

ORIGINAL ARTICLE

Perceived work ability and work-family conflict in healthcare workers: An observational study in a teaching hospital in Italy

Giuseppe La Torre MD^{1,2}  | Daniela Grima RN¹ | Ferdinando Romano MD¹ | Antonella Polimeni PD³

¹Department of Public Health and Infectious Diseases, Sapienza University of Rome, Rome, Italy

²Unit of Occupational Medicine, Teaching Hospital Policlinico Umberto I, Rome, Italy

³Department of Oral and Maxillofacial Sciences, Sapienza University of Rome, Rome, Italy

Correspondence:

Giuseppe La Torre, Department of Public health and Infectious Diseases, Sapienza University of Rome, Piazzale Aldo Moro 5, 00185 Rome, Italy.
Email: giuseppe.latorre@uniroma1.it

Funding information

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Abstract

Objective: The aim of the study was to investigate the variables associated with work ability, work-family conflict and the relationship between these variables.

Methods: An observational prospective study was conducted and involved 436 employees of a Teaching Hospital in Rome. Data collection was performed using the following tools: the Work Ability Index (WAI) and the Work-to-family conflict and Family-to-work conflict Scale (WFC—FWC Scale). Data were analyzed through univariate analysis of variance (ANOVA) and multivariate linear regression, using the SPSS software version 25.

Results: A direct relationship of the WFC score with two variables (female gender and physicians) and an inverse relationship with other two variables (age and administrative staff) were found. There is a direct relationship between the FWC score and the variable “having sons”. The WFC and FWC scores showed a direct relationship between them.

The Work Ability presented an almost significant association only with the profession variable, in which administrative staff, followed by physicians, presented a higher WAI score with respect to other professional categories, such as nurses.

Conclusions: Wellbeing intervention for health workers should be directed mainly to women, older workers and those with sons. In addition, more attention should be given to nurses, who showed lower work ability scores.

KEYWORDS

healthcare workers, work ability index, work-family conflict

1 | INTRODUCTION

In all developed countries, the population aging is an inevitable process¹ and depends on both the reduction of the birth rate and on longer life expectancy. Demographic aging inevitably leads to the progressive aging of the workforce: in particular, the data on employment in public health show an

increase in the mean age of National Health Service (NHS) employees equal to 50.7 years.¹

In 1980, the aging of the working population led the Finnish Institute for Occupational Health (FIOH) to develop the concept of work ability and the Work Ability Index (WAI) to measure workers' perceptions of their physical, mental and social health and their ability to meet work demands.² Poor work

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2021 The Authors. *Journal of Occupational Health* published by John Wiley & Sons Australia, Ltd on behalf of The Japan Society for Occupational Health

ability is predictive of sick leave, early retirement and disability pension³⁻⁵ as well as depression, work-related stress and emotional exhaustion.⁶⁻⁸ On the other hand, high work ability is associated with high productivity and worker well-being.⁹

To understand the concept of work ability and the dimensions associated with it, the Finnish researchers presented a global conceptual model, the “Work Ability House”, represented by a four-story house and a roof, inserted in a generic external environment.

The surrounding environment also affects work ability, including the family.¹⁰ Making work and family life compatible has become increasingly important,¹¹ considering the greater number of women engaged in work activities,¹² the increasing number of single parents in the workforce, as well as the number of couples in which both partners are employed.^{13,14}

In the scientific literature this construct is called Work-Family Conflict. The first researchers who dealt with the work-family conflict were Greenhaus and Beutell, who defined it as “*a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect*”.¹⁵

The Work-Family Conflict consists of two dimensions: the conflict of working role on family role (Work to family conflict - WFC) and the conflict of family role on working role (Family to work conflict—FWC).¹⁶ The involvement of the person in more roles requires the attribution of resources more to one role than the other, therefore, the effectiveness of the individual in some roles is compromised¹⁷ and the experience of conflict is inevitable.¹⁸

In this conflict, the organization plays a fundamental role: it is defined *family-friendly* when it supports the integration between family life and working life of its employees¹⁹ and guarantees fairness for the work expectations of employees.²⁰

We wanted to study the relationship between WAI and WFC in the healthcare sector due to both physical and emotional workload as well as to the social importance of the healthcare roles in the society. We explored indirect and direct associations between socio-economic variables and job roles and self-reported work ability and their impact on WFC.

Briefly, the objectives of this study are:

1. To identify the variables (ie, socio-economic variables and job roles) associated with Work Ability and with Work-Family Conflict;
2. To identify the inter-relationship between Work Ability and Work-Family Conflict.

2 | MATERIALS AND METHODS

2.1 | Study design and sampling

An observational prospective study was conducted between November 2019 and March 2020 to assess the perceived

work ability and the conflict between work and family in the employees of the Teaching Hospital Policlinico Umberto I in Rome. Both questionnaires (Work Ability Index and Work-to-family conflict and family-to-work conflict scale) were inserted in a Google Form and administered by an interviewer to each employee through a tablet.

Data collection was carried out at the Unit of Occupational Medicine of the Teaching Hospital Policlinico Umberto I in Rome and the target population included all employees (physicians, nurses, other health professionals and administrative staff) who went to the Unit to perform blood sampling and/or medical examination with an Occupational Doctor during the study period. The source population was comprised by 6078 healthcare professionals, so we tried to involve 5% of the total sample population.

The choice of the sample is not subordinated to a selection but depends on voluntary adhesion of the interviewees. Employees were contacted personally and informed regarding the type of study and its objectives. The questionnaire included the confirmation of informed consent, specifying that participation is entirely voluntary, and that the compilation could be interrupted at any time. Furthermore, the participants were informed that the compilation is completely anonymous, and that the data would be processed in aggregate form.

Four hundred and thirty six employees of both sexes (182 men and 254 women) and aged between 21 and 67 were interviewed. They included physicians (40.6%; 7.7% of collection rate), nurses (31.7%; 7.7% of collection rate), other health care workers (23.9%; 9.9% of collection rate) and administrators (3.9%; 2.9% of collection rate).

2.2 | Data collection tools

Respondents were asked to indicate age, sex, civil status, if they have children, profession, location and department. The data collection tools used in this study were the Work Ability Index (WAI) and the bi-directional scale Work-to-family conflict and family-to-work conflict.

The Work Ability Index is a self-assessment made up of 7 parts: Current work ability compared with the lifetime best (0-10 points); Work ability in relation to the demands of the job (2-10 points); Number of current diseases diagnosed by a physician (1-7 points); Estimated work impairment due to diseases (1-6 points); Sick leave during the past year (12 months) (1-5 points); Own prognosis of work ability 2 years from now (1, 4 or 7 points); Personal resources (1-4 points).²¹ The WAI questionnaire score is obtained adding scores attributed to each question.

The score ranges from 7 to 49 points and four categories were suggested to describe the WAI levels: poor (7-27), moderate (28-36), good (37-43) and excellent (44-49). In our analysis, however, we treated the WAI score as a continuous variable.

The work-family conflict was investigated using the Italian version of the Work-to-family conflict and Family-to-work conflict Scale by Netemeyer et al.²²

This scale allows to evaluate the conflict in both directions: the work-to-family conflict and the family-to-work conflict. Five statements are related to the work-family conflict and the remaining five are related to the family-work conflict.²²

Responses are distributed on a seven-point agree/disagree scale, where (i) corresponds to completely disagree, (ii) to fairly disagree, (iii) to slightly disagree, (iv) to neither agree nor disagree, (v) to a somewhat agree, (vi) to fairly agree and (vii) to completely agree.

The study was approved by the Sapienza Ethics Committee (ref. 4991) and was carried out according to the Declaration of Helsinki protocols (1989) of the World Medical Association.

2.3 | Statistical analysis

Data were analyzed using Statistical Package for Social Sciences (SPSS) software version 25.

Two types of analysis were conducted: univariate analysis, which involved the use of analysis of variance (ANOVA) and multivariate analysis, which involved the use of multiple linear regression models, using both full models and stepwise models with backward elimination. In the multivariate analysis, the results are presented as β coefficients.

Finally, a Structural Equation Modelling (SEM) was carried out, following a Principal Component Analysis (PCA).

The multicollinearity was checked using the collinearity statistics (VIF values). In the regression analyses, the goodness of fit of the models was calculated using the R^2 . The significance level was set at $P < .05$.

3 | RESULTS

3.1 | Sample characteristics

The sample included 436 employees, 254 (58.3%) were women and 182 (41.7%) were men. Table 1 shows the characteristics of the population studied.

3.2 | Results of the work-family conflict and family-work conflict

The means and standard deviations for each item were calculated according to the responses obtained.

By relating both scores (WFC and FWC scores) a direct relationship emerged, so as one increases, the other

TABLE 1 Characteristics of the population studied

Variables	N (%) Mean (SD)
Gender	
Male	182 (41.7%)
Female	254 (58.3%)
Age	48.22 (12.40)
Civil status	
Married/cohabiting	260 (59.6%)
Divorced or Separated	41 (9.4%)
Widower	4 (0.9%)
Single	131 (30%)
Having sons	
Yes	250 (57.3%)
No	186 (42.7%)
Profession	
Physicians	177 (40.6%)
Nurses	138 (31.7%)
Other health professionals	104 (23.9%)
Administrative staff	17 (3.9%)

also increases. Subsequently, the WFC and FWC scores were related to the age variable: with increasing age the Work-Family conflict progressively decreases, while the Family-Work conflict is not influenced by the age variable.

The multivariate analysis (Table 2) confirmed what emerged in the univariate analysis (Table 3): a direct relationship of the WFC score with two variables (female gender and physicians) and an inverse relationship with other two variables (the age and administrative staff). A direct relationship emerged between the FWC score and the variable of having children. Both WFC and FWC scores show a direct relationship.

3.3 | Results of work ability

To obtain the WAI score, the qualitative variables were re-converted into quantitative variables and summed up. The WAI score had a normal distribution with a mean of 37.50 (SD = 4.26), with a minimum score of 15.67 and a maximum score of 48.67.

From the univariate analysis emerged that WAI has an almost significant association with the profession variable, in which administrative staff, followed by physicians, have a higher WAI score than other professional categories; in contrast, nurses have lower WAI scores. For the remaining variables, there are no statistically significant differences.

Consequently, the multivariate analysis confirmed what emerged in the univariate analysis.

TABLE 2 Multivariate analysis of WFC and FWC scores

Independent variable	WFC		FWC	
	Standardized Beta (<i>P</i>) Full model	Standardized Beta (<i>P</i>) Last step	Standardized Beta (<i>P</i>) Full model	Standardized Beta (<i>P</i>) Last step
Age	−.091 (.073)	−.109 (.011)	.011 (.833)	—
Female gender	.047 (.275)	—	.046 (.306)	—
Having sons	.003 (.951)	—	.072 (.197)	.084 (.047)
Married / cohabiting	−.029 (.546)	—	.025 (.614)	—
Physicians	.126 (.019)	.101 (.019)	.002 (.975)	—
Nurses	.029 (.581)	—	−.005 (.932)	—
Administrative	−.102 (.021)	−.108 (.011)	−.006 (.887)	—
FWC	.447 (.000)	.450 (.000)	—	—
WFC	—	—	.471 (.000)	.475 (.000)
R2 of the model	.269	.265	.229	.227

TABLE 3 Univariate analysis of WFC, FWC, and WAI scores

Variables	WFC		FWC		WAI	
	Mean (SD)	<i>P</i>	Mean (SD)	<i>P</i>	Mean (SD)	<i>P</i>
Gender						
Female	19.22 (6.94)	.060	11.47 (5.85)	.128	37.25 (4.26)	.115
Male	17.96 (6.80)		10.62 (5.58)		37.91 (4.48)	
Age (years)						
<50	20.16 (6.24)	.000	11.34 (5.72)	.460	37.80 (3.57)	.222
≥50	17.49 (7.18)		10.93 (5.77)		37.30 (4.74)	
Civil status						
Married/cohabiting	18.36 (6.70)	.313	11.26 (5.50)	.912	37.44 (4.39)	.599
Divorced or Separated	17.81 (7.55)		10.82 (5.92)		—	
Widower	19.58 (7.01)		10.90 (6.20)		—	
Single	20.00 (8.88)		12.00 (6.27)		—	
Other civil states	—		—		37.66 (4.06)	
Having sons						
No	19.29 (7.03)	0.121	10.79 (5.74)	.308	37.58 (3.97)	.808
Yes	18.25 (6.78)		11.36 (5.76)		37.48 (4.46)	
Profession						
Physicians	20.13 (6.46)	.000	11.57 (5.96)	.229	38.00 (3.85)	.053
Nurses	18.44 (6.86)		11.10 (5.94)		36.91 (4.17)	
Other health professionals	17.58 (7.02)		10.76 (5.28)		37.29 (4.65)	
Administrative staff	12.55 (6.59)		8.76 (4.23)		39.07 (5.64)	

3.4 | Relationship between work ability, work-family conflict and family-work conflict

The multivariate analysis (Table 4), which involved the use of linear regression models, made it possible to highlight an inverse relationship between the WAI and the FWC.

Therefore, a high WAI score is significantly associated with a lower Family-Work Conflict (FWC).

The WFC and FWC scores, on the other hand, have a direct relationship: as the work-family conflict (WFC) increases, the family-work conflict (FWC) increases.

TABLE 4 Multivariate analysis of WFC, FWC, and WAI scores

Independent variable	WFC		FWC		WAI	
	Standardized Beta (P)	Standardized Beta (P)	Standardized Beta (P)	Standardized Beta (P)	Standardized Beta (P)	Standardized Beta (P)
	Full model	Last step	Full model	Last step	Full model	Last step
Age 50	-.135 (.004)	-.144 (.001)	.007 (.876)	—	-.090 (.082)	—
Children	.010 (.842)	—	.075 (.146)	.079 (.055)	.055 (.331)	—
Female gender	.042 (.328)	—	.034 (.424)	—	-.041 (.395)	—
Physicians	.122 (.024)	.098 (.021)	.027 (.617)	—	.094 (.112)	.112 (.014)
Nurses	.021 (.686)	—	-.010 (.845)	—	-.033 (.573)	—
Administrative	-.100 (.024)	-.106 (.012)	.007 (.868)	—	.058 (.233)	—
Married/cohabiting	-.030 (.528)	—	.018 (.711)	—	-.023 (.669)	—
WFC	—	—	.432 (<.001)	.436 (<.001)	-.044 (.414)	—
FWC	.434 (<.001)	.448 (<.001)	—	—	-.290 (<.001)	-.314 (<.001)
WAI	-.036 (.414)	—	-.237 (<.001)	-.235 (<.001)	—	—
R ² of model	.278	.274	.282	.280	.121	.107

3.5 | SEM

The SEM was based on the following steps.

1. A PCA model identified three different variables that explained % of the total covariance of the models for WAI (Figure 1).
2. These three variables were used as independent variables for building two different linear regression models in which WFC and FWC were the dependent variables, respectively.

The variable “Socio-economic status” explained 50.97% of the variance of the WAI, while the variable “Senior administrative” and “Healthcare professional experienced” were responsible of 40.61% and 29.81% of the variance of WAI, respectively.

The results of the SEM are illustrated in Table 5. Apart from FWC, the only variable that has an influence on WFC is the Healthcare professional experienced ($\beta = -0.160$; $P < .001$). On the other hand the three variable coming out from the PCA analysis do not have any influence on FWC.

No collinearity was found in all the models (VIF values between 1.006 and 1.728).

4 | DISCUSSION

4.1 | Main finding of this study

This study was conducted to evaluate the variables associated with work ability and the conflict between work and family and to evaluate the relationship between these two constructs in the health professionals of a Teaching Hospital in Rome.

Socio-economic factors and job role in the healthcare sector are variables that have an influence on WAI and on WFC, using both traditional linear regression models and SEM:

The results of the present study highlighted, first of all, a direct relationship between the two directions of the work-family conflict. The variables that showed a statistically significant association with the work-family conflict were female gender and the physicians (both associated with higher WFC scores) and administrative staff with lower WFC scores. The nurses didn't score very differently from other healthcare professionals; however, they have a slightly higher WFC score.

In our sample, with increasing age the conflict between work and family (WFC) is progressively reduced. Instead, the family-work conflict (FWC) is not influenced by the age variable but has a statistically significant association with the variable of having children. In fact, workers with children

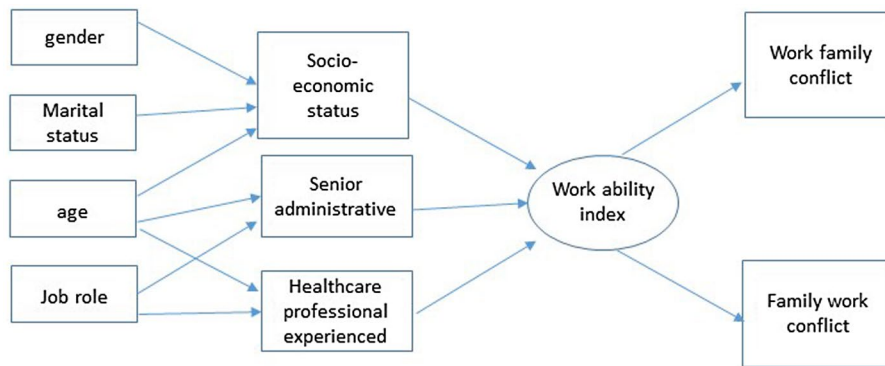


FIGURE 1 Explanation of the principal component analysis for identifying variables influencing work ability index

TABLE 5 Structural equation modelling analysis of WFC and FWC scores

Independent variable	WFC		FWC	
	Standardized Beta (<i>P</i>) Full model	Standardized Beta (<i>P</i>) Last step	Standardized Beta (<i>P</i>) Full model	Standardized Beta (<i>P</i>) Last step
Socio-economic status	.773 (.370)	—	.778 (.375)	—
Healthcare worker experienced	-.453 (.068)	-.160 (<.001)	-.047 (.851)	—
Senior Administrative	-.477 (.545)	—	-.681 (.395)	—
FWC	.460 (<.001)	.463 (<.001)	—	—
WFC	—	—	.475 (<.001)	.469 (<.001)
R ² of the model	.248	.245	.223	.220

have more family responsibilities, which lead to a greater family interference with work.²³

As far as concerns Work Ability, the present study has revealed an almost significant association only for the profession variable, with high WAI scores in the administrative staff and physicians and lower scores in the category of nurses. No significant association was demonstrated between WAI and age, gender, civil status and having children.

4.2 | What is already known on this topic?

There are several studies on work-family conflict involving nurses or other health workers²⁴⁻²⁹ but only a few of these investigate the influence of individual characteristics such as gender and age in the work-family conflict, non-modifiable factors that cannot be used as a basis for a decisive intervention.

In line with our findings, the Treister-Goltzman study, examining the literature of the past two decades, reports a higher work-family conflict for the medical category, with a worse effect on female sex than on male.³⁰ In addition, the study conducted by Adàm et al, reported that female physicians showed significantly higher levels of WFC than male physicians.³¹

As far as concerns Work Ability, nurses showed moderate/poor WAI score also in other studies,^{32,33} probably because

they are exposed to more stressful situations. In contrast, an average WAI level was reported in a study conducted on Taiwanese nurses.³⁴

Different studies in the literature report statistically and inversely significant associations between age and WAI,³⁵⁻³⁸ while our results did not report any significant associations between WAI and age, gender, marital status, and having children.

4.3 | What this study adds

The present study offers an important contribution to the research because there is only one other study³⁹ that investigates the relationship between Work Ability and work-family conflict. According to these results, it is necessary to act on modifiable factors that influence the working capacity and the work-family conflict of health workers. There are three modifiable factors on which it is possible to intervene: the organization, the workers and the family.

Factors such as age and gender cannot be changed, however it is necessary to ensure sustainable employability, considering the link between age and work ability.

Finally, it is interesting to underline the inverse significant correlation between WAI and FWC. An increase of the work ability is associated to lower scores of family to work

conflict, and this could be used in the prevention or the mitigation of the FWC phenomenon.⁴⁰

4.4 | Limitations of this study

There were some limitations to this study. The low number of participants did not allow to generalize the results to all healthcare professionals; more research is needed to study the association of these two constructs in healthcare professionals. Secondly, the study design did not provide for the inclusion of other variables that can influence the work-family conflict.

Moreover, dealing with multiple occupations, like in this study, there is the need to consider the roles and experience of participants and we did not address deeply this issue. Future researches may include other individual variables such as household income or home-work distance to better understand these constructs.

5 | CONCLUSIONS

The Work Ability Index is considered the "thermometer" to measure the phenomenon of aging and to predict the incidence of inability to work.

A periodic analysis of the perceived ability of workers as well as the conflict they experience in daily life can be useful to understand the best actions to ensure the wellbeing of employees.

These findings suggest that interventions should be primarily directed to women, older workers and those with children. The latter seem to have, in fact, a greater difficulty in maintaining a balance between work and family.

At last, by relating the two constructs a significant inverse association emerged, supporting the idea of Ilmarinen et al, that work ability is not separated from life outside work and the balance between work and family is an important factor of work ability.⁴¹

DISCLOSURE

Approval of the research protocol: The study was approved by the Local Ethics Committee (ref. 4991) and was carried out according to the Declaration of Helsinki protocols (1989) of the World Medical Association. *Informed consent:* Written informed consent was obtained from all participants. *Registry and the registration no. of the study/trial:* N/A. *Animal studies:* N/A. *Conflict of interest:* The authors declare no conflict of interests for this article.

AUTHOR CONTRIBUTIONS

GLT, FR and AP conceived the ideas; GLT and DG collected the data; GLT and DG analyzed the data; GLT, FR

and AP led the writing. All authors read and approved the final manuscript.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ORCID

Giuseppe La Torre  <https://orcid.org/0000-0002-1233-2040>

REFERENCES

1. Istat. Employment in public health; 2020. Available from: https://www.aranagenzia.it/attachments/article/10565/Statistica_today_sanit%C3%A0_2018.pdf. Published May 2020. Accessed June 10, 2020
2. Tuomi K, Ilmarinen J, Jahkola A, Katajarinne L, Tulkki A. *Work Ability Index (2nd revised)*. Finnish Institute of Occupational Health; 1998.
3. Camerino D, Conway PM, Van der Heijden BI, et al. Low-perceived work ability, ageing and intention to leave nursing: a comparison among 10 European countries. *J Adv Nurs*. 2006;56(5):542-552. doi:<https://doi.org/10.1111/j.1365-2648.2006.04046.x>. PMID: 17078829
4. Monteiro MS, Ilmarinen J, Corrêa Filho HR. Work ability of workers in different age groups in a public health institution in Brazil. *Int J Occup Saf Ergon*. 2006;12(4):417-427. doi:<https://doi.org/10.1080/10803548.2006.11076703>
5. Emberland JS, Knardahl S. Contribution of psychological, social, and mechanical work exposures to low work ability: a prospective study. *J Occup Environ Med*. 2015;57(3):300-314. doi:<https://doi.org/10.1097/JOM.0000000000000353>
6. Tuomi K, Eskelinen L, Toikkanen J, Jarvinen E, Ilmarinen J, Klockars M. Work load and individual factors affecting work ability among aging municipal employees. *Scand J Work Environ Health*. 1991;17(Suppl 1):128-134.
7. van den Berg TI, Alavinia SM, Bredt FJ, Lindeboom D, Elders LA, Burdorf A. The influence of psychosocial factors at work and lifestyle on health and work ability among professional workers. *Int Arch Occup Environ Health*. 2008;81(8):1029-1036. doi:<https://doi.org/10.1007/s00420-007-0296-7>
8. Viotti S, Martini M, Converso D. Are there any job resources capable of moderating the effect of physical demands on work ability? A study among kindergarten teachers. *Int J Occup Saf Ergon*. 2017;23(4):544-552. doi:<https://doi.org/10.1080/10803548.2016.1267976>
9. Tuomi K, Huuhtanen P, Nykyri E, Ilmarinen J. Promotion of work ability, the quality of work and retirement. *Occup Med*. 2001;51(5):318-324. doi:<https://doi.org/10.1093/occmed/51.5.318>
10. Martinez MC, Latorre Mdo R, Fischer FM. Testing the "Work Ability House" Model in hospital workers. *Rev Bras Epidemiol*. 2016;19(2):403-418. doi:<https://doi.org/10.1590/1980-5497201600020016>
11. Ilmarinen J. Work ability—a comprehensive concept for occupational health research and prevention. *Scand J Work Environ Health*. 2009;35(1):1-5. doi:<https://doi.org/10.5271/sjweh.1304>
12. Major DA, Germano LM. The changing nature of work and its impact on the work-home interface. In: Jones F, Burke RJ,

- Westman M, eds. *Work-life balance: A psychological perspective*. Psychology Press; 2006:13-38.
13. Kossek EE, Lambert S. *Work and life integration: organizational, cultural, and individual perspectives*. Psychology Press. 2005. doi:<https://doi.org/10.4324/9781410611529>
 14. Neal MB, Hammer LB. *Working Couples Caring for Children and Aging Parents: Effects on Work and Well-Being*. Oregon Institute of Occupational Health Sciences. 2007.
 15. Greenhaus JH, Beutell NJ. Sources of conflict between work and family roles. *Acad Manag Rev*. 1985;10:76-88.
 16. Frone MR, Russell M, Cooper ML. Antecedents and outcomes of work-family conflict: testing a model of the work-family interface. *J Appl Psychol*. 1992;77(1):65-78. doi:<https://doi.org/10.1037/0021-9010.77.1.65>
 17. Greenhaus JH, Allen TD, Spector PE. Health consequences of work-family conflict: the dark side of the work-family interface. *Res Occup Stress and Well Being*. 2006;5:61-98. doi:[https://doi.org/10.1016/s1479-3555\(05\)05002-xù](https://doi.org/10.1016/s1479-3555(05)05002-xù)
 18. Karatepe OM, Bekteshi L. Antecedents and outcomes of work-family facilitation and family-work facilitation among frontline hotel employees. *Int J Hosp Manag*. 2008;27:517-528. doi:<https://doi.org/10.1016/j.ijhm.2007.09.004>
 19. Colombo L, Zito M, Emanuel F. Work-family conflict in nursing: the role of job demands, organizational equity and a family-friendly climate. *Counseling*. 2015;8(2):2.
 20. Casper WJ, Eby LT, Bordeaux C, Lockwood A, Lambert D. A review of research methods in IO/OB work-family research. *J Appl Psychol*. 2007;92(1):28-43. doi:<https://doi.org/10.1037/0021-9010.92.1.28>
 21. Ilmarinen J. The Work Ability Index (WAI). *Occup Med*. 2007;57(2):160.
 22. Netemeyer RG, McMurrian R, Boles JS. Development and validation of work-family conflict and family-work conflict scales. *J Appl Psychol*. 1996;81:400-410.
 23. Thompson CA, Beauvais LL, Lyness KS. When work-family benefits are not enough: the influence of work-family culture on benefit utilization, organizational attachment, and work-family conflict. *J Vocat Behav*. 1999;54:392-415.
 24. Asiedu EEA, Annor F, Amponsah-Tawiah K, Dartey-Baah K. Juggling family and professional caring: role demands, work-family conflict and burnout among registered nurses in Ghana. *Nurs Open*. 2018;5(4):611-620. doi:<https://doi.org/10.1002/nop2.178>
 25. Chen L, Liu J, Yang H, et al. Work-family conflict and job burn-out among Chinese doctors: the mediating role of coping styles. *Gen Psychiatr*. 2018;31(1):e000004. doi:<https://doi.org/10.1136/gpsych-2018-000004>
 26. Yamaguchi Y, Inoue T, Harada H, Oike M. Job control, work-family balance and nurses' intention to leave their profession and organization: a comparative cross-sectional survey. *Int J Nurs Stud*. 2016;64:52-62. doi:<https://doi.org/10.1016/j.ijnurstu.2016.09.003>
 27. Hatam N, Jalali MT, Askarian M, Kharazmi E. Relationship between family-work and work-family conflict with organizational commitment and desertion intention among nurses and paramedical staff at hospitals. *Int J Community Based Nurs Midwifery*. 2016;4(2):107-118.
 28. Berkman LF, Liu SY, Hammer L, et al. Work-family conflict, cardiometabolic risk, and sleep duration in nursing employees. *J Occup Health Psychol*. 2015;20(4):420-433. doi:<https://doi.org/10.1037/a0039143>
 29. Mauno S, Ruokolainen M, Kinnunen U. Work-family conflict and enrichment from the perspective of psychosocial resources: comparing Finnish healthcare workers by working schedules. *Appl Ergon*. 2015;48:86-94. doi:<https://doi.org/10.1016/j.apergo.2014.11.009>
 30. Treister-Goltzman Y, Peleg R. Female physicians and the work-family conflict. *Isr Med Assoc J*. 2016;18(5):261-266.
 31. Adám S, Gyorffy Z, László K. High prevalence of job dissatisfaction among female physicians: work-family conflict as a potential stressor. *Orv Hetil*. 2009;150(31):1451-1456. doi:<https://doi.org/10.1556/OH.2009.28582>
 32. Heyam DF, Beshar G, Nesreen AK. Work ability index of shift working hospital nurses in Jordan. *Open Nurs J*. 2018;12:116-124. doi:<https://doi.org/10.2174/1874434601812010116>
 33. Silva TPDD, Araújo WN, Stival MM, Toledo AM, Burke TN, Carregaro RL. Musculoskeletal discomfort, work ability and fatigue in nursing professionals working in a hospital environment. *Rev Esc Enferm USP*. 2018;52:e03332. doi:<https://doi.org/10.1590/S1980-220X2017022903332>
 34. Chiu MC, Wang MJ, Lu CW, Pan SM, Kumashiro M, Ilmarinen J. Evaluating work ability and quality of life for clinical nurses in Taiwan. *Nurs Outlook*. 2007;55(6):318-326. doi:<https://doi.org/10.1016/j.outlook.2007.07.002>
 35. Rostamabadi A, Zamanian Z, Sedaghat Z. Factors associated with work ability index (WAI) among intensive care units' (ICUs') nurses. *J Occup Health*. 2017;59(2):147-155. doi:<https://doi.org/10.1539/joh.16-0060-OAù>
 36. Abbasi M, Zakerian A, Kolahdouzi M, Mehri A, Akbarzadeh A, Ebrahimi MH. Relationship between work ability index and cognitive failure among nurses. *Electron Physician*. 2016;8(3):2136-2143. doi:<https://doi.org/10.19082/2136>
 37. Carel RS, Zusman M, Karakis I. Work Ability Index in Israeli hospital nurses: applicability of the adapted questionnaire. *Exp Aging Res*. 2013;39(5):579-590. doi:<https://doi.org/10.1080/0361073X.2013.839316>
 38. Magnago TS, de Lima AC, Prochnow A, Ceron MD, Tavares JP, Urbanetto JS. Intensity of musculoskeletal pain and (in) ability to work in nursing. *Rev Lat Am Enfermagem*. 2012;20(6):1125-1133. doi:<https://doi.org/10.1590/s0104-11692012000600015>
 39. Bethge M, Borngärber Y. Work-family conflicts and self-reported work ability: cross-sectional findings in women with chronic musculoskeletal disorders. *BMC Musculoskelet Disord*. 2015;16:58.
 40. Mokarami H, Kalteh HO, Marioryad H. The effect of work-related and socio-demographic factors on Work Ability Index (WAI) among Iranian workers. *Work*. 2020;65(1):137-143.
 41. Ilmarinen J. *Towards a longer worklife! Ageing and the quality of worklife in the European Union*. Finnish Institute of Occupational Health; 2006.

How to cite this article: La Torre G, Grima D, Romano F, Polimeni A. Perceived work ability and work-family conflict in healthcare workers: An observational study in a teaching hospital in Italy. *J Occup Health*. 2021;63:e12271. <https://doi.org/10.1002/1348-9585.12271>