue can be crucial in shaping attitudes and beliefs, particularly as it relates to public policy and politics (Campbell, 2012). For example, risk perception of climate change within communities equally vulnerable to hazard is strongly linked to personal experience with harmful environmental conditions and increases concerns of climate issues (Elrick-Barr et al., 2015). Applying an exposure theory framework to the 2015 MERS-Coronavirus outbreak in South Korea, Choi et al. (2017) highlight the positive relationship between social media exposure and increased perception of risk to the virus. Social media that exposed users to negative descriptions about MERS—such as anxiety, fear, and uncertainty—increased emotional strain (Austin et al., 2012; Choi et al., 2017). Media reports from COVID-19 provide illustrative examples of how personal exposure to the virus, either through direct infection or infection or death amongst friends and family, changed doubters' views of the severity of the virus (Brito, 2020; Modarressy-Tehrani & McLoughlin, 2020). Personal exposure is also positively associated with support for policy measures such as contact tracing and quarantine lockdowns (Guillon & Kergall, 2020; Zhang et al., 2020). Exposure theory posits that direct experience with an event is powerful in changing attitudes, and the COVID-19 pandemic has introduced a range of meaningful exposure events.

Here, we posit that men and women who were exposed to stressful experiences under the first COVID-19 restrictions—employment disruption or increases in domestic work—should report greater financial worry and emotional strain as a result. Employment disruption may be particularly predictive of financial worry. However, increases in domestic work may also intensify financial worry as returns to work, school, and childcare remained unclear at this moment in time. Exposure theory posits gender-neutral outcomes with those experiencing an event to be equally impacted. This leads to a clear hypothetical prediction.

### 2.1.1 | Exposure-based theoretical predictions

H1: Those who experienced a career or domestic disruption at the start of the COVID-19 pandemic will report greater financial worry and emotional strain than those who had no disruption.

## 2.2 | Gender frames

We combine gender frames and exposure theories to understand how financial loss and domestic increases impact experiences of emotional and financial strain by gender and parental status. Gender is a master status through which we organize our everyday social interactions (Goffman, 1959). Expanding upon a social-interactionist theoretical foundation, Ridgeway (2011) argues that gender serves as a primary frame through which we view, interpret, and behave within our social interactions. Individuals are held accountable to gendered norms through rewards or penalties making gender a central mechanism through which we make sense of the world (Ridgeway, 2011; Risman, 1998). Even those who do not ascribe to traditional demonstrations of gender are held accountable to broader institutionalized gender norms. This helps explain why gender inequality remains salient even as attitudes have become more egalitarian (Cotter et al., 2011).

Gendered scripts are often the most prominent within the domestic sphere—at home. Berk (1985) identifies the home as a gender factory that socializes men and women into gender roles. West and Zimmerman (1987) present a “doing-gender” perspective whereby everyday interaction reinforces gender roles within the home. Women’s performance and men’s avoidance of housework is one example of “doing-gender” that reinforces traditional breadwinner/homemaker roles (Coverman, 1985). These theoretical approaches underscore how gender frames our social interactions to reinforce women’s domestic and men’s economic roles. Existing research shows a critical life course transition—the birth of a first child—increases the enactment of traditional gender norms with mothers spending more time in domestic work and less in employment when children are present (Baxter et al., 2008; Maume, 2006; Sayer, 2016). Further, internalized gender norms are shown to change upon the transition into parenthood, with many becoming more traditional (Baxter et al., 2015). Collectively, these studies indicate that, for many, the exposure to a life-changing event—the birth of a first child—has gendered consequences. We extend this approach to understand how exposure to employment and domestic disruption at the start of the pandemic had gendered impacts by parental status, thus requiring the integration of these theories.

We hypothesize that the exposure to employment disruption and domestic demands may have reinforced gender frames. Men who lost their jobs may be more financially worried and anxious than women who lost employment because traditional norms emphasize men as breadwinners and providers. These experiences may be particularly salient for fathers for whom being financial providers is central to traditional breadwinner norms and expectations of being a “good” father (Coltrane, 1997; Mari, 2019). Women who stepped into more domestic work at the start of the pandemic may be more financially worried and emotionally strained by this reinforcement of traditional gender norms known to have long-term financial and employment consequences (Christie-Mizell, 2006). These patterns may be particularly detrimental to mothers who were carrying a larger domestic load under the first lockdown (Craig & Churchill, 2021) at the expense of their well-being (Möhring et al., 2021). Mothers’ larger domestic burdens are a key mechanism to explain motherhood pay gaps and employment exits (Blundell et al., 2020; Budig, Misra, & Boeckmann, 2012; Craig, 2006). Under the pandemic, mothers’ larger domestic loads may impinge upon their careers in two critical ways: (1) by deteriorating their energy and focus for work and (2) by violating ideal worker norms by signaling to their employers that their time is divided (Hogenboom, 2020; Miller, 2020).

Thus, if losses under COVID-19 are being perceived through gendered frames, we would expect men and women with the same *experiences* to internalize them *differently*. We anticipate parents may be particularly vulnerable to job loss and domestic demands, given that traditional breadwinner/homemaker roles are inherently tied to being a “good” parent (Hays, 1996; Ranson, 2010). Thus, we apply these two theoretical approaches integratively—exposure to job loss and greater domestic work may increase emotional strain and financial worry, *and* these experiences may be gendered. Thus, applying a gendered frames exposure approach, we present the following hypothesis.

### 2.2.1 | Gender frame exposure theory

H2: Men who have experienced job loss or pay/work hour reductions will report greater financial worry and emotional strain than women who have lost a job or had their pay/work hours cut.

H3: Women who are managing more domestic work will report greater financial worry and emotional strain than men who are performing a larger domestic load.

## 2.2.2 | Parental gendered frame exposure theory

H4: Economic strain will have a larger association to fathers' economic strain and financial worry than mothers and those without children; increases in domestic work will have a greater positive association to mothers' economic strain and financial worry than fathers and those without children.

## 3 | A GENDERED PANDEMIC: A COMPARISON OF AUSTRALIA AND US

We benchmark gendered experiences of the first lockdown across two countries with shared cultural histories—Australia and the United States. Initial empirical evidence shows that women are disproportionately impacted by the COVID-19 quarantines at the start of the pandemic in both countries. Women are clustered in industries hardest hit by the recession—retail, accommodation, and travel—and their economic and productive lives are affected differently than men's (Alon et al., 2020; Madgavkar et al., 2020; United Nations, 2020). At the time of our survey, women reported higher unemployment rates than men in the US (Kochhar, 2020) and Australia (Richardson & Denniss, 2020). Before COVID-19 became a universal pandemic, women were doing more unpaid care and domestic work than men in both countries (Craig & Mullan, 2010). During the start of the pandemic, these divisions worsened with initial evidence showing mothers assumed a larger share of the domestic work in the US (Carlson et al., 2020; Ruppanner et al., 2021) and Australia (Craig & Churchill, 2021; Ruppanner et al., 2021). Amongst those in the US who have maintained employment, married mothers reduced work time across all child-ages and even when they and their partner could work from home (Collins et al., 2020). The increased demand for unpaid domestic work deepens the inequality in the gender division of labor (United Nations, 2020).

Whether this translates into women, and in particular, mothers reporting greater financial worry and emotional strain is not yet to be fully understood. Existing pandemic research shows US mothers carrying more domestic work and employment disruptions reported greater anxiety and poorer sleep than US fathers and Australian parents (Ruppanner et al., 2021). However, little is known about whether these experiences replicate for the childless population and, importantly, to what extent is heightened poor emotional health is driven by financial worry.

These questions are important given that the Australian and US federal governments diverged in their approaches in managing the pandemic. The magnitude of the outbreak was significantly greater in the US during this period, and the pandemic itself became a partisan issue, with some elected officials, including President Donald Trump, downplaying the severity of the virus. This created a level of uncertainty that was not matched in Australia, where the outbreak (at this time) was relatively small and concentrated in the states of New South Wales and Victoria. Most of the active cases during this period were returned overseas travelers. The economic impacts in Australia were also significant, but the unemployment rate was much lower than that in the US (Tetlow et al., 2020). Further, in response, the Australian Federal Government initiated two new economic policies, JobKeeper and JobSeeker, to temporarily supplement incomes (Australian Government 2020; Karp & Henriques-Gomes, 2020). Combined, the two schemes covered five million adult Australians (40 percent of the working-age population).

Given the larger financial support for Australians and the country's much smaller COVID-19 caseload compared to the US at this time, we anticipate that the economic and health threat would lead US respondents to feel more financially worried and emotionally strained than Australians, regardless of gender. The US federal government did pass an act to provide workers with unemployment benefits, cash payments, and a moratorium on evictions (International Labor Organization, 2020). However, the threat of the virus was direr, which may lead to feelings of financial worry and emotional strain. Alternatively, US respondents may be no more worried and anxious than Australians at this time point because President Trump minimized the threat.

While some parameters surrounding lockdown were similar across the two countries—movement restrictions, economic lockdowns, and school and daycare closures all began around the same time—the pre-lockdown gender inequality patterns differed. The Australian state extended significantly more statutory protections to employees than

are provided in the US. Employees in the former are entitled to more generous parental leave, and Australian governments spend more on family benefits as a percentage of the gross domestic product than do those in the US (Cooper et al., 2020; Thévenon, 2011). Women's employment in Australia is more characterized by part-time (or casual) work, while full-time employment is more dominant in the US, even among women with young dependent children (Cooper et al., 2020). Even when controlling for work hours, motherhood earnings penalties are smaller in Australia than in the US (Cooke, 2014). Although women in both countries contributed significantly more time to household labor than men, the division of responsibilities is more egalitarian among couple households in the United States than Australia, perhaps owing to the prevalence of women's full-time employment in the former (Cooper et al., 2020). Collectively, the literature suggests a more significant role of full-time employment for US women. We are unclear how job loss and increases in housework will manifest through financial worry and emotional strain across these countries. Applying comparative data at this critical timeframe helps illuminate these patterns. This leads to our final hypothesis:

H5: Job loss and domestic increases will have distinct patterns on emotional strain and financial worry in Australia and the US during the start of the pandemic.

## 4 | DATA AND METHODS

### 4.1 | Data

To test these theories, we fielded surveys on the YouGov (a global leader in survey research) online panels in Australia and the US over May 2–3, 2020. These panels are comprised of participants who elect to receive surveys from the YouGov. The surveys fielded for this study were commissioned by the authors and designed to collect representative samples of 1005 adult citizens in Australia and 1050 in the United States. To ensure it was representative, the Australian sample was pre-stratified by age, gender, and state and the US sample by age, gender, race, education, and region. The questionnaire provided asked respondents a series of questions about their experiences while severe restrictions on movement, gatherings, and economic activity were in place in both countries.

### 4.2 | Dependent variables: Emotional strain and financial worry

The first dependent variable of this study is a latent variable measuring emotional strain. This is constructed by three items asking respondents how much of the time during the past week: (1) they felt anxious; (2) their sleep was restless; and (3) they felt calm and peaceful. Respondents answered on an ordinal scale ranging from 1 (none or almost none of the time) to 4 (all or almost all of the time). The third item was reversed and produced high inter-item correlations ( $\alpha = 0.65$  in Australia and  $0.70$  in the US). The second dependent variable is a latent variable measuring financial worry induced by COVID-19. It is constructed by three items asking respondents how worried they were about (1) losing their job in the next 12 months; (2) not having enough money to retire on; and (3) not being able to pay rent or mortgage. Responses are on a 5-point ordinal scale that were reverse coded so that higher scores indicate a higher level of financial worry ( $\alpha = 0.76$  in Australia and  $0.77$  in the US).

## 4.3 | Independent variables

### 4.3.1 | Impacts of COVID-19

We used two dummy variables to capture the major impacts of COVID-19. The first dummy variable measured whether the respondent had lost their employment or had pay or hours reduced due to COVID-19 lockdown (1 = yes). In the original questionnaire, respondents were asked about the change in housework since social distancing began. Responses are on an ordinal scale ranging from 1 (doing much more) to 5 (doing much less). Using these responses, we constructed a dummy variable for those respondents who reported doing more or much more housework (1 = yes). Those who had no change in their domestic loads or reported these were not relevant provide the comparative group (value = 0).

### 4.3.2 | Demographic controls

In addition to the impacts of COVID-19, we also included a series of demographics that are shown to influence mental health status (Aneshensel et al., 2013; Eaton et al., 1999; Fryers et al., 2003)<sup>1</sup>. We excluded those aged over 65 and measured age using three dummy variables: 18–29, 30–44 (the reference group), and 45–65.

In the US and Australia, respondents were asked about their educational qualifications, but the choices were different given the different education systems in the two countries. We regrouped these responses into one dummy variable, with the value 1 assigned to those who hold a bachelor's degree or above.

Respondents were asked to measure their total household income. We grouped the responses into four categories: low income (less than AU\$60k or US\$40k<sup>2</sup>), middle income (between AU\$60k and AU\$120k, or between US\$40k and US\$80k; the reference group), high income (more than AU\$120k or US\$80k), and missing income. The dummy variable of missing income was created to include those who chose not to report their household income. We used this dummy variable to avoid losing observations.

Finally, we measured marital status through a dummy variable (1 = married) and parental status through another dummy variable (1 = parent). A total of 11 respondents chose not to provide their marital status information, and these observations were dropped. Our final analytical sample consists of 825 (426 female and 399 male) in Australia and 835 (465 female and 370 male) in the United States.

## 4.4 | Structural equation modeling

To understand the impacts of COVID-19 on the respondents' emotional strain and financial worry, we applied structural equation modeling (SEM), which can provide quantitative tests of not only observed variables but also constructs that cannot be directly measured and help with the understanding of the complex relations among constructs (Schumacker & Lomax, 2016; Thakkar, 2020) that are difficult to be tested in other ways. SEM is widely applied in psychology and related disciplines, given the difficulty of measuring subjective well-being directly (MacCallum & Austin, 2000).

This study included emotional strain and financial worry as latent dependent variables and modeled them to be interrelated (Figure 1). In SEM, the premise of using the traditional maximum likelihood method is that the multivariate normal distribution assumption can be met (Distefano, 2002). Our models are likely to violate this assumption, given that all of the independent variables are dummies. For this reason, we adopted the Asymptotically Distribution Free (ADF) method proposed by Browne (1984) to relax the normal distribution assumption.

To explore gender differences, we followed a three-step procedure. We first constrained path coefficients to be the same for the two gender groups, using modification indices to evaluate the appropriateness of the constrained

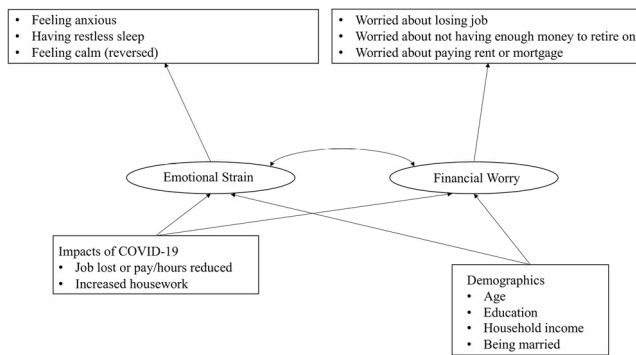


FIGURE 1 SEM model

models. If the results violated the assumption of gender similarity, we then freed the parameters to vary by gender.<sup>3</sup> For all of our models, the measures of fitness improved after freeing the parameters. We thus report only the results of unconstrained models. At the final step, we further examined gender differences by using Wald tests to identify which parameters allowed to vary across gender groups could be constrained.

## 5 | RESULTS

### 5.1 | Descriptive statistics

Table 1 summarizes the descriptive statistics for both dependent and independent variables by gender and parental status in Australia. Overall, women respondents have a higher level of emotional strain across all three measures. In particular, among the childless group, women reported a significantly higher level of anxiety; among the parents, women were significantly less calm. In terms of financial worry, women and men show more similar patterns. The only exception is that compared to childless men, childless women reported a slightly higher level of worry about losing job. However, this pattern is reversed in the parents' group. Fathers are significantly more worried about their job security, compared to childless men. In other words, when children are present, Australian men exhibit higher level of concern over their job security (preliminary support for H4). The impacts of COVID-19 seem to have fallen evenly on women and men. Notably, however, compared to childless people, parents report greater increases in housework, among both mothers and fathers.

Table 2 presents the parallel statistics in the United States. Again, women respondents have a higher level of emotional strain across all three measures. When children are present, the gender gap further widens. Compared to childless men, fathers are significantly calmer. This contradicts with the pattern in Australia, where fathers seem to suffer from the presence of children in their emotional health. In terms of financial worry, women and men show more similar patterns. The main exception is that compared to childless men, childless women are significantly more worried about not having money to retire on. Again, similar to the pattern in Australia, the impacts of COVID-19 seem to have fallen evenly on women and men. The main exception is that compared to fathers, significantly more mothers report an increase in housework. In the US, the presence of children exposes women to significantly more employment and housework disruptions.



TABLE 1 Descriptive data for Australia

	Min	Max	Childless People			Parents			Men: Child-less versus parents
			Mean/% for women	Mean/% for men	Sig. gender difference	Mean/% for women	Mean/% for men	Sig. gender difference	
<b>Emotional strain</b>									
Feeling anxious	1	4	2.27	1.89	***	2.23	2.06		
Having restless sleep	1	4	2.23	2.05		2.32	2.26		*
Feeling calm (reversed)	1	4	2.77	2.56	*	2.71	2.42	***	
<b>Financial worry</b>									
Worried about losing job in the next 12 months	1	5	2.31	2.26	*	2.43	2.54		**
Worried about not being able to pay rent or mortgage	1	5	3.10	2.85		3.15	2.99		*
Worried about not having money to retire on	1	5	2.33	2.26		2.54	2.52		
<b>Impacts of COVID-19</b>									
Job lost or pay/hours reduced	0	1	0.37	0.30	*	0.37	0.37		
Increased housework	0	1	0.52	0.48		0.65	0.58	***	**
<b>Demographic controls</b>									
Age: Between 18 and 29	0	1	0.29	0.28		0.19	0.13	*	***
Age: Between 45 and 65	0	1	0.45	0.45		0.36	0.43		**
Bachelor's degree or above	0	1	0.43	0.40		0.40	0.51	**	**
Household income: Low (less than AU\$60k/US\$40k)	0	1	0.43	0.39		0.31	0.29		**
Household income: High (more than AU\$120k/US\$80k)	0	1	0.13	0.18		0.19	0.22		*
Household income: Missing	0	1	0.14	0.09	*	0.17	0.09	**	
Being married	0	1	0.44	0.40		0.68	0.75	***	***

Note: To test for gender and country differences, chi-square tests were performed for categorical variables and two-sample tests of proportions were performed for binary variables.

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE 2 Descriptive data for the US

	Min		Max		Childless people			Parents			Women: Child-less versus parents		Men: Child-less versus parents	
					Mean/% for women	Mean/% for men	Sig. gender difference	Mean/% for women	Mean/% for men	Sig. gender difference	Mean/% for men	Sig. gender difference	Mean/% for men	Sig. gender difference
<b>Emotional strain</b>														
Feeling anxious	1	4	2.33	1.96	2.33	1.96	***	2.36	1.94	***	1.94	***	1.94	***
Having restless sleep	1	4	2.33	2.01	2.33	2.01	***	2.45	1.99	***	1.99	***	1.99	***
Feeling calm (reversed)	1	4	2.80	2.65	2.80	2.65		2.77	2.35	***	2.35	***	2.35	***
<b>Financial worry</b>														
Worried about losing job in the next 12 months	1	5	2.13	2.07	2.13	2.07		2.45	2.30		2.30	*	2.30	*
Worried about not being able to pay rent or mortgage	1	5	3.20	2.89	3.20	2.89		3.05	2.99		2.99		2.99	
Worried about not having money to retire on	1	5	2.25	2.15	2.25	2.15	**	2.51	2.26		2.26		2.26	
<b>Impacts of COVID-19</b>														
Job lost or pay/hours reduced	0	1	0.26	0.26	0.26	0.26		0.36	0.32		0.32	**	0.32	**
Increased housework	0	1	0.46	0.43	0.46	0.43		0.61	0.48	**	0.48	**	0.48	**
<b>Demographic controls</b>														
Age: Between 18 and 29	0	1	0.25	0.20	0.25	0.20		0.23	0.17		0.17		0.17	
Age: Between 45 and 65	0	1	0.60	0.60	0.60	0.60		0.34	0.41		0.41	***	0.41	***
Bachelor's degree or above	0	1	0.32	0.27	0.32	0.27		0.25	0.34	*	0.34	*	0.34	*
Household income: Low (less than AU\$60k/US\$40k)	0	1	0.36	0.33	0.36	0.33		0.43	0.26	***	0.26	***	0.26	***
Household income: High (more than AU\$120k/US\$80k)	0	1	0.20	0.26	0.20	0.26	*	0.20	0.38		0.38	***	0.38	**
Household income: Missing	0	1	0.19	0.14	0.19	0.14		0.12	0.08		0.08	**	0.08	*
Being married	0	1	0.46	0.44	0.46	0.44		0.54	0.72	***	0.72	***	0.72	***

Note: To test for gender and country differences, chi-square tests were performed for categorical variables and two-sample tests of proportions were performed for binary variables.

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

## 5.2 | Childless people and parents: Australia and the US

Tables 3 and 4 present the SEM results for Australian and US respondents by gender and parental status. Figures 2 through 5 display these results graphically to understand the interrelationship across these measures. Across these models, a few key results emerge. First, job loss is associated with greater emotional strain and financial worry for men and women whether parents or non-parents (support for H1). Important differences by gender, parental status, and country emerge. In Australia, we find fathers' job loss has a larger positive association to financial worry relative to mothers' lending support to our parental gendered frame hypothesis (H4). By contrast, we find US fathers report less emotional strain and financial worry than other groups indicating this theorization is insufficient in the US. Specifically, we find US mothers report more emotional strain associated with job loss than US fathers, and US childless men report greater emotional strain than US fathers. We also find US childless men report greater financial worry associated with job loss than US childless women and US fathers. Across these models, we find support for an exposure effect with job loss increasing financial worry and emotional strain, but, counter to hypotheses, we find Australian fathers, US mothers, and US childless men to be more acutely impacted, lending mixed support for our parental gendered frame hypothesis (H4).

We also show increases in housework produced distinct gendered, parental, and country patterns. In Australia, increases in housework are associated with increased emotional strain amongst mothers and women without children, a finding consistent with our gendered frame exposure hypothesis (H3). For Australian childless men and fathers, increased housework is tied to greater financial worry, a significant gender difference. Indeed, the relationship between increased housework and financial worry is not significant for Australian childless women or mothers, counter to expectations (H3). In the US, increases in housework are tied to increased emotional strain for everyone *except* men without children lending partial support to gender-neutral exposure based arguments (H1). US mothers are unique in that increased time in housework is also associated with greater financial worry, lending support to our gender parental frames hypothesis (H4). Across these models, we find evidence that increases in housework had gendered consequence, but Australian fathers and US mothers were particularly vulnerable to its negative associations to financial worry and emotional strain.

## 6 | CONCLUSION

The COVID-19 pandemic has had a tremendous social and economic impact on countries around the world. While this has caused challenges for both men and women, we theorized that there would be specifically gendered impacts mediated by local contexts. To better understand these impacts, we surveyed respondents in Australian and the US during the height of the first pandemic lockdowns. We integrated two theoretical frameworks—exposure and gender frames—to understand how employment disruptions and domestic increases structured feelings of financial worry and emotional strain by gender and parental status. We found support for exposure-based arguments. Notably, those who lost their job or had pay reduced at the start of the pandemic reported greater emotional strain and financial worry than those whose employment remained intact. Yet, gender also plays a role in these experiences illustrating the value of integrating these theories. Notably, women (mothers and those without children) reported greater emotional strain associated with increases in housework; childless men in Australia and the US were not impacted. We show women, especially mothers, picked up more housework than men and reported worse emotional strain as a consequence. We also found US mothers who increased housework reported more financial strain. Across these findings, we show support for an exposure approach but, importantly, that gender and parental status play a critical role.

Where these theories have limited explanatory power, however, is explaining the compounding economic and domestic demands under the pandemic. US mothers, in particular, experienced distinct cross-cutting disadvantage from job loss and increases in housework on financial worry and emotional strain that were distinct to other groups. Thus, US mothers were vulnerable to exposure to job loss and gendered norms that were particularly detrimental at

TABLE 3 Comparison of childless people and parents in Australia (N = 825)

	Childless people			Parents			Sig. gender difference	Fathers (N = 197)	Sig. gender difference	Women: Child-less versus parents	Men: Child-less versus parents
	Women (N = 235)	Men (N = 202)	Sig. gender difference	Mothers (N = 191)	Fathers (N = 197)	Sig. gender difference					
Dependent variable: Emotional strain											
Job lost or pay/hours reduced due to COVID-19	0.23***	0.27***		0.27***	0.35***		0.35***				
Increased housework due to COVID-19	0.25***	0.01	*	0.16*	0.31***		0.31***			*	
Demographics											
Age: Between 18 and 29	-0.01	-0.16		0.35***	0.27**		0.27**		**	**	***
Age: Between 45 and 65	-0.32***	-0.42***		-0.07	-0.34***		-0.34***		**	**	
Bachelor's degree or above	0.23***	-0.09	***	0.15*	-0.23***		-0.23***		***		
Household income: Low (less than AU\$60k)	-0.10	0.02		-0.08	0.01		0.01				
Household income: High (more than AU\$120k)	-0.22**	-0.21**		-0.03	-0.03		-0.03		***	***	
Household income: Missing	0.26**	0.26**		0.15	0.11		0.11				
Being married	-0.02	0.28***	**	-0.27**	-0.15		-0.15		**	**	
Dependent variable: Financial worry											
Job lost or pay/hours reduced due to COVID-19	0.58***	0.87***		0.68***	0.62***		0.62***				
Increased housework due to COVID-19	0.16	0.46***	*	0.12	0.50***		0.50***		***		
Demographics											
Age: Between 18 and 29	0.10	-0.69***	***	0.10	0.38***		0.38***			***	***
Age: Between 45 and 64	-0.09	-0.51***	***	-0.01	-0.33***		-0.33***		*		
Bachelor's degree or above	0.17	0.28**		-0.13	-0.06		-0.06				
Household income: Low (less than AU\$60k)	0.31**	0.52***		0.10	0.34***		0.34***				
Household income: High (more than AU\$120k)	0.20	-0.05		-0.50***	0.11		0.11		***	***	
Household income: Missing	0.15	0.73***	**	-0.83***	0.54***		0.54***		***	***	
Being married	0.10	0.22*		0.45***	-0.32***		-0.32***		***	*	*
Cov (emotional strain, financial worry)	0.26***	0.15***		0.22	0.23***		0.23***				

\*\*\*p < 0.01, \*\*p < 0.05, \*p < 0.1.

TABLE 4 Comparison of childless people and parents in the US (N = 835)

	Childless people			Parents			Sig. gender difference	Fathers (N = 155)	Women: Child-less versus parents	Men: Child-less versus parents
	Women (N = 259)	Men (N = 215)	Sig. gender difference	Mothers (N = 206)	Fathers (N = 155)					
Dependent variable: Emotional strain										
Job lost or pay/hours reduced due to COVID-19	0.31***	0.48***		0.58***	0.19***	0.19***	***			***
Increased housework due to COVID-19	0.25**	0.02	*	0.30***	0.19**	0.19**	*			
Demographics										
Age: Between 18 and 29	0.69***	0.66***		0.15	0.20*	0.20*				
Age: Between 45 and 65	0.18	0.39***		-0.42***	-0.33***	-0.33***				***
Bachelor's degree or above	0.40***	-0.07	***	0.22**	-0.04	-0.04	**			
Household income: Low (less than US\$40k)	0.26**	-0.12	***	0.09	0.18*	0.18*		*		
Household income: High (more than US\$80k)	0.22*	-0.13	**	-0.19*	-0.05	-0.05		**		**
Household income: Missing	0.05	0.08		-0.11	-0.22**	-0.22**		**		**
Being married	-0.09	-0.12		0.21**	-0.04	-0.04	**	**	**	**
Dependent variable: Financial worry										
Job lost or pay/hours reduced due to COVID-19	0.94***	2.03***	***	1.18***	1.20***	1.20***	***			***
Increased housework due to COVID-19	0.20	0.11		0.47***	0.16	0.16	*	***	***	***
Demographics										
Age: Between 18 and 29	0.34**	-0.24	**	-0.17*	0.21	0.21	*			***
Age: Between 45 and 64	0.08	-0.03		-0.82***	-0.58***	-0.58***		***	***	**
Bachelor's degree or above	0.23*	0.11		-0.22	-0.23*	-0.23*		***	***	
Household income: Low (less than US\$40k)	0.10	0.08		0.18	0.55***	0.55***	*			**
Household income: High (more than US\$80k)	-0.42***	-0.27		0.05	0.17	0.17		***	***	***
Household income: Missing	-0.13	0.03		0.10	-0.84***	-0.84***	***			***
Being married	-0.14	-0.61***	***	0.37***	0.25*	0.25*				***
Cov (emotional strain, financial worry)	0.39***	0.35***		0.35***	0.33**	0.33**				

\*\*\*p < 0.01, \*\*p < 0.05, \*p < 0.1.

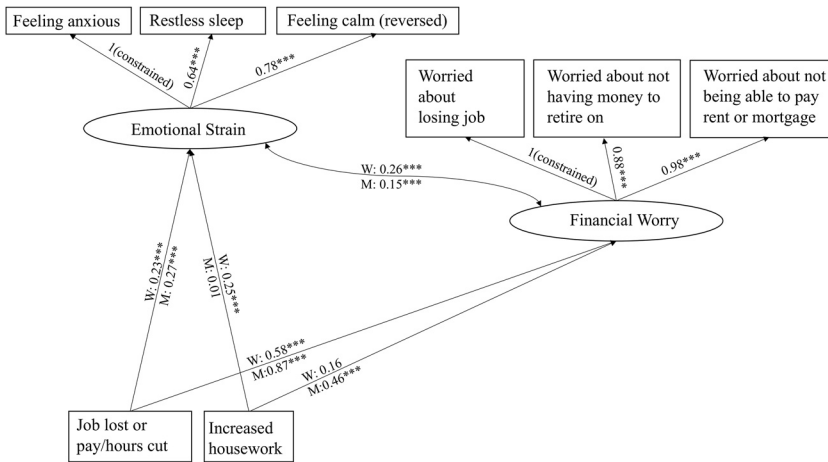


FIGURE 2 Results for childless people in Australia

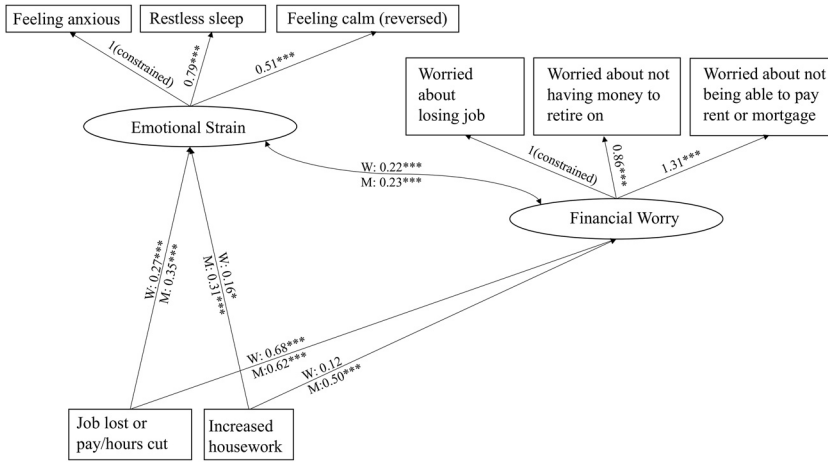


FIGURE 3 Results for parents in Australia

the start of the pandemic. Further, the theories are limited in explaining the distinct experiences of men at the start of the pandemic. Australian fathers exhibited patterns similar to US mothers as job loss and increased housework contributing to emotional strain *and* financial worry. Increased housework is not associated with Australian mothers' financial worry suggesting Australian fathers were distinct in their experiences. Greater housework may serve as a proxy for broader financial hardship or a response to the anxiety of the pandemic. Establishing the directionality of the causal arrows is beyond the scope of the data, but we show Australian fathers report patterns similar to US mothers in job loss and housework increases contributing to emotional strain *and* financial worry. US childless men who lost their jobs also reported greater emotional strain and financial worry suggesting exposure to economic precarity was felt more acutely for this group as well.

Given the dramatic changes under the COVID-19 pandemic, it is important to contextualize the timeframes during which we are surveying our respondents. We captured US and Australian respondents at the start of the pandemic with little knowledge about the severity of the virus and the economic fallout. We expect emotional strain and financial worry to increase dramatically at this moment especially amongst those whose jobs were disrupted and balanc-

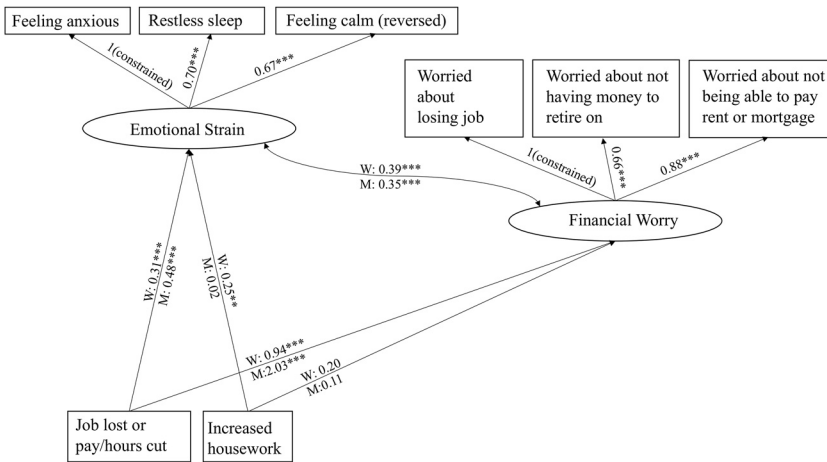


FIGURE 4 Results for childless people in the US

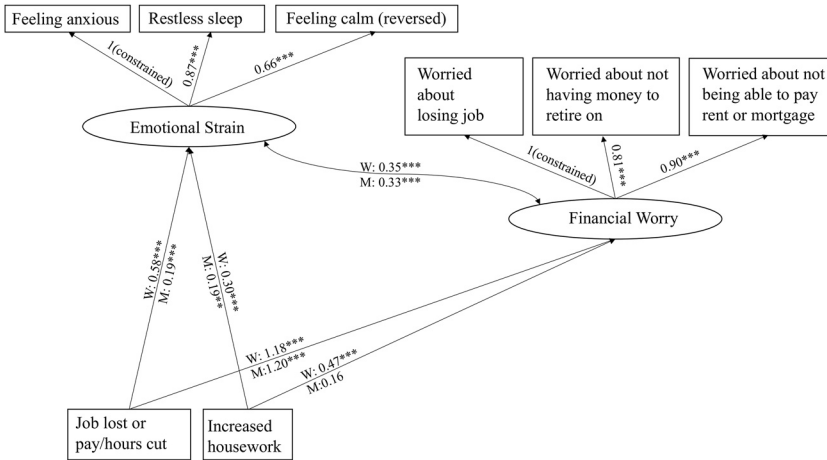


FIGURE 5 Results for parents in the US

ing greater domestic demands. We show exposure to these stimuli are associated with poor emotional and financial health with important gender differences. Yet, establishing these patterns over time as economies, schools, and day-cares reopened and, for some, closed.

Although we point to the importance of economic precarity and housework increases, important questions remain. The first is whether these short-term patterns are engrained over time. Studies applying an exposure perspective often document immediate and short-term changes in attitudes and behaviors (Dasgupta & Rivera, 2008; Gessler et al., 2021). Yet, questions about the long-term consequences of exposure-based changes remain. Evidence is thin to support the stability of long-term changes in behavior based on short-term shocks (exposures) (Agüero & Be-leche, 2017; Middleton et al., 2013). We know that the pandemic had disparate consequences in these two countries with Australia leading the world in COVID-19 reductions and the US in infections. Schools in the US closed in some states but not others and geographic concentrations of employment opportunities varied dramatically. This means some in the US faced long-term school and economic closures, increased difficulty in accessing employment, and dramatic increases in COVID-19 infections. By contrast, Australia ground its COVID-19 infections close to zero and, with

the exception of the state of Victoria, did not enforce additional long-term lockdowns. Children returned to schools, businesses reopened, and government subsidies remained strong over the year. Thus, Australian fathers may have picked up more housework at the start of the pandemic but subsequently returned to baseline. Our results point to the need for longitudinal data collection to understand whether exposure to job loss and greater caregiving are associated with long-term changes in gender constructions. Simply, we cannot empirically establish whether exposure shift gender frames without long-term panel data.

Policymakers should be considering these experiences as they design economic and social recovery plans. Those in the US, especially US mothers, are apprehensive about their finances, which leads to greater emotional strain. Women's larger domestic burden is associated with emotional strain and financial worry for those with and without children. Women, in particular mothers, may be concerned that their greater domestic time will scar them against future employment prospects. Weighing this burden and providing adequate mental health supports around populations experiencing loss and strain is incredibly important.

Further, mothers, in particular, are carrying competing pressures and may be buffering fathers from the negative impacts and should receive special consideration, especially in a country like the US, where the pandemic has ravaged the population and led to massive school closures (Collins et al., 2021). Ultimately, our results are clear: those experiencing employment disruptions and domestic increase are suffering, especially American mothers.

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## CONFLICT OF INTEREST

None.

## DATA AVAILABILITY STATEMENT

Research data are not shared.

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## ENDNOTES

- <sup>1</sup> These studies consistently show an association between a less privileged social position and worse conditions of mental health.
- <sup>2</sup> At the time of writing (August 2020), one US dollar equals approximately 1.40 Australian dollars.
- <sup>3</sup> One common way to determine whether distinct parameters should be used across groups is to do likelihood-ratio tests comparing the constrained and unconstrained models. However, this was not possible for our models (due to the missing log-likelihood) because we used the ADF method to relax the normal distribution assumption. To partly remedy this, we used the traditional maximum likelihood method to re-estimate our models (everything else remained the same) and did the likelihood-ratio tests. The results support unconstrained models.

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