

Housework, paid work and psychiatric symptoms*

Trabalho doméstico, trabalho assalariado e sintomas psiquiátricos

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Keywords

Workload, psychology.[#] Mental health.[#] Women, working, psychology.[#] Work hours.[#] – Gender. Psychiatric symptoms.

Abstract

Objective

To evaluate the hypothesis that work burden, the simultaneous engagement in paid work and unpaid family housework, is a potential risk factor for psychiatric symptoms among women.

Methods

A cross-sectional study was carried out with 460 women randomly selected from a poor area of the city of Salvador, Brazil. Women between 18 to 70 years old, who reported having a paid occupation or were involved in unpaid domestic activities for their families, were eligible. Work burden-related variables were defined as: a) double work shift, i.e., simultaneous engagement in a paid job plus unpaid housework; and b) daily working time. Psychiatric symptoms were collected through a validated questionnaire, the QMPA.

Results

Positive, statistically significant associations between high (>7 symptoms) QMPA scores and either double work shift (prevalence ratio – PR=2.04, 95% confidence interval – CI: 1.16, 2.29) or more than 10 hours of daily work time (PR=2.29, 95% CI: 1.96, 3.43) were found after adjustment for age, marital status and number of pre-school children.

Conclusions

Major correlates of high QMPA scores are work burden variables. Being married or having pre-school children are also associated with high QMPA scores only when associated with work burden.

Descritores

Carga de trabalho, psicologia.[#] Saúde mental.[#] Trabalho feminino, psicologia.[#] Jornada de trabalho.[#] Saúde da mulher. Estado civil. – Gênero. Duração do trabalho. Sintomas psiquiátricos.

Resumo

Objetivo

Avaliar a hipótese de que a dupla carga de trabalho é um fator de risco potencial para sintomas psiquiátricos em mulheres.

Métodos

Estudo transversal realizado com 460 mulheres aleatoriamente selecionadas de uma área pobre da cidade de Salvador, BA, Brasil. Foram selecionadas mulheres entre 18 e 70 anos de idade, que referiram ter ocupação paga ou estar envolvidas com trabalho doméstico não remunerado para as suas famílias. A sobrecarga de trabalho foi analisada como: a) dupla jornada de trabalho, i.e., envolvimento simultâneo em trabalho pago e trabalho não pago para a família; e b) duração da jornada diária total de trabalho. Os

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sintomas psiquiátricos foram registrados por meio de um questionário psiquiátrico devidamente validado, o Questionário de Morbidade Psiquiátrica de Adultos (QMPA).

Resultados

Foram encontradas associações positivas, ajustadas por idade, estado civil e filhos em idade pré-escolar, entre escores altos do QMPA (>7 sintomas) e dupla jornada de trabalho (razão de prevalência, RP=2,04, 95% intervalo de confiança, IC: 1,16, 2,29) e mais que 10 horas de jornada de trabalho (RP=2,29, 95% IC: 1,96, 3,43).

Conclusões

Os mais importantes fatores em associação com escores altos do QMPA foram as variáveis relacionadas ao trabalho. Ser casada ou ter crianças em idade pré-escolar na família estavam associadas a escores altos do QMPA apenas quando em combinação com a sobrecarga de trabalho.

INTRODUCTION

Studies show that employed women are less likely to report psychological symptoms,¹⁰ anxiety,¹⁰ depressive symptoms,^{5,6,10} psychological distress² or psychosomaticism⁵ than non-employed women. However, research findings concerning mental health and double work shift, which is the simultaneous engagement in paid work and unpaid family housework or child care, are contradictory.¹⁷ For instance, having children was found to be a major predictor of depressive symptoms among employed women.² In contrast, there are data suggesting that being a parent decreases the level of depressive symptoms for both employed and non-employed, currently or ever married women.⁶ In a study of single women, a higher prevalence of depressive symptoms was found in the non-employed group when compared to those who were employed.⁵

Research findings on the effect of working time on psychological well-being are inconsistent. For example, Warr & Parry¹⁷ (1982) observed that women employed full-time reported fewer depressive symptoms than those in part-time jobs, although the difference was not statistically significant. However, women who had both little social support and a part-time job had the highest level of depressive symptoms. Other studies report that full-time employed married women have more depressive symptoms or psychiatric symptoms than part-time married ones.⁶

A few studies have addressed these questions in Latin American countries, where values toward families or job conditions and opportunities may play distinct roles in the development of mental distress. In an epidemiological study carried out in a poor urban area, a non statistically significant association between prevalence of mental dysfunction and number of children was reported.¹¹ In this exploratory study, the effect of work burden, double work shift and total daily working time on women's mental health is examined, taken into con-

sideration marital status, having any pre-school children and a paid job.

METHODS

The data used was collected in a community-based household survey carried out in a poor neighborhood of the city of Salvador, capital of Bahia, in Northern Brazil. From 470 randomly selected families, all 677 adult women were asked to participate in an additional investigation on women's work conditions. During an initial household visit, socio-demographic data, such as age, marital status, race, religion, education level, migration history, and income, were obtained from a family informant for each family member. Individual interviews were carried out to collect data on the characteristics of their current work, defined as paid activities performed outside their household, and housework done for their own families. Because of the small numbers and predictable differences in work characteristics, women who reported being currently unemployed (i.e., who were looking for a paid job in the past month), being exclusively a student, or who were younger than 18 or older than 70 years of age were excluded.

To assess mental health status, a psychiatric symptoms questionnaire, the "Questionário de Morbidade Psiquiátrica de Adultos" (Questionnaire for Psychiatric Morbidity among Adults, QMPA), widely used in mental research in Brazil was administered to a well-informed member of the family, usually the mother, who provided data for every family member. The use of proxy respondents to QMPA was evaluated and results show acceptable reliability in community-based surveys.¹³ Designed to be used by non-medical personnel, the QMPA comprises 43 questions about symptoms of anxiety/somatization, irritability/depression, cognition/sensory-perception, and previous treatment for mental disorders. Based on the answers to the questions, recorded as yes=1/no=0 with reference to relevant symptoms perceived during the

past year, scores were calculated by summing positive responses. QMPA scores were analyzed with a cutoff point set at seven, which has been used to identify potential cases of psychiatric disturbances in other population morbidity studies.¹³

Variable definitions

Women's work burden was analyzed with two variables: double work shift and total working time. Double workers were women who reported to have a paid job as their main or secondary occupation and were also in charge of all or part of their household chores. Non-double workers, or homemakers, comprised women who were exclusively in charge of housework for their families. Total working time represents the summation of housework and paid working time, in hours per day, analyzed as a dichotomous variable: high working time comprises women with more than 10 hours of total daily working time, and low working time applies to those who reported 10 or less hours of total work per day. Family variables included: pre-school children at home (children up to six years of age living at home); marital status (married – those women who have a husband or a consensual relationship –, single, widowed or divorced); housework sharing (women who have someone of their family to help them with housework chores as compared to those who perform it in isolation).

Statistical analysis

Age-adjusted prevalence ratios (Mantel-Haenszel method) and their corresponding Test-based 95% confidence intervals were calculated to evaluate the association of work burden and family variables with high QMPA scores (>7). To assess the association of work burden with marital status and pre-school children and having psychological symptoms, prevalence ratios were estimated for each group of combined variables, taking as reference group unmarried women with no pre-school children and without double work shift or high total working time. Potential confounding and effect modifier variables were examined by logistic regression models fitted using backward procedures, starting with a saturated model with all participants and respective product terms for effect modifiers. Potential confounders variables were identified by reviewing the literature and empirically, by examining whether they were associated with each of the main independent variables among non-cases, and simultaneously with their association with high QMPA scores among non-exposed. Potential confounders were dropped from the saturated model when point estimates for the main independent variables changed less than 20%.¹² Potential effect modifiers were: so-

cioeconomic variables, namely, per capita family income, education level, and race; and family-related variables, such as pre-school children at home, marital status and housework sharing. Effect modifier variables were retained in the final model, if the corresponding maximum likelihood ratio test yielded a *p*-value ≤ 0.20 . Although high correlations were predictable among covariates and independent variables, particularly between double work shift and high total working time, there was no evidence of collinearity. Delta method was used to obtain confidence intervals for prevalence ratios estimated with logistic regression parameters. Regression assumptions and fitness of the final model were examined by deviance analysis using SAS version 6.12.¹⁴

RESULTS

The original study population comprised all 677 adult women from 470 families selected in the survey. In this analysis, 101 women were excluded due to psychiatric diagnoses other than minor psychological disorders (*n*=18), or because they were employers or career professionals (*n*=8), retired (*n*=12), older than 70 years of age (*n*=18) or younger than 18 years (*n*=45). Three subjects showing inconsistent occupational data and one with missing data were also excluded. Of the remaining 572 women, 23 were unemployed and looking for a job, 78 were engaged only in paid employment, 11 had two paid occupations and reported no housework, and consequently, were not eligible.

In the final study population of 460 women, 241 (52.4%) were classified as having a double work shift, and 223 (48.5%) reported more than 10 hours of total working time per day. Most women with double work shifts reported paid jobs as their main occupation (231 out of 241, 95.8%). The major occupation was domestic services (57.7%), and only 15 (6.2%) were engaged in skilled occupations. Homemakers (*n*=219) comprised women who reported housework for their families as their only occupation (206 out of 219, 94.1%) or who were also students (*n*=13, 5.9%). It is worth noticing that double work shift and high total working time were inversely associated, i.e., among double shift workers, the proportion of women who reported having worked more than 10 hours a day was 45.7%, and among homemakers, it was estimated as 54.3%, a statistically non-significant difference.

Women reporting double work shift were older, had higher per capita family income and more help in housework of other women in their families than those who were homemakers (Table 1). Regarding daily working time, women who spent more than 10 hours per day at

work were older, have fewer years of education, were more likely to be married, and had less help on housework as compared to the reference group.

The association of working a double shift, being married and having pre-school children at home corresponds to an age-adjusted PR=2.03 (95% CI: 1.07, 3.83) for psychiatric symptoms (Table 2). Neither marriage nor pre-school children at home in the absence of double work shift is significantly associated with high QMPA scores (Table 2). Results regarding

high daily total working time differ from those obtained for double work shift workers (Table 3). Unmarried women with no pre-school children at home but having a double work shift were more likely to have high QMPA scores than those in the reference group (PR=1.82, 95% CI: 1.01, 3.29). There was a borderline positive association between high total working time and high QMPA scores (PR=1.57, 95% CI: 0.97, 2.56) among married women with pre-school children at home. None of the other variables in isolation were associated with high QMPA scores.

Table 1 - Sociodemographic characteristics of the study population according to work burden variables.

Variables	Double work-shift		Only homemakers		Total work-time		High	
	Double workers N=241	%	Only homemakers N=219	%	Low (≤10 hrs/day) N=237	%	(>10 hrs/day) N=223	%
Age (years)								
18-25	65	27.0	94	42.9	100	42.2	59	26.5
26-39	86	35.7	60	27.4	67	28.3	79	35.4
>39	90	37.3	65	29.7	70	29.5	85	38.1
Education								
Elementary	141	58.5	131	59.8	120	50.6	152	68.2
More than elementary	100	41.5	88	40.2	117	49.4	71	31.8
Family income (US\$/month)								
<270.10	101	41.9	130	59.4	115	48.5	116	52.0
>270.00	140	58.1	89	40.6	122	51.5	107	48.0
Race								
Black	177	73.4	153	69.9	179	75.5	151	67.7
Non-black	64	26.6	66	30.1	58	24.5	72	32.3
Marital status								
Non-married	110	45.6	84	38.4	125	52.7	69	30.9
Married	131	54.4	135	61.6	112	47.3	154	69.1
Pre-school children								
None	114	47.3	86	39.3	115	48.5	85	38.1
One or more	127	52.7	133	60.7	122	51.5	138	61.9
Housework sharing								
Yes	144	59.8	150	68.5	100	42.2	66	29.6
No	97	40.2	69	31.5	137	57.8	157	70.4

Table 2 - Prevalence ratio for the association of high QMPA scores and combinations of double work-shift, marital status and pre-school children at home.

Subgroups	N (460)	Age-adjusted*	
		PR	95% CI
Non married, no children, no double workshift	48	—	—
Non-married, no children, with double workshift	62	1.82	(1.01, 3.29)
Non-married, with children, with double workshift	48	1.21	(0.49, 3.00)
Married, no children, with double workshift	52	1.11	(0.54, 2.29)
Married, no children, no double workshift	38	0.94	(0.42, 2.08)
Married, with children, no double workshift	97	1.61	(0.79, 3.27)
Non-married, with children, no double workshift	36	0.87	(0.28, 2.76)
Married, with children, with double workshift	79	2.03	(1.07, 3.83)

*Mantel-Haenszel adjustment for age.
PR – Prevalence ratio.
CI – Confidence Interval.

Table 3 - Prevalence ratios for the association of high QMPA scores and combinations of high total work-time, marital status and pre-school children.

Subgroups	N (460)	Age-adjusted*	
		PR	95% CI
Non married, no children, no high work-time	74	—	—
Non-married, no children, with high work-time	36	1.57	(0.86, 2.86)
Non-married, with children, with high work-time	33	1.19	(0.58, 2.41)
Married, no children, with high work-time	49	1.53	(0.85, 2.75)
Married, no children, no high work-time	41	0.70	(0.33, 1.52)
Married, with children, no high work-time	71	1.17	(0.66, 2.08)
Non-married, with children, no high work-time	51	0.77	(0.37, 1.62)
Married, with children, with high work-time	105	1.57	(0.97, 2.56)

*Mantel-Haenszel adjustment for age.

In the simultaneous analysis of both work burden variables, using logistic regression modeling, education as an effect modifier (Likelihood Ratio Test=3.004, p-value=0.083). Logistic regression estimates stratified by education level (Table 4) showed that among women with more than elementary education, double work shift was the only factor associated with high QMPA scores (PR=2.04, 95% CI: 1.16, 3.61). Among less educated women, work burden was also the single factor associated with high QMPA scores, but in this case, it is the high total working time that was associated with high number of psychiatric symptoms (PR=2.29 95% CI: 1.96, 3.43). In both education level groups, being married or having pre-school children were not associated with high QMPA scores. In addition, no changes in the point estimates for the main associations were observed when these family-related variables were dropped from the model under consideration.

DISCUSSION

Based on these study findings, in poor urban areas of Northern Brazil, work burden as measured by double work shift or high total daily working time may be predictors of high QMPA scores among women. Although family characteristics, such as being married or having pre-school age children at home, are not individually associated with psychiatric symptoms, they are contributing factors when in combination with double work shift or high daily working time. Married women with pre-school children and a double work shift were almost twice as likely to have high QMPA scores as those who were unmarried and have no pre-school children or double work shift. Differences in results concerning double work shift and total daily working time longer than 10 hours shown that they represent distinct aspects of women's work load. In addition, education level was an important mediating factor in the relationships between work, family and women's mental health. Double workers had lower daily working time than home-

makers, which could be resulting of arrangements within families for an acceptable balance on work responsibilities. When both double work shift and total working time are analyzed together in the group of women with a higher education level, a home outside employment is more important than long hours of work to be associated with high QMPA scores. In contrast, among those who had a lower education level, the strongest correlate of psychological distress was extended daily working time and children, although marriage did not appear to additionally increase distress.

These results disagree with previous findings that employed women have better mental health than homemakers^{2,5,10,16,17} or that employed married women are at greater risk of psychological symptoms than employed unmarried women.^{10,17} There was no evidence in support that having children is a potential risk^{2,3,16} or benefit⁶ for women's mental health, regardless of the work burden. It is worth noticing that the work variable analyzed is not employment but the combination of unpaid housework and a paid job. And that these results should be interpreted taking into consideration the cultural and socioeconomic context of the study population. The health benefits of homemakers as compared to double workers may come from differences in the nature or quality of the paid jobs. For instance, the majority of occupations reported were low-skilled, underpaid and probably performed under precarious conditions. Informal jobs and domestic occupations, such as home cleaners, maids or nannies, are the most common occupations for women in this area.¹³ Thus, the idea that employment is beneficial for women's mental health because it provides another source of life satisfaction¹ may not be true in this population. On the contrary, these research findings are in accordance with the hypothesis that employment may have a detrimental effect on women's mental health when the quality of employment is low,¹⁷ and that having multiple roles is not a blessing but a potential risk for mental symptoms.

Table 4 - Results from logistic regression for the simultaneous association of high QMPA scores with both work burden variables (double work-shift, high total work-time), family variables and age, according to education.

Model*	Education			
	More than elementary (N=188)		Elementary or less (N=272)	
	PR	95%CI	PR	95%CI
Referent	1.00	—	1.00	—
Double work-shift	2.04	(1.16, 3.61)	1.23	(0.87, 1.73)
High total work-time	0.80	(0.46, 1.36)	2.29	(1.96, 3.43)
Being married	1.29	(0.76, 2.19)	0.95	(0.65, 1.38)
Having pre-school age children	1.35	(0.70, 2.59)	0.74	(0.49, 1.12)
Age 26-39 years	0.97	(0.37, 2.53)	1.24	(0.76, 2.01)
Age > 39 years	1.11	(0.46, 2.69)	1.01	(0.64, 1.59)

*Double work-shift, high total work-time being married and having pre-school children were all coded as 1=yes, 0=no; Age was modeled as two dummy variables corresponding to age 26-39 years, and age >39 years with referent category as 18-25 years. CI - Confidence Intervals estimated by using Delta method.

The results presented here are consistent with recent research findings⁹ indicating that motherhood brings life satisfaction because of friendship, companionship, sense of security and housework sharing as children grow older. However, it can also be stressful due to lack of time for resting and conflicts due to the need to reconcile job schedules and child-care. Indeed, poor marital satisfaction relies on the quality of the relationship with the husband, the perceived importance of marriage and the availability of alternative sources of social support. Although marriage, pre-school children and double work shift were analyzed by considering their possible interactions and potential distinct effects, there were no data on quality or perception of family roles that could be helpful to draw more conclusive inferences.

The unexpected inverse association between double work shift and high total working time suggests that family dynamics operate to create an acceptable balance in work. For instance, it may be evidence of a reduction in domestic duties for employed women, and increasing domestic participation by those who remain at home. In addition, domestic service is the most common paid occupation in this community, which often implies that workers must live outside their own households.

Interestingly, the relationships between women's mental health and double work shift and high total daily working time differ according to education level. It has been reported that double work shift may cause role conflicts for married women because of tensions generated by marriage demands and the need to work outside the home⁴. Here, double work shift was a potential risk for women's mental health, but only among women with an education level more than elementary. It seems that having a higher education level exacerbates the hazardous effects of the double work shift, which may be explained by a stronger sense of discordance between family and work conditions among better educated women or their abilities and job requirements. In contrast, among less educated women, high total working time is the more relevant factor, even after adjustment for double work shift, which could be interpreted as resulting from working for long periods of time under poor conditions that often characterize low-skilled occupations.

An explanation for the empirical evidence that women engaged in more than one work shift are at higher risk of psychological distress than women who are not in the labor force is the possible strain or conflicts generated by multiple social roles.¹⁵ In contrast, the "double satisfaction source" theory or expansion

hypothesis⁴ assume that employment is an extra source of satisfaction and accomplishment feelings and give access to social support. Women who are only involved in housework may feel frustrated because they generally have better abilities than those often required for housework, which is usually performed in isolation, leading to feelings of loneliness, as well as low prestige condition and financial dependency on the family breadwinner.⁴ Women's perception of family having a central role in their lives, job control, autonomy or quality, and the interactions between employment and family have recently been incorporated in theoretical models in this research area.¹⁵ It is worth noticing that feelings of loneliness or low prestige may not be associated with housework in this community, because active social interaction in daily life, known as having a protective effect against psychological distress, has been reported as an important part of the women's lives.¹³

The limitations of inferences drawn from measures of association, estimated by comparisons between employed and non-employed groups, have been widely discussed.¹⁰ Employment, as an analytical category itself, has been criticized¹⁷ because it represents only a rough approximation of the enormous variety of occupational and job characteristics. Another potential limitation on the inferences drawn from multiple role hypothesis studies is misclassification bias due to a possible tendency of housewives to report more psychological symptoms than employed women, because they may conceal symptoms to prevent job loss.¹⁷ Moreover, some of the problems discussed before in the multiple role research remain unsolved. For instance, it is plausible to assume that the same selection factors known as healthy worker effect may occur in relation to the type of women's working day. For example, women who already have ill mental health may prefer or are forced to occupy less demanding jobs, such as part-time employment. Consequently, although these research findings are in accordance with the expected, they are based on a cross-sectional study, therefore no definitive conclusions can be made. These findings, however, are unique in the sense that years of work are rarely used in research addressing these questions, and no data were found on duration of work and mental outcomes.

One major limitation in the present knowledge of the effect of multiple roles on women's mental health is underscored by these data: the supposed equivalence between social roles and work burden. Employment may be beneficial to women's well-being but it depends on the work condition, quality of its organization, and the person's subjective perceptions. Fo-

cusing on characteristics or perceptions that may define the cultural importance, work values and using more qualitative-oriented research it may be possible to better understand potential adverse health effects and the women's life quality, an information that needs to be incorporated in health promotion programs.

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