Review of Radical Political Economics
2021, Vol. 53(4) 579–589

DOI: 10.1177/04866134211035565
rrpe.sagepub.com
SAGE

Work Time Matters for Mental Health: A Gender Analysis of Paid and Unpaid Labor in the United States

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Abstract

Based on Midlife in the United States (MIDUS) survey data for 2013–14, this paper examines the association between work time (inclusive of both paid and unpaid work time) and the mental health outcomes of men and women in the United States, controlling for economic and social buffers, education, and demographic factors. In the United States, even though women constitute close to half of the paid labor force, they still perform the lion's share of unpaid work. The findings indicate that total work time is positively related with emotional distress for women, while there is no statistically significant relationship for men. For women, the relationship between work time and mental health is primarily driven by unpaid work rather than paid work. Evaluating the relationship between mental health and both productive and reproductive work is critical to develop effective public policies toward gender equity and social well-being.

JEL classification: I14, J16, J01

Keywords

gender, mental health, work

1. Introduction

The World Health Organization (WHO) defines mental health as "a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community" (WHO 2018: 1). Since the early 2000s, the WHO has officially recognized that mental health constitutes a key component of health and social welfare, and in 2015 the UN Sustainable

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Date received: February 28, 2021
Date accepted: July 10, 2021

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Development Goals (SDGs)—in a historic turning point—included mental health under the health and well-being goal (WHO 2001; Patel et al. 2018).[1]

Mental health disorders have become a major source of public health concern worldwide. In 2017, according to the Global Burden of Disease Collaborative Network (2018), 970 million people around the world experienced a mental or substance use disorder, with anxiety and depression appearing as the most prevalent problems. Mental illnesses—defined by the National Institute of Mental Health (NIMH) as a mental, behavioral, or emotional disorder—range from mild to moderate to severe and are common in the United States as well. In 2018, nearly one in five US adults reported some type of mental illness; and consistent with global statistics, women reported a higher incidence of mental illness than men (25 percent compared to 16 percent) (NIMH 2021).

The contribution of economic factors—specifically, unemployment—to the development of various forms of psychological distress has been identified since the Great Depression (Jahoda, Lazarsfeld, and Zeisel [1933] 1971; Bakke 1934; Komarovsky 1940). Research on the relationship between the economy and mental health has intensified over the last four decades, and only grew after the 2008–9 global crisis (Dagher, Chen, and Thomas 2015; Jenkins et al. 2009; Piovani and Aydiner-Avsar 2015, 2019; Strandh et al. 2013; Stuckler et al. 2011). In the 2000s, the scope of empirical studies has broadened from a focus on the labor market only to an analysis of the effect of multiple economic variables on mental health, including poverty, inequality, household debt, and work time (Jenkins et al. 2009; Merva and Fowles 2009; Powels, Siegers, and Vlasblom 2008).

This paper adopts a gender perspective to evaluate the relationship between total work time, inclusive of both paid (or productive) and unpaid (or reproductive) work time, and emotional distress for the US middle-aged population using 2013–14 survey data. Using a logistic regression methodology, this paper finds that total work time is positively related with emotional distress for women, while there is no statistically significant relationship for men. For women, the relationship between work time and mental health is primarily driven by unpaid work rather than paid work. This paper provides an empirical contribution to the economics literature on work time and mental health by analyzing the case of the United States. The findings of the study highlight that work time matters for women's mental health, and that the disproportionate unpaid work burden held by women needs to be recognized and addressed with appropriate public policies.

2. Work Time and Mental Health

There is by now a growing body of the literature indicating that paid and unpaid work include both elements of fulfillment and sources of stress; the combination of demands and responsibility of productive and reproductive work life tend to be associated with reduced physical health and poorer mental health, in turn increasing the potential for work-life conflict and role overload (Allen et al. 2000; Hammer et al. 2004). On the one hand, employment can constitute a protective factor for mental health, by providing a sense of purpose, economic security, a source of social relations, and a structure to the day (WHO 2011). On the other hand, lack of control on the job, job insecurity, job stress, and long hours exercise a detrimental effect on mental well-being (Butterworth et al. 2011; Minnotte and Yucel 2018). Similarly, housework and care labor can be a source of pleasure and stress relief; however, as the demands increase, there is evidence that these activities lead to both physical and mental health problems, especially when care—which is less flexible—is involved and resources are scarce (MacDonald, Phipps, and Lethbridge 2005; Turcotte 2013).

[1]SDG3 targets the achievement of "healthy lives and well-being for all at all ages." Target 3.4 requests that countries "by 2030, reduce by one third premature mortality from noncommunicable diseases through prevention and treatment and promote mental health and well-being." Target 3.5 requests that countries "strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol."

The feminist literature highlights the importance of time use for quality of life, especially for working women. People who are more time-affluent systematically report greater happiness and life satisfaction. The length and intensity of the workday are thus important determinants of individual and social well-being (Floro 1995; Giurge, Whillans, and West 2020; Whillans et al. 2017).

Time can be conceptualized as a valuable and finite health resource. Time scarcity impacts well-being in that it constrains people in their access to activities that are critical to good health (e.g., exercise, building close relationships, sleep, play, etc.) and is directly linked to poorer mental health (Strazdins et al. 2011). Based on a Gallup poll conducted in the United States in 2015, 48 percent of respondents indicated that they do not have enough time to do what they want to do; this rate has remained substantially unvaried since the early 1990s (Newport 2015). In comparison to the average across OECD countries, US workers spend a higher number of hours per year in the workplace (OECD 2021). In comparison to men, however, women typically experience what is referred to as the "second shift"—in addition to paid work, women take on the majority of unpaid household and care work. On average, women in the United States spend close to 30 percent more time for household activities and almost double the amount of time caring and helping household children than their male counterparts (BLS 2020). Time scarcity is thus a real phenomenon for working women in the United States, which directly affects their well-being. This gender gap in total work time is explained by the persistence of gender norms that, despite women's active participation in the paid sphere of the economy, keep assigning women the primary responsibility for reproductive labor.

In this study, given the especially intense work burden for working women, we hypothesize that women—in comparison to men—disproportionately experience emotional distress due to both paid and unpaid work. Also important to note are the potentially detrimental psychological effects on men as well, resulting from disproportionately large number of paid works hours in the United States. The gender socialization process in the United States, in addition to consolidated historical patterns, however, still tend to reward a notion of masculinity associated with a provisioning role, willingness to work intensively—seen as a necessary instrument for upward social mobility—and refrain from exhibiting vulnerability; on this basis, we hypothesize that men are unlikely to report emotional distress associated with paid work time (Mayer 2018). Given the much lower involvement of men in household activities, we also expect men not to report distress due to home demands.

Since the 1990s, research has shown that a more equitable division of labor is associated with specific welfare gains for married women. It leads to improvements in the health of marital relationships, and to positive physical and mental health outcomes for married women (Orbuch and Eyster 1997; Barnett and Hyde 2001). Further empirical work for the United States shows that a more equitable distribution of paid and unpaid work is associated with fewer depressive symptoms for both husbands and wives, as a result of lower conflict and better individual emotions in a situation of equity (Kalmijn and Monden 2011). More recently, Fettro and Nomaguchi (2018) find that "role overload" (as measured by perceived life demands in relation to individual capacity) contributes to family-to-work conflict; this means that family responsibilities interfere with the demands of paid work. The difficulties associated with balancing family responsibilities with employment are found to be especially compelling for women living with young children. As demonstrated in the scholarship since the Great Depression, paid work is a key social determinant of health; Caputo, Pavalko, and Hardy (2020), however, go further and find that paid work generates not only current, but also future health benefits. They show that paid work during midlife is a predictor of longevity and improved health for women at an older age. More specifically, the health benefits of employment are found to last for the next sixteen to twenty-five years (independent on whether the subjective experience in the workplace was positive or negative).

There are empirical studies on the relationship between work time and mental health for countries other than the United States as well. In Canada, MacDonald, Phipps, and Lethbridge (2005)

find that an increase in paid work time is stress-inducing for both men and women, but that this does not equally hold for unpaid work time. Their analysis shows that women's greater time demands on unpaid work are a greater contributor to women's—rather than men's—stress (especially when housework and elder care—rather than child care—are involved). Similarly, Liu, MacPhail, and Dong (2018) find that the unpaid care responsibilities that women have assumed in China after the dismantling of the collectives under Mao is associated with a greater work burden and worse mental health for prime-age, working women (vis-à-vis male peers). In Ireland, McGinnity and Russell (2007) find that work burdens are particularly high among individuals who are self-employed, employees, parents of young children, and those caring for adults; the results indicate that work commitments among these categories have led to time poverty and feelings of being rushed and stressed among both men and women.

3. Empirical analysis

This study examines the association between total work time—and its disaggregation in paid work and unpaid work time (which includes both household chores and care labor)—and the mental health outcome of men and women, using Midlife in the United States (MIDUS) survey data for 2013–14.[2]

Our dependent variable—mental health outcome—measures emotional distress.[3] Paid work time measures the total weekly hours of work at primary and secondary jobs. Unpaid work time refers to total weekly hours of work on unpaid assistance provided to parents, in-laws, children, grandchildren, other family members, and friends, and time spent on household chores. Total work time is the sum of paid and unpaid weekly work time.

The analysis controls for economic and social factors that can affect mental health. The full list of the independent variables and the way they are calculated are presented in the appendix. Economic buffers include household income to control for one's financial status, health insurance coverage to control for one's access to health care services, and job characteristics—such as occupation and sector—to take into account the quality of work life. We incorporate into our model a number of control variables as social buffers. The level of trust in the neighborhood is introduced as a proxy for one's quality of social relations. Marital status and the number of children under 18 living in the same household represent both emotional support factors as well as degree of care responsibilities in one's family. Perceived respect from others for the unpaid work done at home is introduced as a proxy for the value given to one's unpaid work responsibilities in the family. Demographic variables (i.e., age, gender, and race), education, and self-rated health status (only including those declaring good to excellent health) are introduced as additional control variables to reduce omitted variable bias, following similar empirical studies in the economics literature (see, for instance, Liu, MacPhail, and Dong 2018). The sample covers only the employed individuals for whom there are data on both paid and unpaid work time, and the model is estimated using logistic regression methodology.[4]

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[2]The methodology of this study is consistent with the empirical approach used by Liu, MacPhail, and Dong (2018).

[3]Specifically, the dependent variable is coded as 1 if the responded agrees, or strongly agrees, with the following statement: "The demands of everyday life often get me down"; otherwise, the variable assumes a value equal to 0.

[4]Restricting the sample only to those employed may create a sample selection bias. This is typically addressed using Heckman's (1979) two-stage approach, which is commonly used in the labor economics scholarship while estimating wage equations using household labor force survey. The MIDUS survey is structured to collect information on health and well-being outcomes of middle-aged Americans. For this reason, it is not suited to estimating a labor force participation equation, which would be required by the Heckman's correction.

Endogeneity is a potential issue in the analysis due to reverse causality or unobserved heterogeneity.[5] Due to data limitations, it is not possible to control for potential endogenous relationship between work time and emotional distress. Both the cross-sectional nature of the dataset and the limited set of variables do not allow for finding a suitable instrumental variable at the individual level.[6] Since employed individuals with emotional distress are likely to work fewer hours than those without, our estimates should be considered as the lower bound of the association between work time and emotional distress. It should also be emphasized that our results should be interpreted as statistically significant correlations, and not as causal relationships, due to the cross-sectional nature of the data.

Estimations are first made for the total sample, and then for men and women separately, to evaluate potential gender differences in the mental health effects associated with work time. We estimate two alternative specifications: the first one includes total work time; the second one decomposes total work time in paid work and unpaid work time.[7] Table 1 presents the estimation results for the odds ratios from logistic regression analysis for each specification and sample. Work time variables represent the key variables of interest among the independent variables.

According to the findings presented in table 1, an increase in total work time—including both paid and unpaid work—has a positive and statistically significant association with the likelihood of developing emotional distress. The odds of developing emotional distress are 8.3 percent higher if total work time increases by ten hours.[8] Being a woman is also positively related to the likelihood of developing emotional distress, which indicates that women are more prone to emotional distress than men, controlling for other factors. Specifically, the odds of developing emotional distress for women are 1.6 times those for men.

When the relationship between total work time and the likelihood of reporting emotional distress is estimated separately for men and women, the relationship holds only for women. According to the estimates, the odds of developing emotional distress are 18.5 percent higher for a woman working ten hours or more per week (including both paid and unpaid work time) with respect to someone who does not.[9]

By decomposing total work time into paid and unpaid work time, we find that paid work time does not show a statistically significant association with emotional distress for either men or women. It is instead the number of hours spent on unpaid work that contributes to women's emotional distress. Specifically, the odds of developing emotional distress increase by 22 percent in response to a ten-hour increase in unpaid work time, and by 11 percent if unpaid work time increases by five hours.[10] The economic significance of work time variables is higher for women than the whole sample.

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[5]This implies that one's work time could be affected by one's emotional distress.

[6]In our analysis, this would require finding an instrument that is correlated with work time, that is uncorrelated with the error term in the estimation equation, and that is not itself an explanatory variable.

[7]According to descriptive statistics for our sample, 23 percent of men and 34 percent of women report emotional distress. Average hours of paid work are 41 hours per week for men and 34 hours per week for women; average hours of unpaid work are 15 hours per week for men and 23 hours per week for women.

[8]The odds ratio for a one-hour change in work time is 1.008. Since we are interested in the significant differences in the hours of work, the odds ratio for a change of ten hours has been calculated in the following way: e^(10*0.008) = 1.083.

[9]The odds ratio for a one-hour change in work time is 1.017. Since we are interested in the significant differences in the hours of work, the odds ratio for a change of ten hours has been calculated in the following way: e^(10*0.017) = 1.185.

[10]The odds ratio for a one-hour change in work time is 1.021. Since we are interested in the significant differences in the hours of work, the odds ratios for a change of ten hours and five hours, respectively, are calculated as follows: e^(10*0.020) = 1.221 and e^(5*0.020) = 1.105.

Table 1. Work Time and Emotional Distress: Logistic Regression Results.

		All		Women		Men	
	Variable	(1)	(2)	(1)	(2)	(1)	(1)
Work time	Total work time	1.008**		1.017***		1.002	
		(0.004)		(0.006)		(0.006)	
	Paid work time		1.009		1.009		1.012
			(0.006)		(0.010)		(0.009)
	Unpaid work time		1.008*		1.021***		0.990
			(0.005)		(0.007)		(0.008)
Demographic	Female	1.608***	1.617***				
		(0.276)	(0.285)				
	Age	1.002	1.002	0.998	0.994	1.005	1.012
		(0.011)	(0.012)	(0.018)	(0.018)	(0.018)	(0.018)
	White	1.376	1.377	1.830	1.782	1.038	1.028
		(0.428)	(0.428)	(0.801)	(0.789)	(0.484)	(0.476)
Other	College graduate	0.912	0.913	1.521	1.506	0.577**	0.597*
		(0.176)	(0.176)	(0.445)	(0.439)	(0.160)	(0.167)
	Self-rated health	0.726***	0.726***	0.805**	0.807**	0.634***	0.632***
		(0.049)	(0.049)	(0.072)	(0.072)	(0.066)	(0.066)
Economic buffers	Income: $40k–79k	1.015	1.013	1.122	1.139	0.828	0.839
		(0.396)	(0.395)	(0.640)	(0.667)	(0.481)	(0.501)
	Income: $80k–119k	1.066	1.062	1.302	1.395	0.737	0.701
		(0.423)	(0.423)	(0.765)	(0.835)	(0.431)	(0.427)
	Income: $120k–179k	0.645	0.642	0.671	0.719	0.537	0.509
		(0.272)	(0.272)	(0.419)	(0.459)	(0.334)	(0.328)
	Income: $180k–249k	0.803	0.798	1.204	1.305	0.548	0.487
		(0.366)	(0.365)	(0.845)	(0.926)	(0.351)	(0.323)
	Income: $250k+	0.814	0.810	1.038	1.137	0.571	0.557
		(0.359)	(0.359)	(0.675)	(0.749)	(0.364)	(0.366)
	Manufacturing	0.686	0.688	0.662	0.652	0.756	0.836
		(0.266)	(0.268)	(0.475)	(0.469)	(0.362)	(0.402)
	Services	0.771	0.775	1.058	1.004	0.863	0.980
		(0.249)	(0.252)	(0.656)	(0.622)	(0.347)	(0.399)
	Low-skilled white collar	0.884	0.886	1.458	1.420	0.507**	0.520**
		(0.176)	(0.176)	(0.396)	(0.384)	(0.161)	(0.166)
	Blue collar	0.855	0.856	2.961	2.924	0.558	0.578
		(0.262)	(0.262)	(2.095)	(2.048)	(0.199)	(0.205)
	Health insurance covered	1.245	1.242	2.140	2.294	1.296	1.419
		(0.633)	(0.632)	(1.688)	(1.920)	(0.865)	(0.960)
Social buffers	Married	0.691	0.693	0.506*	0.470*	1.285	1.284
		(0.227)	(0.229)	(0.203)	(0.193)	(0.847)	(0.862)
	Number of children	1.194*	1.195*	0.952	0.937	1.353**	1.394**
		(0.114)	(0.115)	(0.143)	(0.141)	(0.178)	(0.189)
	Have no trust in the community	2.640***	2.637***	2.088**	2.147**	2.587***	2.563***
		(0.531)	(0.532)	(0.697)	(0.735)	(0.685)	(0.689)
	Respect for unpaid work	0.826	0.826	0.633*	0.633*	0.998	1.010
		(0.162)	(0.162)	(0.171)	(0.172)	(0.295)	(0.302)
	Constant	2.151	2.068	0.448	0.694	7.051	2.847
		(2.505)	(2.533)	(0.796)	(1.265)	(10.60)	(4.688)
	Observations	890	890	398	398	492	492

Note: Income class at less than $40k is the base group for the family income variable; agriculture is the base group for sector; high-skilled white collar is the base group for occupation. Odds ratios are presented in the table. Robust standard errors for the odds ratios are presented in parentheses.
*$p < .1$. **$p < .05$. ***$p < .01$.

Consistent with our hypothesis, the empirical results indicate that women, in comparison to men, experience a negative association between mental health and a heavy work burden. The primary responsibility for housework and care labor is the driver of this outcome. This indicates that the traditional gender division of labor is perpetuated at the expense of women's well-being.

Among the social buffers, an increase in the number of children in the household has a statistically significant and positive association with the likelihood of developing emotional distress for the whole sample. Specifically, an increase in the number of children in the household increases the odds of developing emotional distress by 19.5 percent. This seems to reflect that the negative effect of the burden resulting from care responsibilities outweighs the positive effect of overall emotional support.

When we distinguish between men and women, we find that this negative effect holds only for men. Hence, for women, the emotional support effect seems to balance out the care burden associated with having children. Being married has a negative and statistically significant association with developing emotional distress only for women. The odds of developing emotional distress for a married woman are around half of those for a non-married woman.

Similarly, poor quality of social relations—proxied by lack of trust in one's neighborhood—has a positive and statistically significant association with the likelihood of developing emotional distress. This effect holds for both men and women. The odds of developing emotional distress for someone with no trust in their neighborhood are 2.64 times those of someone with trust. Perceived respect from others for unpaid work at home has a negative and statistically significant association with emotional distress only for women. The odds of developing emotional distress for someone with perceived respect are 0.63 times those of someone lacking it. This implies that for women being respected for their unpaid work within the household matters, with positive implications on their psychological well-being.

Interestingly, economic variables overall do not seem to have a statistically significant association with the likelihood of developing emotional distress for both men and women. In contrast, having a positive, self-rated, health status has a uniformly negative and statistically significant association with the likelihood of developing emotional distress for men and women. Finally, being a college graduate has a mitigating effect on the likelihood of experiencing emotional distress only for men. The odds of developing emotional distress for a college graduate are 0.60 times those of a non-college graduate among men.

The key results of this analysis indicate that unpaid work burden adversely affects women's mental well-being for the middle age population in the United States. Social buffers, considered as a group, act as a protective factor for both men and women. Economic buffers and demographic factors, other than sex, are less relevant in explaining mental distress among the middle age population in the United States.

4. Concluding remarks

This paper uses the MIDUS survey data for 2013–14 to explore the implications of both paid and unpaid work responsibilities on emotional distress for the middle age population, with the goal of evaluating whether there is evidence of gender differences. As the literature indicates, time use is a critical determinant of well-being, of which mental health has been increasingly recognized as a core component.

The results indicate that heavier work burden is positively associated with the likelihood of developing emotional distress only for women and not men. The data indicate that this outcome is associated with unpaid, not paid, work. These findings are consistent with the empirical findings by MacDonald, Phipps, and Lethbridge (2005) on Canada and Liu, MacPhail, and Dong (2018) on China; as presented in section 2, both studies find as well that unpaid work has adverse effects on women's mental well-being. Social buffers also have a statistically significant association with emotional distress among the middle age population in the United States.

Our results are based on the analysis of cross-sectional data; a panel data analysis would be desirable to further this type of analysis by addressing possible endogeneity and identify causal relationships. It would also be interesting for future research to investigate how the quality of employment could mediate the relationship between paid work and mental health, and to examine—through a comparative analysis—how different country-specific contexts contribute to inform this relationship, which could also help identify effective policy interventions.

The findings of this analysis point to a gendered relationship between work time and mental health among middle age employed individuals in the United States. This indicates the importance of introducing measures to help reduce the work burden for women and promote a more equitable gender division of labor, in turn supporting social welfare. To move in this direction, it is essential for the state to address the gap between wages and productivity in the United States (a long historical problem and a key driver of long work hours in the United States), and provide social service—such as child care, elder care, and other family support services—which would greatly contribute to reduce women's unpaid work burden.

Appendix

Variable Definitions

Table A.1. List of variables.

	Variable name	Variable definition
Wok time	Total work time	Respondent's sum of hours spent on paid work and unpaid work
	Paid work time	Respondent's hours worked for pay at main job
	Unpaid work time	Respondent's hours spent for unpaid assistance (given to children, parents, in-laws, other family members and friends) and household chores
Demographic	Female	Respondent's sex (1: female; 0: male)
	Age	Respondent's age
	White	Respondent's race (1: white; 0: other races)
Other	College graduate	Respondent's education (1: college or more; 0: less than college)
	Self-rated health	Respondent's rating of current health status on a scale of 10 (0: worst; 10: best),
Economic	Income	Household total income from wage, pension, social security, and other sources (1: less than $40k; 2: $40k-79k; 3: $80k-119k; 4: $120k-179k; 5: $180k-249k; 6: 250k+)
	Sector	Respondent's current industry as major groups, aggregated into 3 categories: 1: agriculture/mining/construction; 2: manufacturing; 3: services
	Occupation	Respondent's current occupation as major groups - aggregated into 3 categories: 1: high-skilled white; 2: low-skilled white; 3: blue collar
	Health insurance covered	Respondent's status of health insurance coverage (1: covered; 0: not covered)
Social	Married	Respondent's marital status (1: married; 0: separated/ divorced/widowed/never married)
	Number of children	Respondent's number of children living in household
	Have no trust in the community	No experience warm and trusting relationships (1: agrees with the statement; 0: disagrees with the statement)
	Respect for unpaid work	Others respect my work at home (1: agrees with the statement; 0: disagrees with the statement)

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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References

Allen, Tammy D., David E. L. Herst, Carly S. Bruck, and Martha Sutton. 2000. Consequences associated with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology* 5 (2): 278–308.

Bakke, Edward W. 1934. *The Unemployed Man: A Social Study*. New York: Dutton.

Barnett, Rosalind C., and Janet S. Hyde. 2001. Women, men, work, and family: An expansionist theory. *American Psychologist* 56 (10): 7817–96.

Bureau of Labor Statistics (BLS). 2020. *American Time Use Survey (ATUS)*. 2019. Washington, DC: US Bureau of Labor Statistics. Accessed at: https://www.bls.gov/news.release/pdf/atus.pdf.

Butterworth, Peter, Liana S. Leach, Lyndall Strazdins, Sarah C. Olsen, Brendan Rodgers, and Dorothy H. Broom. 2011. The psychosocial quality of work determines whether employment has benefits for mental health: Results from a longitudinal national household panel survey. *Occupational and Environmental Medicine* 68 (11): 806–12.

Caputo, Jennifer, Eliza K. Pavalko, and Melissa A. Hardy. 2020. Midlife work and women's long-term health and mortality. *Demography* 57: 373–402.

Dagher, Rada K., Jie Chen, and Stephen B. Thomas 2015. Gender differences in mental health outcomes before, during, and after the Great Recession. *PLOS ONE* 10 (5): e0124103.

Fettro, Marshal N., and Kei Nomaguchi. 2018. Spousal problems and family-to-work conflict among employed US adults. *Journal of Family and Economic Issues* 39 (2): 277–96.

Floro, Maria S. 1995. Women's well-being, poverty, and work intensity. *Feminist Economics* 1 (3): 1–25.

Giurge, Laura M., Ashley V. Whillans, and Colin West. 2020. Why time poverty matters for individuals, organisations, and nations. *Nature Human Behavior* 4 (10): 993–1003.

Global Burden of Disease Collaborative Network. 2018. *Global Burden of Disease Study 2017 Results*. Seattle, WA: Institute for Health Metrics and Evaluation (IHME). Accessed at: http://www.healthdata.org/sites/default/files/files/policy_report/2019/GBD_2017_Booklet.pdf.

Hammer, T. Helland, Per Øystein Saksvik, Kjell Nytrø, Hans Torvatn, and Mahmut Bayazit. 2004. Expanding the psychological work environment: Workplace norms and work-family conflict as correlates of stress and health. *Journal of Occupational Health Psychology* 9 (1): 83–97.

Heckman, James J. 1979. Sample selection bias as a specification error. *Econometrica* 47 (1): 153–61.

Jahoda, Marie, Paul F. Lazarsfeld, and Hans Zeisel. [1933] 1971. *Marienthal: The Sociography of an Unemployed Community*. New Brunswick, NJ: Transaction.

Jenkins, Rachel, Chris Fitch, Malcolm Hurlston, and Frances Walker. 2009. Recession, debt, and mental health: Challenges and solutions. *Mental Health in Family Medicine* 6 (2): 85–90.

Kalmijn, Matthijs, and Christiaan W. S. Monden. 2011. The division of labor and depressive symptoms at the couple level: Effects of equity or specialization? *Journal of Social and Personal Relationships* 29 (3): 358–74.

Komarovsky, Mirra. 1940. *The Unemployed Man and His Family: The Effect of Unemployment upon the Status of the Man in Fifty-Nine Families*. New York: Dryden.

Liu, Lan, Fiona MacPhail, and Xiao-yuan Dong. 2018. Gender, work burden, and mental health in post-reform China. *Feminist Economics* 24 (2): 194–217.

MacDonald, Martha, Shelley Phipps, and Lynn Lethbridge. 2005. Taking its toll: The influence of paid and unpaid work on women's well-being. *Feminist Economics* 11 (1): 63–94.

Mayer, David M. 2018. How men get penalized for straying from masculine norms. *Harvard Business Review* October 8. Accessed at: https://hbr.org/2018/10/how-men-get-penalized-for-straying-from-masculine-norms.

McGinnity, Frances, and Helen Russell. 2007. Work rich, time poor? Time-use of women and men in Ireland. *Economic and Social Review* 38 (3): 323–54.

Merva, Mary, and Richard Fowles. 2009. Economic outcomes and mental health. In *Back to Shared Prosperity: The Growing Inequality of Wealth and Income in America*, ed. Ray Marshall, 69–75. Armonk, NY: M. E. Sharpe.

Minnotte, Krysta L., and Deniz Yucel. 2018. Work-family conflict, job insecurity, and health outcomes among US workers. *Social Indicators Research* 139 (2): 517–40.

National Institute of Mental Health. 2021. *Mental Health Information*. Last updated: January 2021. Accessed at: https://www.nimh.nih.gov/health/statistics/mental-illness.shtml.

Newport, Frank. 2015. Americans' perceived time crunch no worse than in past. *Gallup News* December 31. Accessed at: https://news.gallup.com/poll/187982/americans-perceived-time-crunch-no-worse-past.aspx.

OECD. 2021. *Hours Worked (Indicator)*. Accessed at: https://doi.org/10.1787/a452d2eb-en.

Orbuch, Terri L., and Sandra L. Eyster. 1997. Division of household labor among black couples and white couples. *Social Forces* 76 (1): 301–32.

Patel, Vikram, Shekhar Saxena, Crick Lund, Graham Thornicroft, Florence Baingana, Paul Bolton, Dan Chisholm, Pamela Y. Collins, Janice L. Cooper, Julian Eaton, Helen Herrman, Mohammad M. Herzallah, Yueqin Huang, Mark J. D. Jordans, Arthur Kleinman, Maria Elena Medina-Mora, Ellen Morgan, Unaiza Niaz, Olayinka Omigbodun, Martin Prince, Atif Rahman, Benedetto Saraceno, Bidyut K. Sarkar, Mary De Silva, Ilina Singh, Dan J. Stein, Charlene Sunkel, and Jürgen Unützer. 2018. *The Lancet Commission on global mental health and sustainable development. The Lancet* 392 (10157/October 27): 1553–98.

Piovani, Chiara, and Nursel Aydiner-Avsar. 2015. The 2008/09 economic crisis: The impact on psychological well-being in the USA. *Forum for Social Economics* 44 (1): 18–45.

———. 2019. The gender impact of unemployment on mental health: A micro analysis for the United States. *Forum for Social Economics*. Accessed at: https://doi.org/10.1080/07360932.2018.1535991.

Powels, Babette, Jacques Siegers, and Jan Dirk Vlasblom. 2008. Income, working hours, and happiness. *Economics Letters* 99 (1): 72–74.

Strandh, Mattias, Anne Hammarström, Karina Nilsson, Mikael Nordenmark, and Helen Russel. 2013. Unemployment, gender and mental health: The role of the gender regime. *Sociology of Health and Illness* 35 (5): 649–65.

Strazdins, Lyndall, Amy L. Griffin, Dorothy H. Broom, Cathy Banwell, Rosemary Korda, Jane Dixon, Francesco Paolucci, and John Glover. 2011. Time scarcity: Another health inequality? *Environment and Planning A* 43 (3): 545–59.

Stuckler, David, Sanjay Basu, Marc Suhrcke, Adam Coutts, and Martin McKee. 2011. Effects of the 2008 recession on health: A first look at European data. *The Lancet* 378 (July 9): 124–25.

Turcotte, Martin. 2013. *Family Caregiving: What Are the Consequences? Insights on Canadian Society*. Minister of Industry. Accessed at: https://www150.statcan.gc.ca/n1/pub/75-006-x/2013001/article/11858-eng.htm.

Whillans, Ashley V., Elizabeth W. Dunn, Paul Smeets, Rene Bekkers, and Michael I. Norton. 2017. Buying time promotes happiness. *Proceedings of the National Academy of Sciences* 114 (32): 8523–27.

World Health Organization (WHO). 2001. *World Health Report—Mental health: New Understanding, New Hope*. Geneva: World Economic Organization. Accessed at: https://www.who.int/whr/2001/en/whr01_en.pdf?ua=1.

———. 2011. *Impact of Economic Crisis on Mental Health*. Geneva: World Economic Organization. Accessed at: https://www.euro.who.int/__data/assets/pdf_file/0008/134999/e94837.pdf.

———. 2018. *Mental Health: Strengthening Our Response*. Fact sheets. Geneva: World Health Organization, March 30. Accessed at: https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response.

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