

WORK ABILITY AMONG FORMAL AND INFORMAL CAREGIVERS: A CROSS-SECTIONAL STUDY

Araujo L, Alonso MS, Dias A, Bernardes JM

Public/Collective Health Graduate Program, Botucatu Medical School, São Paulo State University (UNESP), Botucatu, Brazil

Family caregivers have **worse health-related quality of life** than paid caregivers;
 Family caregivers also have **worse work ability** than paid caregivers;
 Factors associated with health-related quality of life and work ability are similar;
 Policy implications suggest mixing individual and social interventions for caregivers.

BACKGROUND

Caregiving activities may negatively impact work ability (WA). However, few studies have evaluated this outcome among caregivers and even fewer differentiated between formal (financially compensated for their caregiving work) and informal (provide care without financial compensation, role typically filled by family members or friends) caregivers. Therefore, the aims of this study were to (a) evaluate differences between formal and informal caregivers' WA and (b) to identify factor associated with WA among caregivers.

METHODS

A cross-sectional study was conducted among 188 Brazilian caregivers (97 formal and 91 informal). Data was obtained from January to August 2023. The following variables were evaluated: caregiver's sociodemographic characteristics, caring activities, burden of care, social support, and WA. Patients' functional independence level was also assessed. Two logistic regression models were adjusted to explore WA associated factors. Firstly, a hierarchical model, evaluated the association between WA and caregivers' sociodemographic characteristics, caring activities, and patients' functional independence level. The second model evaluated the association of caregiver burden and social support with the outcomes. These two distinct regression models were employed because burden of care and social support permeated both the proximal and distal levels. Including these factors in the hierarchical model could introduce confounding effects due to multicollinearity

RESULTS

The level of WA was significantly different between informal and formal caregivers ($p = 0.002$). WA was classified as being less than good in 51.7% and 25.8% of informal and formal caregivers, respectively, according to the Work Ability Index. Age (OR 1.057, 95% CI 1.028-1.087), Body Mass Index (OR 1.108, 95% CI 1.001-1.226), physical fitness (OR 0.257, 95% CI 0.116-0.570) and hours of care (OR 1.079, 95% CI 1.018-1.143) were associated with WA in the hierarchical model. In the second model, moderate (OR 6.358, 95% CI 2.677-15.096) and high (OR 21.829, 95% CI 8.174-58.295) burden of care and social support (OR 0.565, 95% CI 0.384-0.832) were associated with WA.

CONCLUSIONS

Public health policies aiming the prevention, promotion, and restoration of caregivers' WA are urgent and should aim the reduction of hours dedicated to caregiving activities and the improvement of caregivers' physical fitness, they should also promote or strengthen caregivers' social support.

RESULTS (TABLES)

Table 1. Odds ratio (OR), 95% confidence interval (CI) and p-values obtained in the simple hierarchical logistic regression model and in the multiple hierarchical logistic regression model for HRQoL and WA.

	for HRQoL			for WA		
	OR	95% CI	p-value	OR	95% CI	p-value
Simple hierarchical logistic regression model						
Caregiver type (ref.: paid)						
Family	1.956	1.093-3.501	0.024	3.076	1.666-5.680	<0.001
Sex (ref.: male)						
Female	1.792	0.884-3.634	0.106	1.744	0.827-3.679	0.144
Age	1.030	1.008-1.053	0.008	1.060	1.034-1.086	<0.001
Skin color (ref.: non-white)						
White	0.675	0.369-1.234	0.202	1.225	0.673-2.338	0.475
Body mass index	1.144	1.055-1.241	0.001	1.129	1.045-1.219	0.002
Marital status (ref.: single)						
Married or living with a partner	1.432	0.736-2.786	0.290	1.855	0.894-3.850	0.097
Others	1.534	0.654-3.597	0.325	3.905	1.582-9.638	0.003
Number of children	1.272	1.036-1.562	0.021	1.379	1.118-1.700	0.003
Household size	1.111	0.922-1.339	0.267	1.050	0.569-1.268	0.613
Personal income (ref.: Up to one minimum wage)						
Up to two minimum wages	0.637	0.317-1.281	0.206	1.135	0.540-2.384	0.739
Three or more minimum wages	1.054	0.475-2.340	0.897	2.807	1.237-6.371	0.014
Do not know/prefer not to disclose	1.045	0.287-3.812	0.947	2.667	0.719-9.890	0.142
Distal level						
Family income (ref.: Up to one minimum wage)						
Up to two minimum wages	0.352	0.096-1.294	0.116	2.955	0.717-12.182	0.134
Three or more minimum wages	0.319	0.096-1.063	0.063	2.615	0.696-9.824	0.155
Do not know/prefer not to disclose	0.203	0.055-0.754	0.017	2.955	0.717-12.182	0.134
Education level (ref.: middle school)						
High school	0.927	0.363-2.367	0.873	2.267	0.777-6.614	0.134
College	0.880	0.326-2.374	0.800	2.361	0.770-7.237	0.133
Religiousness (ref.: no)						
Yes	1.433	0.688-3.028	0.332	1.447	0.661-3.167	0.356
Smoking (ref.: yes)						
No	0.548	0.251-1.198	0.132	1.298	0.588-2.866	0.519
Alcohol consumption (ref.: yes)						
No	0.855	0.479-1.528	0.598	0.967	0.534-1.753	0.913
Medication use (ref.: yes)						
No	0.431	0.232-0.798	0.007	0.386	0.208-0.716	0.003
Self-perceived physical fitness (ref.: precarious)						
Good	0.230	0.120-0.442	<0.001	0.257	0.136-0.483	<0.001
Caregiving experience length	1.041	1.000-1.083	0.050	1.061	1.018-1.105	0.005
Number of care recipients	1.012	0.978-1.046	0.501	0.951	0.914-0.990	0.014
Daily caregiving hours	1.064	1.016-1.113	0.008	1.087	1.037-1.139	<0.001
Bathing (ref.: no)						
Yes	0.944	0.453-1.970	0.879	0.840	0.401-1.760	0.644
Feeding (ref.: no)						
Yes	1.216	0.614-2.406	0.575	0.867	0.435-1.726	0.684
Manual patient handling (ref.: no)						
Yes	1.252	0.599-2.616	0.551	0.840	0.401-1.760	0.644
(Un)Dressing (ref.: no)						
Yes	1.178	0.550-2.525	0.674	0.946	0.438-2.042	0.887
Walking assistance (ref.: no)						
Yes	0.792	0.358-1.755	0.566	0.779	0.353-1.719	0.537
Toileting (ref.: no)						
Yes	1.422	0.689-2.936	0.341	0.940	0.453-1.949	0.867
Household tasks (ref.: none)						
One	1.778	0.571-5.538	0.321	x	x	x
Two	2.000	0.592-6.756	0.264	0.480	0.094-2.458	0.378
Three	2.723	1.319-5.624	0.007	2.000	0.546-7.327	0.295
Care recipients' functional independence	1.000	0.991-1.009	0.964	1.005	0.996-1.014	0.256
Multiple hierarchical logistic regression model (final model)						
Medication use (ref.: yes)						
No	0.449	0.229-0.880	0.020	-----	-----	-----
Self-perceived physical fitness (ref.: precarious)						
Good	0.275	0.140-0.543	<0.001	-----	-----	-----
Daily caregiving hours	1.057	1.006-1.111	0.028	-----	-----	-----
Age				1.057	1.028-1.087	<0.001
Body mass index	-----	-----	-----	1.108	1.001-1.226	0.048
Self-perceived physical fitness (ref.: precarious)						
Good	-----	-----	-----	0.257	0.116-0.570	0.001
Daily caregiving hours	-----	-----	-----	1.079	1.018-1.143	0.011

Table 2. Odds ratio (OR), 95% confidence interval (CI) and p-values obtained in the simple logistic regression model and in the multiple logistic regression model for HRQoL and WA.

	for HRQoL			for WA		
	OR	95% CI	p-value	OR	95% CI	p-value
Simple logistic regression model						
Caregiver burden (ref.: mild)						
Moderate	5.143	2.382-11.106	<0.001	6.670	2.961-15.024	<0.001
Severe	14.483	5.505-38.105	<0.001	23.925	9.280-61.679	<0.001
Perceived social support	0.619	0.450-0.852	0.003	0.512	0.369-0.711	<0.001
Multiple logistic regression model						
Caregiver burden (ref.: mild)						
Moderate	5.908	2.613-13.362	<0.001	6.358	2.677-15.096	<0.001
Severe	12.502	4.677-33.424	<0.001	21.829	8.174-58.295	<0.001
Perceived social support	0.666	0.462-0.960	0.029	0.565	0.384-0.832	0.004

ADDITIONAL KEY INFORMATION

Author Contact Information: João Marcos Bernardes joao.m.bernardes@unesp.br

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