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Mental Health and Gender Inequality amid the COVID-19 Pandemic

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Abstract

This research investigates variations between men and women in the worsening of mental health conditions and overall psychological welfare influenced by the COVID-19 outbreak, including potential pathways that contribute to such disparities. Drawing on responses from 2,545 adults in Chile's Life during Pandemic survey, we apply statistical regression techniques to assess disparities by gender in mental health status, psychological welfare, financial vulnerability, and domestic responsibilities amid the COVID-19 crisis. The analysis reveals that females more frequently indicate poor general mental health and declines in welfare. Females also show higher probabilities of receiving recent mental health diagnoses, seeking professional care, and using prescribed drugs. Additionally, females note greater rises in home duties and child-rearing responsibilities, alongside elevated risks of job displacement or revenue reduction linked to the outbreak. These findings provide an overview of how COVID-19 distinctly affects psychological outcomes across genders. We suggest that interventions designed to alleviate financial pressures and tailor support to women's circumstances could help reduce pandemic-related declines in mental health.

Keywords: Mental health, Gender, Inequality, Well-being, COVID-19

Introduction

The COVID-19 outbreak has delivered a profound and sustained disruption to families globally. Numerous nations experienced sharp drops in economic output, resulting in reduced earnings, rising joblessness, and increased poverty levels. Certain groups face greater susceptibility to the wide-ranging consequences of the crisis. Notably, the outbreak intensified existing gender disparities, disproportionately impacting industries dominated by female workers. Dang *et al*. [1] demonstrate that females faced higher chances of irreversible job loss during the crisis compared to males, and they anticipated larger future reductions in their earnings than males did. Furthermore, heightened demands for child supervision arose from closures of educational institutions and care facilities, disproportionately burdening mothers over fathers [2–4]. Linked to financial worries and concerns over access to essentials, psychological health declined markedly in the initial phase of the COVID-19 crisis [5–7]. Reports highlighted elevated rates of depressive states, anxious feelings, and general distress in places like the United States, Canada, and the United Kingdom [5, 8–12]. Given that females typically exhibit higher rates of depression symptoms [11], combined with their greater involvement in domestic tasks and child supervision relative to males [13, 14], it is reasonable to expect gendered variations in the erosion of mental health and welfare during the outbreak.

Chile serves as a valuable case for examining gender disparities amid the COVID-19 crisis. Initially, restrictions significantly curtailed national economic performance. Measures were applied at local levels with weekly updates [15]. National activity levels fell substantially in 2020, with restrictions closely tied to reduced regional commerce [16]. Additionally, women's

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involvement in the labor market ranks among the lowest in OECD nations, and it declined further during the crisis. Rates of female workforce engagement dropped from 53.3 percent before the outbreak to 41.2 percent by mid-2020, largely because female-heavy fields like services suffered major setbacks [17].

This work adds to emerging studies examining how financial instability and expanded home duties act as primary sources of strain fueling broad emotional challenges during the crisis, with particular populations showing heightened sensitivity to its psychological toll [18]. The evidence points to serious concerns for females' psychological state and daily functioning due to COVID-19. Accordingly, decision-makers and healthcare professionals should track the emotional support requirements of women facing economic hardship in times of widespread health emergencies.

The purpose here is to outline broad patterns in the gendered psychological consequences of COVID-19 within Chile. Specifically, we examine disparities by gender in declines of mental health and psychological welfare stemming from the outbreak, along with underlying factors. In particular, we assess contributions from job loss, earnings reductions, expanded home tasks, and extended hours devoted to supervising children or elderly relatives in mediating the connection between gender and mental health outcomes.

Materials and Methods

Study design and data

This research employs cross-sectional data collected from a comprehensive national survey titled Vida en Pandemia (Life during Pandemic), encompassing participants from every region in Chile [19]. The data collection occurred between July 13 and 17, 2020, via telephone interviews—approximately 4.5 months following the identification of the country's initial COVID-19 case. The dataset includes responses from 2,545 adults, with 1,271 identifying as women, representing exactly 50 percent of the total sample. The sampling strategy was structured to achieve balance across age groups, gender, and residential municipalities, thereby enhancing representativeness along these key dimensions. As the dataset is fully deidentified, this analysis was not classified as human subjects research.

The survey captures a range of basic sociodemographic details about participants, such as age, gender, education attainment, socioeconomic indicators, and municipal location. It also provides in-depth insights into employment status, financial difficulties and economic well-being, household composition, and various self-assessed measures of psychological health.

Key dependent variables include binary indicators for diminished overall welfare, sleep disturbances, emotional distress, and persistent sadness. These are coded as 1 when respondents indicate experiencing the condition often or very often, and 0 otherwise. A central focus is placed on a variable capturing decline in welfare, set to 1 if participants report that their psychological health or general well-being has deteriorated relative to February (pre-pandemic period), and 0 otherwise. Although the survey is cross-sectional, this item enables assessment of self-perceived changes in psychological state. Additional outcomes pertain to mental health service use, including binary indicators for receiving a new diagnosis, initiating treatment, or starting prescription medication for psychological conditions since the onset of the pandemic. Two measures address financial vulnerability: one for job loss (coded as 1 if unemployment began after March 2020 directly due to the pandemic, and 0 otherwise), and another for reduced earnings (coded as 1 if reported income in May was lower than in February, and 0 otherwise). Finally, we include indicators for increased domestic responsibilities, specifically: 1) general housework, 2) child supervision, and 3) elder care, each coded as 1 if the respondent reports a rise compared to the early weeks of March before widespread restrictions, and 0 otherwise.

Analytical approach

To investigate gendered impacts of the COVID-19 crisis, we employ linear probability models (LPMs) specified as follows:

$$y_{ir} = A_r + \beta_1 female_i + \beta_2 X_i + \varepsilon_i \quad (1)$$

where denotes the outcome of interest for person i residing in region r, and $female_i$ is a binary indicator equal to 1 for female respondents and 0 for males. The vector X_i incorporates an array of covariates, comprising: age group dummies (18–24, 25–34, 35–44, 45–54, 55–64, and 65+); a dummy for being the household head; education categories (complete or incomplete primary, secondary, technical, bachelor's degree, master's or higher); an indicator for cohabitation or marriage; dummies for the presence of children under 12 or adults over 65 in the home; and indicators for private health coverage, public sector job, self-employment, and

immigrant background. Most models additionally adjust for pre-pandemic household income (in natural log form). All estimations incorporate region fixed effects (A_r) to control for time-invariant regional factors. Standard errors are calculated to be robust against heteroskedasticity.

The primary parameter of interest is β_1 on the female indicator, which quantifies the gender disparity—specifically, the difference between women and men—across outcomes related to psychological welfare, mental health indicators, financial instability, and increased domestic burdens.

Results and Discussion

Drawing on the dataset comprising 2,545 adults from Chile, this section presents the rates of self-assessed psychological welfare, engagement with mental health services, financial vulnerability, and rises in domestic responsibilities. In **Table 1**, Columns 1 and 2 display the mean and standard deviation for each binary outcome across the entire sample. Descriptive characteristics of participants separated by gender are provided in **Table 2**. Columns 1 and 2 show the mean and standard deviation for each variable among females (1,271 cases), while Columns 3 and 4 provide the corresponding figures for males (1,274 cases). Column 5 indicates the difference in means between the two groups, and Column 6 reports the p-value associated with that difference.

Several notable distinctions emerge between females and males. In particular, males in the sample tend to be somewhat older and more frequently identify as the head of the household. Females are less likely to indicate living with a partner, yet more likely to have children under the age of 12 in the home. Consistent with prevailing patterns in this setting, females report lower employment rates prior to the onset of the pandemic.

Table 1. Descriptive statistics outcome variables.

	Mean	Std. Dev.	Min	Max
Well-being				
Poor wellbeing	0.337	0.473	0	1
Sleeping problems	0.431	0.495	0	1
Deterioration	0.555	0.497	0	1
Distress	0.387	0.487	0	1
Sadness	0.345	0.476	0	1
Mental health				
Diagnosis	0.044	0.204	0	1
Treatment	0.036	0.187	0	1
Medication	0.043	0.202	0	1
Economic fragility				
Unemployment	0.333	0.471	0	1
Income loss	0.378	0.485	0	1
Household workload				
Household chores	0.684	0.465	0	1
Childcare	0.199	0.399	0	1
Elderly care	0.070	0.255	0	1

This table provides basic descriptive statistics—including the mean, standard deviation, minimum, and maximum values—for each of the outcome variables. The outcome variables are divided into four groups: well-being, mental health, economic fragility and increase in household workload.Vida en Pandemia, Chile 2020.

Table 2. Descriptive statistics control variables by gender.

	(1)		(2)		(3)	
	Female		Male		Difference	
	Mean	Std. Dev.	Mean	Std. Dev.	B	p
Age	43.777	15.149	45.744	16.554	1.968**	(0.002)
Household head	0.411	0.492	0.648	0.478	0.237***	(0.000)
Primary–incomplete	0.002	0.049	0.002	0.048	−0.000	(0.998)
Primary–complete	0.005	0.069	0.005	0.074	0.001	(0.784)
Secondary–incomplete	0.042	0.200	0.031	0.174	−0.010	(0.166)
Secondary–complete	0.154	0.361	0.148	0.355	−0.007	(0.640)
Technical–incomplete	0.054	0.225	0.055	0.228	0.001	(0.872)
Technical–complete	0.187	0.390	0.153	0.360	−0.034*	(0.022)
Bachelor–incomplete	0.136	0.343	0.142	0.349	0.006	(0.664)
Bachelor–complete	0.341	0.474	0.356	0.479	0.016	(0.407)
Master or more	0.079	0.271	0.107	0.309	0.027*	(0.018)
Living with a partner	0.482	0.500	0.586	0.493	0.103***	(0.000)
Young children in household	0.326	0.469	0.246	0.431	−0.079***	(0.000)
Elder in household	0.196	0.397	0.202	0.401	0.006	(0.713)
Private health insurance	0.290	0.454	0.349	0.477	0.059**	(0.001)

Public sector	0.158	0.365	0.124	0.330	−0.034*	(0.013)
Self-employed	0.205	0.404	0.214	0.410	0.009	(0.579)
Migrant	0.049	0.215	0.076	0.265	0.027**	(0.004)
Employed pre-pandemic	0.778	0.416	0.831	0.375	0.053***	(0.001)
Pre-pandemic income	1.101	1.112	1.159	1.024	0.058	(0.231)
Observations	1271		1274		2545	

This table presents basic descriptive statistics (mean and standard deviation) for all control variables, stratified by gender. Additionally, it includes the difference in means between males and females, along with the corresponding p-value for each difference. Pre-pandemic household income is expressed in thousands of Chilean pesos. Source: Vida en Pandemia survey, Chile 2020.

Multivariate analysis

Gender disparities in psychological welfare and mental health

We investigate the presence of substantial gender gaps in psychological welfare and mental health outcomes during the pandemic, after adjusting for an extensive array of covariates. The estimates presented in **Table 3** indicate that, throughout the crisis period, females exhibit a higher probability of reporting poor well-being (columns 1 and 2), encountering greater sleep disturbances (columns 3 and 4), and noting a more pronounced decline in mood relative to the pre-pandemic baseline (columns 5 and 6). Females also show elevated likelihoods of experiencing adverse affective states, including distress (columns 7 and 8) and sadness (columns 9 and 10).

It is worth noting that certain models incorporate controls for labor income prior to the pandemic, thereby limiting the analysis to respondents who reported earnings in February. In essence, these specifications compare employed females and males who were active in the workforce at the outset of the crisis, revealing that females still display poorer mental health and welfare indicators even after accounting for income levels and other attributes.

Table 3. Well-being.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Poor well-being		**Sleeping problems**		**Deterioration**		**Distress**		**Sadness**	
Female	0.0646***	0.0546**	0.109***	0.104***	0.105***	0.0887***	0.122***	0.111***	0.117***	0.105***
	[0.0200]	[0.0229]	[0.0206]	[0.0236]	[0.0205]	[0.0236]	[0.0202]	[0.0234]	[0.0200]	[0.0230]
Age (18–24)	0.161***	0.214***	0.298***	0.290***	0.181***	0.231***	0.328***	0.337***	0.199***	0.166***
	[0.0448]	[0.0567]	[0.0459]	[0.0567]	[0.0468]	[0.0570]	[0.0448]	[0.0562]	[0.0453]	[0.0567]
Age (25–34)	0.153***	0.160***	0.162***	0.179***	0.162***	0.170***	0.225***	0.233***	0.108***	0.120***
	[0.0339]	[0.0393]	[0.0350]	[0.0402]	[0.0368]	[0.0426]	[0.0336]	[0.0390]	[0.0336]	[0.0382]
Age (35–44)	0.0973***	0.0944**	0.125***	0.138***	0.0814**	0.0892**	0.150***	0.138***	0.0650*	0.0807**
	[0.0361]	[0.0410]	[0.0374]	[0.0423]	[0.0393]	[0.0447]	[0.0360]	[0.0408]	[0.0359]	[0.0403]
Age (45–54)	0.0907***	0.100**	0.130***	0.134***	0.108***	0.132***	0.129***	0.135***	0.0447	0.0619
	[0.0340]	[0.0391]	[0.0353]	[0.0404]	[0.0371]	[0.0429]	[0.0338]	[0.0392]	[0.0333]	[0.0378]
Age (55–64)	−0.00278	−0.0199	0.0789**	0.0782**	0.0570	0.0487	0.0689**	0.0489	0.0281	0.0394
	[0.0323]	[0.0364]	[0.0344]	[0.0390]	[0.0368]	[0.0423]	[0.0325]	[0.0370]	[0.0326]	[0.0364]
Household head	0.0323	0.0334	−0.0133	−0.0285	−0.0220	−0.0208	0.0252	0.0107	−0.000415	−0.0218
	[0.0215]	[0.0246]	[0.0222]	[0.0255]	[0.0221]	[0.0253]	[0.0218]	[0.0251]	[0.0215]	[0.0248]
Primary–incomplete	−0.104	−0.131	0.00262	−0.0564	0.0578	−0.000421	0.192	0.116	0.224	0.187
	[0.164]	[0.166]	[0.232]	[0.234]	[0.206]	[0.212]	[0.180]	[0.178]	[0.206]	[0.210]

Primary–complete	0.0193	0.0721	−0.104	−0.0714	−0.198	−0.201	0.00273	−0.0559	0.0818	−0.0358
	[0.136]	[0.174]	[0.137]	[0.166]	[0.125]	[0.150]	[0.134]	[0.156]	[0.138]	[0.175]
Secondary–incomplete	0.0234	0.0205	0.107*	0.108	−0.0382	−0.0483	0.0525	0.0239	0.0722	0.115*
	[0.0584]	[0.0668]	[0.0592]	[0.0678]	[0.0611]	[0.0697]	[0.0594]	[0.0677]	[0.0594]	[0.0690]
Secondary–complete	0.0119	−0.00529	0.0842**	0.0143	0.0676	0.0182	0.0549	−0.00708	0.0434	0.0167
	[0.0404]	[0.0462]	[0.0412]	[0.0477]	[0.0427]	[0.0499]	[0.0401]	[0.0471]	[0.0396]	[0.0461]
Technical–incomplete	−0.0274	−0.0241	0.114**	0.0686	0.0352	0.00973	0.0560	0.0403	0.113**	0.114*
	[0.0518]	[0.0598]	[0.0537]	[0.0624]	[0.0552]	[0.0642]	[0.0522]	[0.0604]	[0.0529]	[0.0605]
Technical–complete	−0.0229	−0.0340	0.0589	0.0328	0.0206	−0.0287	0.0443	−0.00578	0.0176	−0.00766
	[0.0391]	[0.0452]	[0.0400]	[0.0460]	[0.0414]	[0.0480]	[0.0390]	[0.0452]	[0.0382]	[0.0440]
Bachelor–incomplete	0.0263	0.0360	0.110***	0.0829*	0.109**	0.0896*	0.0748*	0.0456	0.0843**	0.0733
	[0.0422]	[0.0482]	[0.0425]	[0.0489]	[0.0436]	[0.0499]	[0.0418]	[0.0480]	[0.0411]	[0.0470]
Bachelor–complete	0.000593	−0.00108	0.0318	0.00312	0.0788**	0.0498	0.0281	−0.00812	0.00873	−0.00425
	[0.0342]	[0.0373]	[0.0347]	[0.0387]	[0.0363]	[0.0405]	[0.0336]	[0.0375]	[0.0330]	[0.0364]
Living with a partner	−0.0372*	−0.0183	0.00143	0.00650	0.0189	0.0413*	−0.0213	−0.00640	−0.0545**	−0.0511**
	[0.0212]	[0.0245]	[0.0218]	[0.0251]	[0.0218]	[0.0251]	[0.0214]	[0.0247]	[0.0213]	[0.0246]
Children in household	0.0148	−0.00185	0.0676***	0.0613**	0.0754***	0.0599**	0.00225	−0.0119	0.0279	0.0346
	[0.0229]	[0.0262]	[0.0233]	[0.0267]	[0.0231]	[0.0265]	[0.0230]	[0.0264]	[0.0227]	[0.0262]
Elder in household	−0.0207	−0.0425	0.00722	−0.00213	0.00391	0.0133	−0.00294	0.00181	−0.00538	−0.00260
	[0.0237]	[0.0271]	[0.0245]	[0.0285]	[0.0253]	[0.0297]	[0.0244]	[0.0282]	[0.0242]	[0.0278]
Private health insurance	−0.00671	0.0139	0.00164	0.00573	0.0354	0.0473*	0.00905	0.0424	−0.0125	0.00363
	[0.0217]	[0.0263]	[0.0226]	[0.0272]	[0.0228]	[0.0278]	[0.0224]	[0.0272]	[0.0217]	[0.0260]
Public sector	0.0529*	0.0856***	−0.0348	−0.0260	0.00534	0.0335	0.0309	0.0568*	0.0229	0.0495
	[0.0288]	[0.0330]	[0.0294]	[0.0336]	[0.0292]	[0.0329]	[0.0292]	[0.0334]	[0.0285]	[0.0325]
Self-employed	0.0108	0.00637	−0.0100	−0.00835	0.00819	0.00668	0.00103	−0.0152	0.00623	0.00583
	[0.0233]	[0.0267]	[0.0239]	[0.0276]	[0.0245]	[0.0284]	[0.0235]	[0.0268]	[0.0233]	[0.0269]
Migrant	−0.0800**	−0.0914**	−0.0828**	−0.0989**	−0.112***	−0.130***	−0.0398	−0.0551	0.00439	−0.0160
	[0.0364]	[0.0414]	[0.0390]	[0.0439]	[0.0421]	[0.0478]	[0.0385]	[0.0436]	[0.0382]	[0.0424]
Pre-pandemic income (log)		−0.104***		−0.0679**		−0.0717**		−0.128***		−0.0894***
		[0.0317]		[0.0330]		[0.0339]		[0.0335]		[0.0318]
Observations	2,545	1,943	2,545	1,943	2,545	1,943	2,545	1,943	2,545	1,943
R-squared	0.039	0.052	0.065	0.068	0.060	0.061	0.066	0.078	0.056	0.062

This table presents coefficients from Linear Probability Models (LPMs) estimating the likelihood of respondents indicating poor well-being, sleep disturbances, decline in overall welfare, or adverse emotions, regressed on the covariates shown. Every specification includes region fixed effects. Heteroskedasticity-robust standard errors appear in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Source: Vida en Pandemia survey, Chile 2020.

Table 3 reveals additional noteworthy patterns. Adults in younger age groups exhibit poorer welfare outcomes compared to those aged over 65. Having young children in the household is positively linked to sleep disturbances

and to reported declines in welfare. Lastly, higher pre-pandemic income levels are negatively correlated with all examined outcome measures.

Gender disparities in mental health diagnosis and treatment

We assess the existence of meaningful gender gaps in mental health service use during the crisis by examining reports of receiving a new mental health diagnosis and/or initiating treatment. Columns 1 and 2 in **Table 4** indicate that females have a higher probability than males of obtaining a new diagnosis of a psychological condition and of currently receiving treatment. Column 3 shows that females are also more likely than males to report using prescribed medication for mental health issues during the pandemic, though this association reaches significance only at the 10% level.

Table 4. Mental health diagnosis and treatment.

	(1)	(2)	(3)
	Diagnosis	**Treatment**	**Medication**
Female	0.0197**	0.0287***	0.0178*
	[0.00986]	[0.00920]	[0.00995]
Age (18–24)	0.0220	0.0396**	0.00260
	[0.0230]	[0.0194]	[0.0206]
Age (25–34)	0.0146	0.0296**	0.00342
	[0.0147]	[0.0116]	[0.0144]
Age (35–44)	0.0343*	0.0440***	0.0276
	[0.0179]	[0.0149]	[0.0181]
Age (45–54)	0.00636	0.0171	−0.00153
	[0.0160]	[0.0121]	[0.0151]
Age (55–64)	0.0186	0.0233**	0.0180
	[0.0158]	[0.0118]	[0.0163]
Household head	0.0144	0.00395	−0.00456
	[0.0110]	[0.00955]	[0.0109]
Primary–incomplete	−0.0267	−0.0223	−0.0488**
	[0.0213]	[0.0205]	[0.0241]
Primary–complete	0.108	0.101	0.0853
	[0.120]	[0.120]	[0.119]
Secondary–incomplete	0.0587*	0.0625*	0.00794
	[0.0348]	[0.0341]	[0.0320]
Secondary–complete	0.0404**	0.0127	−0.00706
	[0.0197]	[0.0183]	[0.0202]
Technical–incomplete	0.0297	−0.00252	0.00310
	[0.0255]	[0.0203]	[0.0272]
Technical–complete	0.0339*	0.0101	−0.0107
	[0.0186]	[0.0178]	[0.0196]
Bachelor–incomplete	0.0199	0.0178	0.00103
	[0.0187]	[0.0199]	[0.0222]
Bachelor–complete	0.000292	−0.00199	−0.0165
	[0.0140]	[0.0159]	[0.0185]
Living with a partner	0.0120	0.0161*	0.00878
	[0.0110]	[0.00960]	[0.0106]
Children in household	0.00399	−0.00829	−0.000840
	[0.0119]	[0.0108]	[0.0109]
Elder in household	0.00971	−0.00625	0.00347
	[0.0120]	[0.00932]	[0.0116]

Private health insurance	0.0215*	0.0106	0.0302**
	[0.0113]	[0.0109]	[0.0124]
Public sector	0.0298*	0.0363**	0.0247
	[0.0163]	[0.0162]	[0.0160]
Self-employed	−0.00391	0.00460	0.00739
	[0.0103]	[0.00953]	[0.0111]
Migrant	−0.00383	0.0331	−0.00634
	[0.0170]	[0.0209]	[0.0166]
Pre-pandemic income (log)	−0.00858	0.0241*	0.00821
	[0.0137]	[0.0141]	[0.0126]
Observations	1,943	1,943	1,943
R-squared	0.024	0.040	0.026

This table presents coefficients from Linear Probability Models (LPMs) estimating the likelihood of respondents reporting a new mental health diagnosis, initiation of new treatment, or starting new medication during the pandemic, regressed on the covariates listed. Every specification includes region fixed effects. Heteroskedasticity-robust standard errors appear in parentheses. ***, **, and * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. Source: Vida en Pandemia survey, Chile 2020.

Gender disparities in economic vulnerability and domestic responsibilities

We outline possible pathways explaining why females experienced greater declines in psychological welfare during the crisis compared to males in **Table 5**. Columns 1 and 2 assess whether females face higher risks of job loss and earnings reductions throughout the pandemic. The analysis is limited to participants who were employed before the outbreak (February 2020). Column 1 reveals that females have a greater probability than males of becoming unemployed as a direct result of COVID-19. Column 2 indicates that females are also more likely to experience income reductions. These findings support the view that the crisis imposed a disproportionately heavy burden on female employment and earnings, rendering women more susceptible to economic shocks.

Table 5. Economic fragility and household workload.

	(1)	(2)	(3)	(4)	(5)
	Unemployment	**Income loss**	**Household chores**	**Childcare**	**Elderly care**
Female	0.0476*	0.0695***	0.0417*	0.0393***	0.0163
	[0.0247]	[0.0251]	[0.0225]	[0.0121]	[0.0115]
Age (18–24)	0.238***	0.102	−0.0133	0.0695***	0.0390
	[0.0702]	[0.0730]	[0.0565]	[0.0259]	[0.0300]
Age (25–34)	0.184***	0.108**	0.0800**	0.0627***	0.0470**
	[0.0465]	[0.0522]	[0.0395]	[0.0172]	[0.0227]
Age (35–44)	0.132***	0.0719	0.0483	0.0568***	0.0474**
	[0.0482]	[0.0537]	[0.0416]	[0.0206]	[0.0235]
Age (45–54)	0.108**	0.0580	0.0320	0.0269	0.0497**
	[0.0467]	[0.0523]	[0.0403]	[0.0190]	[0.0229]
Age (55–64)	0.148***	0.0741	0.0419	0.0213	0.0675***
	[0.0472]	[0.0517]	[0.0389]	[0.0141]	[0.0238]
Household head	−0.0187	−0.0152	0.0202	0.0355***	0.0149
	[0.0267]	[0.0278]	[0.0239]	[0.0130]	[0.0121]
Primary–incomplete	−0.238	0.0760	−0.266	0.0532	0.0481
	[0.200]	[0.214]	[0.210]	[0.0523]	[0.128]
Primary–complete	0.193	0.0156	−0.129	−0.127	−0.0634*
	[0.195]	[0.158]	[0.174]	[0.124]	[0.0364]

Secondary–incomplete	0.214***	0.161**	−0.0804	0.0123	0.0507
	[0.0727]	[0.0751]	[0.0647]	[0.0316]	[0.0408]
Secondary–complete	0.0821*	0.138***	−0.125***	−0.00550	−0.0130
	[0.0495]	[0.0513]	[0.0454]	[0.0232]	[0.0216]
Technical–incomplete	0.00845	0.165**	−0.179***	−0.0294	0.0259
	[0.0631]	[0.0648]	[0.0605]	[0.0370]	[0.0298]
Technical–complete	0.0269	0.0991**	−0.131***	−0.0146	−0.0119
	[0.0454]	[0.0476]	[0.0430]	[0.0231]	[0.0197]
Bachelor–incomplete	0.0360	0.148***	−0.0607	0.00409	0.00786
	[0.0505]	[0.0532]	[0.0449]	[0.0218]	[0.0235]
Bachelor–complete	0.000619	0.0442	−0.0811**	−0.00947	−0.00745
	[0.0368]	[0.0401]	[0.0354]	[0.0178]	[0.0164]
Living with a partner	0.0320	−0.00631	0.0227	0.0140	−0.0126
	[0.0265]	[0.0269]	[0.0237]	[0.0127]	[0.0121]
Children in household	−0.0386	−0.0306	0.00127	0.692***	−0.00706
	[0.0276]	[0.0288]	[0.0258]	[0.0202]	[0.0123]
Elder in household	0.0401	0.0213	−0.000452	−0.00406	0.284***
	[0.0318]	[0.0331]	[0.0275]	[0.0129]	[0.0246]
Private health insurance	−0.0912***	−0.139***	0.0647**	0.00238	−0.0181
	[0.0277]	[0.0290]	[0.0263]	[0.0133]	[0.0128]
Public sector	−0.0930***	−0.131***	0.0215	0.0225	0.00403
	[0.0295]	[0.0316]	[0.0315]	[0.0177]	[0.0137]
Self-employed	0.125***	0.155***	0.0440*	−0.00543	0.00196
	[0.0295]	[0.0302]	[0.0264]	[0.0142]	[0.0146]
Migrant	0.0353	−0.0255	−0.0354	−0.00348	0.0222
	[0.0483]	[0.0462]	[0.0451]	[0.0238]	[0.0238]
Pre-pandemic income (log)	−0.122***	0.239***	−0.0407	0.000918	−0.0166
	[0.0348]	[0.0363]	[0.0313]	[0.0152]	[0.0172]
Observations	1,626	1,626	1,943	1,943	1,943
R-squared	0.102	0.095	0.032	0.642	0.202

This table presents coefficients from Linear Probability Models (LPMs) estimating the likelihood of respondents reporting unemployment, income reduction, a rise in household chores, a rise in childcare responsibilities, or a rise in elder care duties, regressed on the covariates listed. Every specification includes region fixed effects. Heteroskedasticity-robust standard errors appear in parentheses. ***, **, and * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. Source: Vida en Pandemia survey, Chile 2020.

Columns 3 to 5 assess whether women experienced greater increases than men in household duties, childcare, and eldercare throughout the pandemic. The analysis shows that women report larger rises in household tasks and childcare responsibilities, but there is no notable gender difference in time spent caring for older household members. Overall, women appear more likely to experience declines in mental health across multiple measures, even after adjusting for a wide set of factors. Two key mechanisms seem to explain these patterns: women are disproportionately affected by job loss and reductions in income due to COVID-19, and they are more likely to face an increased burden of household and childcare work.

Economic vulnerability, household responsibilities, and well-being

After examining gender differences in mental health, economic vulnerability, and domestic workload, we now explore how economic fragility and household responsibilities are linked to well-being. **Table 6** presents these findings, with columns 1 to 5 investigating the impact of unemployment, income loss, household chores, childcare, and eldercare on declines in well-being, respectively.

Table 6. Well-being deterioration, economic fragility and household workload.

Deterioration	(1)	(2)	(3)	(4)	(5)
Female	0.0830***	0.0830***	0.0848***	0.0864***	0.0867***
	[0.0233]	[0.0235]	[0.0236]	[0.0237]	[0.0236]
Age (18–24)	0.186***	0.215***	0.232***	0.226***	0.226***
	[0.0566]	[0.0572]	[0.0568]	[0.0572]	[0.0570]
Age (25–34)	0.135***	0.147***	0.163***	0.167***	0.165***
	[0.0430]	[0.0430]	[0.0426]	[0.0428]	[0.0426]
Age (35–44)	0.0603	0.0702	0.0846*	0.0859*	0.0834*
	[0.0447]	[0.0448]	[0.0444]	[0.0448]	[0.0446]
Age (45–54)	0.106**	0.116***	0.129***	0.130***	0.126***
	[0.0429]	[0.0430]	[0.0427]	[0.0429]	[0.0428]
Age (55–64)	0.0190	0.0336	0.0447	0.0474	0.0404
	[0.0423]	[0.0424]	[0.0420]	[0.0424]	[0.0423]
Household head	−0.0204	−0.0195	−0.0227	−0.0229	−0.0226
	[0.0251]	[0.0252]	[0.0252]	[0.0253]	[0.0253]
Primary–incomplete	0.0428	−0.00811	0.0247	−0.00357	−0.00629
	[0.199]	[0.207]	[0.204]	[0.210]	[0.204]
Primary–complete	−0.219	−0.203	−0.189	−0.193	−0.193
	[0.134]	[0.155]	[0.145]	[0.153]	[0.149]
Secondary–incomplete	−0.0740	−0.0744	−0.0407	−0.0490	−0.0545
	[0.0692]	[0.0696]	[0.0699]	[0.0695]	[0.0692]
Secondary–complete	0.0132	0.00193	0.0300	0.0185	0.0198
	[0.0493]	[0.0498]	[0.0498]	[0.0499]	[0.0499]
Technical–incomplete	0.0179	−0.00854	0.0266	0.0115	0.00657
	[0.0635]	[0.0645]	[0.0639]	[0.0638]	[0.0639]
Technical–complete	−0.0286	−0.0415	−0.0163	−0.0278	−0.0273
	[0.0473]	[0.0479]	[0.0479]	[0.0480]	[0.0480]
Bachelor–incomplete	0.0864*	0.0741	0.0953*	0.0894*	0.0886*
	[0.0494]	[0.0500]	[0.0498]	[0.0499]	[0.0501]
Bachelor–complete	0.0539	0.0448	0.0575	0.0504	0.0507
	[0.0400]	[0.0405]	[0.0403]	[0.0405]	[0.0405]
Living with a partner	0.0387	0.0426*	0.0392	0.0405	0.0429*
	[0.0248]	[0.0249]	[0.0249]	[0.0251]	[0.0250]
Children in household	0.0636**	0.0642**	0.0598**	0.0190	0.0608**
	[0.0262]	[0.0264]	[0.0265]	[0.0410]	[0.0266]
Elder in household	0.00921	0.0106	0.0133	0.0135	−0.0214
	[0.0294]	[0.0296]	[0.0294]	[0.0297]	[0.0327]
Private health insurance	0.0594**	0.0597**	0.0412	0.0471*	0.0495*
	[0.0276]	[0.0276]	[0.0277]	[0.0278]	[0.0278]
Public sector	0.0456	0.0452	0.0314	0.0321	0.0330
	[0.0330]	[0.0330]	[0.0328]	[0.0329]	[0.0328]
Self-employed	−0.0180	−0.0184	0.00252	0.00700	0.00644
	[0.0283]	[0.0285]	[0.0284]	[0.0284]	[0.0284]
Migrant	−0.135***	−0.128***	−0.126***	−0.129***	−0.132***
	[0.0478]	[0.0477]	[0.0477]	[0.0477]	[0.0474]
Pre-pandemic income (log)	−0.0495	−0.0997***	−0.0678**	−0.0717**	−0.0697**
	[0.0338]	[0.0342]	[0.0337]	[0.0339]	[0.0337]

Unemployment	0.160***				
	[0.0240]				
Income loss		0.120***			
		[0.0234]			
Household chores			0.0946***		
			[0.0243]		
Childcare				0.0592	
				[0.0442]	
Elderly care					0.122**
					[0.0484]
Observations	1,943	1,943	1,943	1,943	1,943
R-squared	0.082	0.074	0.069	0.062	0.064

The table presents results from a Linear Probability Model (LPM) estimating the likelihood that an individual reports a decline in well-being based on the variables shown. All models include controls for region fixed effects, and heteroskedasticity-robust standard errors are reported in parentheses. Significance levels are denoted by ***, **, and * for 1%, 5%, and 10%, respectively. Data source: Vida en Pandemia, Chile 2020.

The findings presented in **Table 6** demonstrate that mental health deterioration (the primary outcome variable of interest) is positively associated with economic vulnerability (captured through unemployment and income loss) and increased household responsibilities (including domestic chores and elder care within the household). In each instance, the coefficients achieve statistical significance and carry substantial economic implications.

The COVID-19 pandemic represents not only a worldwide health crisis precipitating a severe economic contraction but also imposes a profound psychological burden [20]. Recent systematic reviews highlight elevated rates of depression, anxiety, post-traumatic stress disorder, and general stress across multiple nations, with numerous studies indicating that women are disproportionately affected compared to men [5, 10, 11, 21].

Current research identifies two primary mechanisms underlying the pandemic's exacerbation of gender inequalities. The first highlights the disproportionate impact on sectors employing large proportions of women. In contrast to previous modern crises, the COVID-19 recession has resulted in greater job and income losses for women than for men [2, 22-24]. While earlier downturns predominantly affected male-dominated industries (e.g., construction), the coronavirus-induced recession has disproportionately harmed female-dominated sectors (e.g., hospitality and retail). The second mechanism, drawn primarily from evidence in high-income countries, stresses the pandemic's amplification of housework and family obligations—particularly childcare, which women predominantly manage—due to school closures [2, 4, 13, 14, 25, 26]. Nonetheless, cross-national variation in the pandemic's effects on gender inequality is evident, influenced by differences in women's labor force participation [1].

This study aimed to assess mental health deterioration and psychological well-being in Chile amid the COVID-19 pandemic, focusing on gender disparities and underlying mechanisms. The results reveal that women report higher levels of worsened mental health, reduced well-being, and greater mental health deterioration than men, even after adjusting for pre-pandemic income, education, age, and the presence of young children in the household. These patterns align with evidence from other countries [4–6, 8, 14, 26]. The findings reflect compounded vulnerability, building on pre-existing gender gaps in mental health: in 2017, depression prevalence was 10.1 percent among women versus 2.1 percent among men [27], while other sources indicate depressive symptoms affect 22.5 percent of adult women compared to 12.9 percent of adult men [28].

Additionally, women are more likely to report new (pandemic-onset) mental health diagnoses, to seek new treatment, and to use medication. The notably low utilization of mental health services during the pandemic is concerning: only 5 percent of women and under 3 percent of men report new diagnoses or treatment. Given the documented declines in well-being, this suggests barriers to access, likely linked to restricted availability of psychological services during lockdowns and delays in adapting to telemedicine.

The observed declines in mental health, well-being, and increases in sleep disturbances appear linked to women bearing a heavier burden from employment and income losses, as well as intensified demands for housework,

childcare, and homeschooling in households with young children [3].

Limitations

Several limitations apply to this analysis. The cross-sectional design of the data constrains inferences about temporal dynamics. Nevertheless, the survey captures mental health and psychological well-being during a period of extensive lockdown with limited mitigating policies in place, and key outcomes are framed as changes relative to the pre-pandemic period. Another limitation is the over-representation of employed women in the sample. However, existing literature underscores that the COVID-19 pandemic has been especially detrimental to working women, making this a pertinent focus. Moreover, the mental health and well-being measures employed were not clinically validated instruments. Future studies should examine the longitudinal trajectory of mental health and well-being and evaluate policies designed to alleviate economic pressures.

Conclusion

The findings provide an overview of gender disparities in the psychological consequences of COVID-19 in Chile. Women exhibit higher rates of mental health deterioration and diminished psychological well-being than men, patterns associated with unemployment, income loss, and heightened housework and childcare responsibilities. These results underscore intersecting vulnerabilities, where traditional gender roles and economic insecurity combine to pose distinct challenges for women during the pandemic. Policies that alleviate economic strain and target women's specific needs could help mitigate pandemic-related mental health declines. Moreover, enhancing access to mental health services is essential to prevent further escalation of mental illness.

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