

A balancing act? Work–life balance, health and well-being in European welfare states

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Background: Recent analyses have shown that adverse psychosocial working conditions, such as job strain and effort–reward imbalance, vary by country and welfare state regimes. Another work-related factor with potential impact on health is a poor work–life balance. The aims of this study are to determine the association between a poor work–life balance and poor health across a variety of European countries and to explore the variation of work–life balance between European countries. **Methods:** Data from the 2010 European Working Conditions Survey were used with 24 096 employees in 27 European countries. Work–life balance is measured with a question on the fit between working hours and family or social commitments. The WHO-5 well-being index and self-rated general health are used as health indicators. Logistic multilevel models were calculated to assess the association between work–life balance and health indicators and to explore the between-country variation of a poor work–life balance. **Results:** Employees reporting a poor work–life balance reported more health problems (Poor well-being: OR = 2.06, 95% CI = 1.83–2.31; Poor self-rated health: OR = 2.00, 95% CI = 1.84–2.17). The associations were very similar for men and women. A considerable part of the between-country variation of work–life balance is explained by working hours, working time regulations and welfare state regimes. The best overall work–life balance is reported by Scandinavian men and women. **Conclusion:** This study provides some evidence on the public health impact of a poor work–life balance and that working time regulations and welfare state characteristics can influence the work–life balance of employees.

Introduction

The role of the work environment as a social determinant of health and well-being has been investigated in a variety of national studies. Most notably, adverse psychosocial working conditions, such as job strain,¹ effort–reward imbalance² and job insecurity,³ have been identified as key risk factors for poor health, including musculoskeletal conditions, mental ill health, cardiovascular disease and obesity (for an overview see⁴). In addition, another work-related factor that is associated with the health of employees is the fit between work and personal life.^{5,6} The term work–life balance is often used in public discussion and within the European Union, where the reconciliation of work and personal life is a new policy priority.⁷

A poor work–life balance can be seen as a work-related stressor and previous examinations show an association between work–life imbalance and stress responses, such as elevated blood pressure, heart rate and cortisol levels.⁸ Consistent with these results, several studies from single countries have shown that a poor work–life balance is associated with health problems.^{5,6,9} Associations have been reported for several health complaints such as self-reported health,¹⁰ physical ill health¹¹ or depression.¹² A recent longitudinal analysis indicates that both men's and women's health is negatively affected by a poor work–life balance.¹³

To understand the causes of an imbalance between work and other life domains, research has investigated a wide range of explaining factors. Work–life balance may vary by demographic, socio-economic and work-related organizational characteristics.¹⁴ Additionally, the work environment and the distribution of health-threatening working conditions are of course rooted in the wider economic, political and social context.^{4,15} Comparative

research in this field is still in its infancy; however, analyses show that adverse working conditions, including a poor work–life balance, vary by country.^{16,17} A likely determinant of this variation is the extent to which reconciliation policies are implemented in different welfare states.⁷ Family policies such as child care services, extended and flexible parental leave schemes and generous support to single parents may increase reconciliation of work and domestic life. One way of studying the influence of the wider socio-economic context on work–life balance is the welfare state regime approach.

Welfare states that are the most similar in terms of political tradition, principles or levels of welfare provision are placed together in distinct welfare state regimes.⁴ In the European context, five welfare state regimes are usually distinguished: the Scandinavian welfare state regime, the Anglo–Saxon regime, the Bismarckian regime, the Southern European regime and the Eastern European regime.^{18–20}

With respect to work–life balance policies, there are still important differences within the wider welfare state context. For example, in the Scandinavian countries, a variety of reconciliation policies can be found that facilitate the combination of participation in paid employment with private life, including high-quality publicly funded and universal care services for children, and parental rights, such as generously paid parental leave, are provided.⁷ Furthermore, relatively flexible work arrangements in terms of working hours can be found.²¹ In the Anglo–Saxon and Bismarckian countries, fewer state efforts are made to facilitate the balance between work and family life. Because of a lack of public support, employees often have to find own solutions to combine work and family life. As a result, part-time work—largely by women—is the dominant strategy to combine work and family responsibilities.²² In the Southern European countries, there is little public provision, including

public care facilities for children. Furthermore, part-time options are largely unavailable in these countries. Therefore, women usually have to make the choice to work full-time or to stay out of the labour market.²³ The Eastern European countries are considered to form a different type of regime.²⁰ After the transition to the market economy, labour market conditions changed, unemployment increased and there was a shift towards policies associated more with the Anglo-Saxon regime. In these countries, two incomes are often needed to sustain a family.²⁴

However, to date, the cross-national comparative research in this field is limited²⁵ and most existing studies use only a small sample of countries,^{7,26} producing divergent results. Although associations between a poor work-life balance and health have been reported by several national-level studies, it is as yet unknown if such an association can be found across a wide range of European countries. This study is the first to provide a comprehensive examination of the association between work-life balance and health in Europe. Both the evidently health-threatening consequences of a poor work-life balance and the broader political context in which they take place are of great interest to occupational health practitioners and researchers. Therefore, this study is motivated by two research questions:

- (1) What is the association between a poor work-life balance and health problems across a variety of European countries
- (2) Does work-life imbalance vary in Europe and by individual factors (e.g. gender, age, education, employment etc.) and welfare state regime type?

Methods

Data

Data were obtained from the 2010 European Working Conditions Survey (EWCS). This periodical survey is conducted by Eurofound to monitor working conditions in Europe. For the analyses, we used the fifth survey from 2010 with information from 27 countries. In each country, a multistage, stratified random sampling method was used to recruit a sample from the working population aged ≥ 15 years. The overall response rate was 44% for the fifth EWCS with considerable variation in the participation rates in the different countries (ranging from 31% in Spain to 74% in Latvia; [Supplementary Table SA](#)). Details on the survey are provided elsewhere.²⁷

To avoid selection processes (e.g. healthy worker effect) we restricted the present analyses to individuals younger than the age of 60 years. We also excluded persons working <15 h a week, working in armed forces or being self-employed. After excluding persons with missing data on exposure, outcome and covariates, a total of 24 096 participants in 2010 were eligible for analysis.

Measurement

Work-life balance is measured with the question: 'How well do your working hours fit in with your family or social commitments? Very well, well, not very well, not at all well'. The variable was dichotomized into good work-life balance (very well/well) and poor work-life balance (not very well/not at all well). Two health outcomes are used. The first one is the WHO-5 well-being index. It consists of five items measuring positive mood, vitality and general interests. The index score ranges from 0 to 25. A cut-off point of ≤ 7 is recommended to screen for a depressive disorder.²⁸ As a second measure, we used self-rated general health ('How is your health in general?'). The variable was dichotomized into very good or good health versus less than good health.

Age (four categories 16–29, 30–39, 40–49 and 50–60) was included as an individual-level demographic variable. We also included the International Standard Classification of Occupations

(ISCO), the standard industrial classification (NACE), public or private sector, fixed-term or indefinite contract, the years at the current workplace (three categories: <1 year, 1–4 years and ≥ 5 years), weekly working hours, the company size, children, household characteristics (no partner, dual earner, part/full time and partner does not work) and education. Education was measured according to International Standard Classification of Education-97 (four categories: no education/primary, secondary, post-secondary and tertiary). Furthermore, we included a variable measuring the working time arrangement with the following response categories: working time arrangements set by the company, several fixed working schedules can be chosen, it is possible to adapt the working hours within certain limits or working hours are entirely determined by the employee.

At the contextual level, countries were grouped according to the predominant welfare state regime type. For this purpose, we used the Ferrera¹⁸ classification as adapted by Bambra and Eikemo.¹⁹ It distinguishes five types of welfare regimes: Scandinavian, Anglo-Saxon, Bismarckian, Southern Europe and Eastern Europe. The East European group included in this study is larger and more heterogeneous as compared with many previous studies. Therefore, we divided this group into the two groups: Former Soviet Union (FSU) countries and Central/Eastern European countries (CEE)^{29,30} (see [Supplementary Table SA](#) for the classification of countries). It has been shown that the transitional recession was much shallower and the recovery was faster in CEE countries as compared with the FSU countries, which allowed the CEE countries to maintain the provision of welfare.³⁰

Statistical analyses

After a basic sample description, we present multilevel logistic regression analyses to test the association between a poor work-life balance and the two health indicators. Given the multilevel structure of the data, we applied multilevel logistic regression analyses with individuals (level 1) nested within countries (level 2). Odds ratios and the 95% confidence intervals are presented in the respective tables. In a next step, we calculated the prevalence of poor work-life balance by gender and welfare regimes. Afterwards, we examined the variation of a poor work-life balance between countries and the possible explanations for such a variation. We performed random intercept multilevel logistic regression analyses to estimate the between-country variation. By applying multilevel models, we are able to study variations between countries. More specifically, the model contains a so-called fixed part and a random component.³¹ We calculated five models, starting with an 'empty model', to estimate the between-country variation of the intercept. Median odds ratios (MOR) were computed to quantify the variation between countries. MOR is defined as the median value of the odds ratio between the country at highest risk and the country at lowest risk when randomly picking two countries.³² MOR equals 1 if there is no between-country variation and gets larger if the between-country variation increases.³³ In models 2–4, we included the individual-level variables, and in the final fifth model, we also included welfare state regimes. Additionally, the between-country variance, MOR and the percentage of proportional change in variance (PCV) are presented. Furthermore, we present model fit statistics (log likelihood, Akaike information criterion [AIC] and Bayesian information criterion [BIC]). All calculations were performed using STATA 11 statistical package (STATA, College Station, TX).

Results

[Table 1](#) gives an overview of the sample characteristics. Poor work-life balance is slightly more often reported by men than by women. In contrast, more women than men report poor mental well-being and fair or worse self-rated health. [Table 2](#) addresses the first

Table 1 Sample description N = 24096; No (%) or mean (SD)

	Men (11310)		Women (12786)	
Age				
16–29	2205	(19.5)	2192	(17.1)
30–39	3106	(27.5)	3380	(26.4)
40–49	3160	(27.9)	3916	(30.6)
50–60	2839	(25.1)	3298	(25.8)
Education				
No/primary education	478	(4.2)	404	(3.2)
Secondary	7075	(62.6)	7096	(55.5)
Post secondary	582	(5.2)	782	(6.1)
Tertiary	3175	(28.1)	4504	(35.2)
NACE				
Agriculture, hunting, forestry and fishing	338	(3.0)	173	(1.4)
Industry	4091	(36.3)	1824	(14.3)
Services	4388	(38.8)	4570	(35.7)
Public administration and defence; compulsory social security	836	(7.4)	927	(7.3)
Other services	1657	(14.7)	5292	(41.4)
ISCO				
High-skilled clerical	2218	(19.6)	2903	(22.7)
Low-skilled clerical	3776	(33.4)	7650	(59.8)
High-skilled manual	2591	(22.9)	492	(3.9)
Low-skilled manual	2725	(24.1)	1741	(13.6)
Sector				
Private	8010	(70.8)	7146	(55.9)
Public	2572	(22.7)	4749	(37.1)
Other	728	(6.4)	891	(7.0)
Years at current workplace				
< 1 years	1026	(9.1)	1113	(8.7)
1–4 years	3491	(30.9)	4011	(31.4)
≥ 5 years	6793	(60.1)	7662	(59.9)
Weekly working hours	40.87	(8.3)	36.89	(9.1)
Contract				
Indefinite	9550	(84.4)	10574	(82.7)
Temporary	1760	(15.6)	2212	(17.3)
Company size				
Small	3029	(26.8)	4213	(33.0)
Medium	5219	(46.2)	5789	(45.3)
Large	1968	(17.4)	1845	(14.4)
Very Large	1094	(9.7)	939	(7.3)
Children				
No	5785	(51.2)	5489	(42.9)
Yes	5525	(48.9)	7297	(57.1)
Household characteristics				
No partner	3448	(30.5)	4442	(34.7)
Dual earner	3256	(28.8)	4495	(35.2)
Part/Full time	1264	(11.2)	1712	(13.4)
Partner doesn't work	3342	(29.6)	2137	(16.7)
Working time arrangement				
Set by the company	7947	(70.3)	9017	(70.5)
Choose between several fixed working schedules	736	(6.5)	1039	(8.1)
Adapt working hours within certain limits	2020	(17.9)	2237	(17.5)
Working hours entirely determined by employee	607	(5.4)	493	(3.9)
WHO-5				
Good mental well-being	10650	(94.2)	11713	(91.6)
Poor mental well-being	660	(5.8)	1073	(8.4)
Self-rated health				
Good or better	8793	(77.8)	9466	(74.0)
Fair or worse	2517	(22.3)	3320	(26.0)
Work-life balance				
Good	9140	(80.8)	10658	(83.4)
Poor	2170	(19.2)	2128	(16.6)

research question. The ORs show that the chance of reporting poor mental well-being or poor self-rated health is higher among men and women with a poor work–life balance.

In Table 3, we explore the prevalence of poor work–life balance by welfare state regimes. The best work–life balance is reported by Scandinavian men and women with ≈11% reporting a poor work–life balance. Women in the Anglo–Saxon countries report similar values. However, this is not the case when only women working full-time are considered (15%). The worst work–life balance is reported by men and women in Southern and Eastern

European countries. Gender differences are generally small when only full-time workers were looked at.

Next, we present results from multilevel logistic regression analyses with work–life balance as the dependent variable separately for men and women (Table 4). In the empty model, significant between-country variations are observed with a MOR of 1.43 for men and 1.50 for women. In model 2, age, education and work-related variables are introduced. The results displayed in Supplementary Table SB show that men working in the service sector, low-skilled manual jobs, the private sector or in large or

Table 2 Association between poor WLB and mental well-being/self-rated health: Results of multilevel models (odds ratios and 95% confidence intervals)

	Poor mental well-being	Poor self-rated health
Total		
Good work–life balance	1	1
Poor work–life balance	2.06 (1.83–2.31)	2.00 (1.84–2.17)
Men		
Good work–life balance	1	1
Poor work–life balance	2.18 (1.82–2.62)	1.91 (1.70–2.15)
Women		
Good work–life balance	1	1
Poor work–life balance	2.03 (1.75–2.36)	2.09 (1.87–2.34)

Odds Ratios are adjusted for age, education, NACE, ISCO, Sector, years at current workplace, weekly working hours, contract, company size, children, household characteristics and working time arrangement.

Table 3 Prevalence of poor work–life balance by welfare state regime

	Full and part time			Full time		
	Total	Men	Women	Total	Men	Women
Scandinavian	10.83%	10.95%	10.71%	10.61%	10.96%	10.18%
Anglo–Saxon	14.03%	16.82%	10.92%	16.78%	17.76%	15.09%
Bismarckian	15.14%	16.21%	13.83%	16.40%	16.10%	16.90%
Southern Europe	23.51%	23.69%	23.29%	25.32%	24.75%	26.15%
FSU	22.70%	26.01%	19.93%	24.00%	26.88%	21.49%
CEE	21.54%	23.88%	19.10%	22.38%	24.62%	19.94%

very large companies have significantly elevated ORs for a poor work–life balance. Women with tertiary education, working in low-skilled clerical or high-skilled manual jobs, in large companies and with temporary contracts show elevated ORs (Supplementary Table SC). As can be seen in Table 4, the inclusion of age, education and work-related variables does not substantially reduce the between-country variation of work–life balance. In the next model, working hours and working arrangement were included. Women working longer hours and reporting that the working hours are entirely set by the company have a higher chance of experiencing a poor work–life balance. The same holds true for men with the exception that men who can choose between several fixed working schedules show higher OR than men whose working hours are set by the company. The random effects of model 2 reveal that there is only a slight reduction in the variation between countries for men but a higher reduction for women with a proportional reduction in variance of 34%. The inclusion of household characteristics in model 3 did not lead to any additional reduction of variance. In the final model, the welfare state typologies are introduced, which leads to an additional reduction of the between-country variance. However, the results show that the association between welfare regime type and a poor work–life balance is stronger for men than for women.

Discussion

In terms of our original research questions, this analysis has provided compelling evidence that work–life balance varies across Europe, and that it is associated with poor self-rated health and mental well-being at the European level. The article has also identified small gender differences in work–life balance as men tend to report poor work–life balance more often than women.

Men working in the service sector, low-skilled manual jobs, private sector or in large or very large firms and women with tertiary education, working in low-skilled clerical or high-skilled manual jobs, in large or very large firms and temporary contracts were at higher risk of work–life imbalance. There was also variation by welfare state regime as the best work–life balance was reported in Scandinavia and the worst in the Southern and Eastern European countries. Controlling for relevant individual-level variables in multilevel analysis, welfare regime differences were stronger for men than for women. Among men the probability of reporting poor work–life balance was higher in all welfare state regimes except from the Anglo–Saxon regime, when compared with the Scandinavian regime.

Our results are in line with other studies on this topic.^{5,6} Leineweber et al.¹⁵ showed that both men's (emotional exhaustion and problem drinking) and women's health (self-rated health and emotional exhaustion) is negatively affected by work–family conflict. Research on work–life balance has identified a wide range of conditions with an influence on the work–life balance of employees. Besides individual and organizational characteristics, the wider cultural and political context can also have an effect on the reconciliation of work and family life.²² One possibility to assess the cultural and political context is the introduction of welfare state typologies. The results of our analyses show that the prevalence of a poor work–life balance varies between countries and welfare state regimes with the highest rates in the Southern and Eastern European countries and the lowest rates in the Scandinavian countries.

Our findings suggest that reconciliation policies associated with a Scandinavian-style welfare state⁷ are more important to men's work–life balance than women's. However, family policies are likely to interact with employment patterns. The lack of a significant association between welfare regime and work–life balance among women could reflect that women adjust their employment behaviour to attend family responsibilities when reconciliation policies are not well-developed. Such an interpretation is consistent with the finding that working hours and working arrangements explained a larger proportion of the between-country variation in poor work–life balance among women than among men. Hence, increasing pursuit of reconciliation policies in non-Scandinavian regimes may not increase work–life balance among women, but may make more women work and more women work more.³⁴

There are several limitations to our study. Work–life balance is measured with only one item, measuring whether working hours fit in with family or social commitments. Therefore, it is not possible to measure different dimensions of work–life balance. Greenhaus and Beutell³⁵ described three dimensions of work and family conflict: time-, strain- or behaviour-based conflict. The work–life balance measure used in the EWCS only contains the time-based conflict, and therefore the two other dimensions are omitted. Furthermore, the health measures in this study are self-rated and only cross-sectional measures of health and work–life balance are available. Because of the cross-sectional design, the causal relationship between a poor work–life balance and health impairments is unclear, as poor health could be an underlying cause of troubles in balancing work and life. Another limitation of the EWCS is the considerable variation of the response rate between countries (overall response rate 44%; see Supplementary Table SA). To assess a possible bias, we additionally adjusted for response rate in the multilevel analyses and results remained unchanged (results not shown). The welfare regime typology used in this article was not developed to capture reconciliation policies, but as it is largely overlapping with recent family policy country clusters found by Korpi et al.,³⁴ we believe that the current typology serve our purpose well, also because the alternative regime approach excludes all Southern and Eastern countries. Future research should address institutional and expenditure-based approaches to

Table 4 Reduction in the between country differences in poor work–life balance: results of multilevel models (Men $N = 11\,310$ and Women $N = 12\,786$)

	Model 1 Empty model	Model 2 + age, education and work-related variables	Model 3 Model 2 + working hours and working arrangement	Model 4 Model 3 + household characteristics	Model 5 Model 4 + welfare
Men					
Random effects					
Country level					
Between country variance	0.1424	0.1396	0.1319	0.1330	0.0615
MOR	1.43	1.43	1.41	1.42	1.27
PCV (%)		2%	7%	7%	57%
Statistics					
Log-likelihood	−5463.47	−5395.08	−5117.75	−5098.06	−5089.60
Likelihood ratio test		$P < 0.001$	$P < 0.001$	$P < 0.001$	$P = 0.005$
AIC	10 930.94	10 836.16	10 289.50	10 258.12	10 251.21
BIC	10 945.60	11 004.83	10 487.50	10 485.46	10 515.21
Women					
Random effects					
Country level					
Between country variance	0.1798	0.1876	0.1183	0.1207	0.0584
MOR	1.50	1.51	1.39	1.39	1.26
PCV (%)		−5%	34%	33%	68%
Statistics					
Log-likelihood	−5658.03	−5574.44	−5388.54	−5369.60	−5361.68
Likelihood ratio test		$P < 0.001$	$P < 0.001$	$P < 0.001$	$P = 0.007$
AIC	11 320.07	11 194.88	10 831.09	10 801.20	10 795.36
BIC	11 334.98	11 366.37	11 032.40	11 032.34	11 063.78

the links between reconciliation policies, work–life balance and health.

Several strengths to the study should be addressed as well. By using data from the EWCS, we were able to conduct analyses for work–life balance and health in 27 European countries. Multilevel models were applied to take account of the hierarchical structure of the data. The sample was large enough to conduct multivariate statistical analyses with appropriate confounder control. Although the health measures used in the analyses are self-reported, it was shown that the WHO-5 index is an appropriate screening instrument for depressive disorders in epidemiological studies.²⁸

In conclusion, our findings indicate that a poor work–life balance is associated with poor health across 27 European countries. Furthermore the results show that a poor work–life balance varies between the included countries and that welfare regime clusters can explain part of this variation. The better work–life balance in the Scandinavian welfare states suggests that the reconciliation policies adopted there should be expanded across Europe to enable more of the European workforce to experience the benefits of a balanced work and domestic life.

Supplementary data

Supplementary data are available at *EURPUB* online.

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Key points

- This study provides information on work–life balance, health and well-being by using recent data from 27 European countries
- Poor work–life balance is associated with health problems for both men and women across Europe
- There is significant between-country variation in work–life balance, with better work–life balance in the Scandinavian countries
- Between-country differences are partly explained by working hours, working time regulations and welfare state regimes

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