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Managing work–family conflict in the medical profession: working conditions and individual resources as related factors

Stefanie Mache,[1] Monika Bernburg,[2] Karin Vitzthum,[2] David A Groneberg,[3] Burghard F Klapp,[4] Gerhard Danzer[4]

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For numbered affiliations see end of article.

Correspondence to
Dr Stefanie Mache;
s.mache@uke.de

ABSTRACT

Objectives: This study developed and tested a research model that examined the effects of working conditions and individual resources on work–family conflict (WFC) using data collected from physicians working at German clinics.

Material and methods: This is a cross-sectional study of 727 physicians working in German hospitals. The work environment, WFC and individual resources were measured by the Copenhagen Psychosocial Questionnaire, the WFC Scale, the Brief Resilient Coping Scale and the Questionnaire for Self-efficacy, Optimism and Pessimism. Descriptive, correlation and linear regression analyses were applied.

Results: Clinical doctors working in German hospitals perceived high levels of WFC (mean=76). Sociodemographic differences were found for age, marital status and presence of children with regard to WFC. No significant gender differences were found. WFCs were positively related to high workloads and quantitative job demands. Job resources (eg, influence at work, social support) and personal resources (eg, resilient coping behaviour and self-efficacy) were negatively associated with physicians' WFCs. Interaction terms suggest that job and personal resources buffer the effects of job demands on WFC.

Conclusions: In this study, WFC was prevalent among German clinicians. Factors of work organisation as well as factors of interpersonal relations at work were identified as significant predictors for WFC. Our results give a strong indication that both individual and organisational factors are related to WFC. Results may play an important role in optimising clinical care. Practical implications for physicians' career planning and recommendations for future research are discussed.

Strengths and limitations of this study

- This is one of the first large studies to analyse and discuss work–family conflicts in the medical profession.
- The main predictors for work family conflicts within the work domain of physicians are illustrated.
- The relatively large sample of physicians, together with few missing data, strengthens the study and makes it possible to generalise the findings.
- The cross-sectional design limits the value in supporting causal effects.
- Data were assessed by self-report measures that limit the objectivity of the study results.

INTRODUCTION

The total number of physicians working in the German clinical sector diminished drastically during the past decade.[1] The introduction of the diagnosis-related-groups (DRG)-based financing system in 2004 has led to major changes in hospital work organisation and workload for clinical doctors. These days health insurance reimbursements are granted diagnosis-centered, which has led to a number of problems such as early dismissal, underfunding of mandatory treatment with complications etc.[2] Probably, in consequence of this, an increasing number of physicians decided to work in non-medical fields (such as pharmaceutical industry, etc.) or abroad.[3] Studies investigated the motives why physicians decided not to work in the clinical sector,[4] for example, overwork, insufficient income, etc.[5 6] Since incompatibility between work and family life is one of the main factors for physicians' dissatisfaction and a central reason for stopping work in the clinical sector, research studies should investigate more thoroughly the topic 'work–family conflict'.

Work–family conflict

Work–family conflict (WFC) has been defined as "a type of inter-role conflict in which the role pressures from work and family are not compatible in some

respect".[7 8] The definition of WFC implies a bidirectional relation between work and family life in such a way that work can interfere with family life (WIF) and family life can interfere with work demands (ie, family-to work conflict: FIW).

According to the role theory,[7] WFC may occur when people are involved in multiple roles (eg, private and work related); these roles tend to drain them and cause stress or inter-role conflict.[9 10] Role theory argues that inter-role conflicts experienced by individuals will result in an undesirable state, if it becomes difficult to fulfil each role successfully owing to conflicting demands on time and behaviour among roles.[7 11]

Working conditions in the healthcare sector and WFC

The medical profession is characterised by an intense and high work commitment. Physicians working in clinics have often reported facing a high workload, low autonomy and job control.[2 12] In addition, physicians often report that the time of residency coincides with the family-founding life stage leading to high levels of WFC.[3 13] Young physicians are more likely to have young children and consequently experience high family or parenting demands, resulting in high levels of WFCs. This has been found to be significantly associated with physicians' job demands (ie, workload).[14–16] As the study by Fuss *et al*[3] showed, German physicians perceive a high extent of WFC compared to the general population. Moreover, they demonstrated that a high workload, the number of working hours per day, the amount and frequency of overtime work, an inflexible work schedule and rare support from colleagues and supervisors can increase the likelihood of employees experiencing a conflict between their work and family roles.

Although this research topic is of high interest, data examining WFCs within the medical profession are rare in general.[17] We expect that both physicians' work-related demands (eg, high workload) and perceived resources (eg, social support) relate directly to WFC.

The Job Demands–Resources (JD–R) Model[18] and the Demand-Control-Support Model[19] build the rationale for this hypothesis. According to the JD-R Model, effects of job demands (ie, organisational job factors that require sustained physical and/or psychological efforts and are associated with certain physiological and/or psychological costs)[20] are related to WFC.[21] A key proposition of the JD–R model is that interactions between job demands and resources are important by the way that certain job resources can buffer negative effects of job stress.[22] Given that WFC is a chronic stressful condition, one could expect that the availability of resources (ie, working part-time, childcare, maternity leave) would help the individual to successfully manage this conflict.[20 23] Research supports this assumption; a number of cross-sectional studies have shown negative associations of job resources with WFCs. These job resources include job control,[24 25] social support at work,[26 27] reward, feedback and supervisory coaching.[21]

The Demand-Control-Support model[19] presumes that working situations have negative psychological or physical consequences in particular when high demands coincide with limited decision latitude and low social support at the workplace.[19] Several studies focused on the question how the model interacts when WFC is considered. They showed that increased job demands are associated with more WFC, while control has a reducing effect.[28–31]

Gender differences, personal resources and WFC

Recently, the number of female physicians working in the German clinical sector has increased.[32] At the same time, expectations within family roles have neither been modified nor reduced.[33] Findings of previous research in various samples concerning gender difference in WFCs are inconsistent. Some studies report higher WFC scores among women compared to men.[34 35] A study by Adám *et al*[36] showed that female physicians reported significantly higher levels of WFC compared to male physicians and more often.

In other studies, WFCs were found to be similar for men and women.[37 38] Some studies demonstrated that female doctors with children spend more time with their family than working men do[7 34 39] by trying to combine a medical career with child caring and working part-time.[40]

Presently, there are few studies that have focused on associations between personal resources and WFC as the outcome variable. The construct of personal resources refers to those personal characteristics that promote an individual's sense of control and self-evaluation, and are linked to resilience, positive coping with environmental demands and well-being.[41] Some studies have examined the role of personal characteristics in WFC.[42–44] According to Hobfoll,[45] the resource category of personal characteristics enhances general resistance to stress. A study by Bernas and Major[46] examined the role of self-efficacy and demonstrated a negative correlation to WFC. Bruck and Allen[47] reported the following results for the relationship between personality variables (Big Five Personality) and WFC: agreeableness and conscientiousness have significant and negative prediction effects on WFC. In contrast, neuroticism was positively associated with the WFC dimensions.

Research questions and hypotheses

The aims of this study are: (1) to analyse the prevalence of WFCs among German hospital physicians, (2) to expose antecedents of WFC within the work domain of physicians and (3) to investigate differences in sociodemographic variables (gender, age) with regard to WFC. Another focus lies in the research question whether personal resources are related to WFC. Expecting personal and work-related resources to moderate relations between work-related demands and WFCs, we also concentrate on interactions between WFCs and different types of personal and work-related resources and demands.

In summary of the outlined theoretical frame and the cited empirical results, we work on the following questions by testing hypotheses:

- Question I: Do German hospital physicians perceive levels of WFC and, if so, do they differ across various sociodemographic variables?
- Hypothesis I: Levels of WFC differ significantly among hospital physicians depending on sociodemographic variables (eg, age, gender, medical specialty).
- Question II: What are the main predictors for WFC within the work domain of physicians?
- Hypothesis IIa: Perceptions of workplace resources (eg, social support) will be negatively related to WFC.
- Hypothesis IIb: Perceptions of workplace demands (eg, quantitative demands) will be positively related to WFC.
- Hypothesis IIc: Perceptions of resources will moderate the relationships between job demands and WFC.
- Question III: Do personal resources predict WFC in the medical profession?
- Hypothesis: Personal resources (eg, self-efficacy) will be negatively related to WFC.

MATERIAL AND METHODS

Study design, participants and setting

The study was designed as a cross-sectional questionnaire evaluation. Data collection took place between 2010 and 2013 in 15 different hospitals in the northern and eastern parts of Germany. Hospital departments were Internal Medicine, Neurology, Surgery, Paediatrics, Anaesthesiology and Gynaecology and Obstetrics. On the basis of information of the German Federal Office of Statistics in 2012, the chosen hospitals are comparable to other German hospitals.[48] The hospitals included in the study had similarities in the following variables: size, number of patients/beds as well as employed medical staff (eg, residents, junior doctors, nurses).

Data collection

In the beginning, we presented our study design to clinic management, physicians' supervisors and physicians during clinical conferences/meetings. Afterwards, the questionnaire was distributed together with an informative and invitational letter to participate. The cover letter explained that participation in this study was voluntary and anonymous.

We did not ask for written consent of the participants as such, but were given the opportunity to review their voluntary participation after having read the informative letter (an informed consent letter). We asked physicians (N=1154) to fill out the questionnaire within 3 weeks and to return it via locked boxes at the hospital wards. Reminders were sent by email after 3 weeks to increase the response rate. At the end, we received 727 questionnaires from the N=1154 contacted physicians (response rate of 63%).

Variables

WFC was the dependent outcome variable. Organisational factors were included as independent variables:

- Quantitative and emotional job demands;
- Degree of freedom at work, influence at work, social relations, social support, sense of community, quality of leadership.

In addition, specific psychological trait variables were chosen in the set of questionnaires (eg, self-efficacy, etc.) presumed by us as predictors for WFC:

- Resilience, self-efficacy, optimism.

We expected physicians' sociodemographic characteristics to have an effect on their ratings; therefore, we analysed differences in age, gender, marital status, presence of children, medical specialty and work experience in years at the time of the study.

Instruments

Work–family conflict

We analysed the WFCs using the German version of the original instrument by Netemeyer.[49] This instrument consists of five items including questions on the influence of work on personal or family life, to be answered with a five-point Likert scale (from 'strongly agree' to 'strongly disagree'):

1. The demands of my work interfere with my home, personal and family life.
2. The amount of time my work takes up makes it difficult to fulfil family responsibilities or personal obligations.
3. Things I want to do at home do not get done because of the demands my job puts on me.
4. My job produces strain that makes it difficult to fulfil family duties or personal duties.
5. Due to work-related duties, I have to make changes to my plans for family or personal activities.

Items described above were transformed to a scale ranging from 0 (minimum value, eg, 'strongly disagree') to 100 points (maximum value, eg, 'strongly agree').

The internal consistency of the scale with our sample was good (α=0.81).

Organisational resources

The German version of the Copenhagen Psychosocial Questionnaire (COPSOQ) was used to evaluate job-related and psychosocial factors at work.[50 51] The questionnaire includes 12 scales; we analysed the following eight scales of the COPSOQ: emotional and quantitative job demands (workload, working under pressure), job resources (quality of leadership, feedback, opportunities for development, social support, sense of community, social relationships, degrees of freedom at work and influence at work). Items are scored on a five-point Likert scale and transformed to a scale ranging from 0 (minimum value, eg, 'do not agree at all') to 100 points (maximum value, eg, 'fully agree'). Previous investigations proved quality criteria of the COPSOQ.[51] We also verified them: Cronbach's α coefficients ranged

between α=0.71 to α=0.85, while intercorrelations ranged between r=0.30 and r=0.68.

Personal resources

The questionnaire 'Self-Efficacy, Optimism and Pessimism' (SWOP-K9) was used to analyse physicians' personal resources.[52] This instrument assesses individuals' perception of self-efficacy, optimism and pessimism on three scales (with nine items in total). The good test quality criteria of the SWOP-K9 questionnaire has been discussed in a previous publication.[52]

Resilience was evaluated by using the German version of the 'Brief Resilient Coping Scale' (BRCS),[53] which consists of four self-assessing items for resilient coping behaviour in difficult or unpleasant situations in the past.

Statistics

Data analysis included descriptive analyses, correlation and reliability analyses. Analyses of variance, and linear bivariate and multiple regression analysis were also performed. Data collected on age, gender, number of years in training and marital status were used as covariates and predictive factors. p Values of less than 0.05 were considered significant, and all p values given were two tailed.[54] Data were calculated using the SPSS software package for social sciences; V.21.0.

RESULTS

Descriptive statistics

Physicians' sociodemographic characteristics are given in table 1. In all, 54% of the respondents were female physicians; 46% were male, 62% were married or lived in a partnership and 41% had children; the mean age was 35 years (SD=7.9 years), and work experience was rated with a mean of 8 years (SD=7.2 years).

WFC and working conditions

On the WFC scale, the study sample of 727 hospital physicians reached a mean of 76.1 (SD=20.4) (range 0–100) (table 2). With regard to the single items of the WFC scale, more than 40% (n=291) of the respondents agreed with the statements "Things I want to do at home do not get done because of the demands my job puts on me" (45%) and "Due to work-related duties, I have to make changes to my plans for family or private activities" (41%). 94% (n=683) agreed with the statement "My job produces strain that makes it difficult to fulfill family duties or personal duties". The other two items were also important for the majority of doctors (>50%).

Descriptive values of physicians' working conditions are listed in table 3. Quantitative job demands were rated with high levels (M=74.56, SD=12.17), whereas job resources were rated with significantly lower scores (range M=44.13–62.66).

Sociodemographic differences

In addition, we examined differences in sociodemographic variables. Men and women differed significantly in age and presence of children (p<0.05). Female physicians were younger than their male colleagues. Men reported more often having a child or children than their female colleagues (p<0.05). For none of the other sociodemographic predictors, a gender difference could be found. Additionally, we analysed the predictors of WFC for gender differences via multivariate analysis of variance. Sense of community (sc) and social support (ss) were the predicting scales which were significantly different for female physicians (sc: mean=79.26, ss: mean=76.61) and male physicians (sc: mean=68.34; ss: mean=70.15; p<0.05). The analysis showed a non-significant result for gender differences in WFC (F(1,726)=0.411; p=0.52) (table 2). We also found that the factor age stayed significant (F(3,724)=3.17; p=0.024): younger physicians reported lower levels of WFC. In addition, for WFC we identified significant differences for presence of children (F(1,726)=4.619; p=0.032): physicians with children reported higher levels of WFC.

Table 1 Demographic characteristics of the participants (n=727)

	N	Per cent
Gender		
Female	393	54
Male	334	46
Age		
<25	0	0
26–30	211	29
31–35	182	25
36–40	138	19
41–45	87	12
46–50	73	10
>50	36	5
Professional status		
Intern/resident	575	79
Attending physician	116	16
Senior physician	36	5
Work experience (years)		
Less than 1	73	10
1–2	102	14
3–5	247	34
More than 5	305	42
Area of specialisation		
Internal medicine	181	25
Surgery	124	17
Paediatrics	102	14
Anaesthesiology	95	13
Neurology	110	15
Gynaecology	115	16
Marital status		
Single	276	38
Married/partnership	451	62
Children		
Child/children	298	41
Without children	429	59

Table 2 Sociodemographic differences in WFC

WFC	M	SD
Gender		
Female	74.1	19.5
Male	73.5	19.4
Age		
<25	61.2	20.1
26–30	68.9	19.6
31–35	75.8	20.4
36–40	76.1	19.7
41–45	75.5	18.3
46–50	74.3	18.5
>50	72.4	16.1
Work experience		
Less than 1 year	61.6	19.8
1–2 years	68.2	20.1
3–5 years	74.5	20.4
More than 5 years	75.3	19.7
Professional status/presence of children		
Intern, no children	58.9	18.9
Intern, children	68.1	19.3
Attending, no children	70.9	20.5
Attending, children	75.4	21.8
Senior, no children	74.9	20.1
Senior, children	72.1	19.5
Medical specialty		
Internal medicine	75.4	21.3
Surgery	76.9	20.7
Paediatrics	73.5	19.6
Anaesthesiology	75.8	21.1
Neurology	72.5	19.2
Gynaecology	76.7	22.6
Sum score	76.1	20.4

WFC, work–family conflict.

We found no significant differences in WFC depending on medical specialty (p>0.05). Mean values of WFC per medical specialty are illustrated in table 2.

Table 3 Descriptive values of independent and dependent variables

Dimensions	M	SD
Working conditions		
Quantitative demands	74.56	12.17
Emotional demands	67.54	12.23
Possibilities for development	43.58	13.51
Influence at work	44.13	11.37
Degree of freedom at work	47.29	12.59
Social support	61.16	13.14
Social relationships	59.52	12.62
Sense of community	62.64	11.45
Quality of leadership	50.73	15.27
Feedback	49.65	12.49
Psychological variables		
Self-efficacy	3.23	0.65
Optimism	3.46	0.69
Resilience	3.82	0.75

Table 4 Correlation coefficients between work family conflicts and psychological, organisational resources

Dimensions	WFC
Organisational demands	
Quantitative demands	0.32**
Emotional demands	0.25*
Organisational resources	
Possibilities for development	−0.31**
Influence at work	−0.36**
Degree of freedom at work	−0.33**
Sense of community	−0.35**
Social support	−0.38**
Social relationships	−0.34**
Quality of leadership	−0.29*
Feedback	−0.21*
Psychological variables	
Self-efficacy	−0.32**
Optimism	−0.27*
Resilience	−0.35**

*p<0.05; **p<0.01.
WFC, work–family conflict.

Associations with WFC

Bivariate analyses revealed several significant negative correlations between WFC and psychosocial (trait) dimensions "resilient coping, self-efficacy and optimism" (see table 4). Similar correlations were found between WFC and influence at work, sense of community, degree of freedom at work, social support and quality of leadership (see table 4).

Finally, we performed the regression analysis in which WFC was set as the dependent variable. At first, the variables age, work experience, cohabitation with a partner and medical specialty were statistically controlled (table 5). These control variables accounted for 5% of the variance in WFCs (model 1). The variables age and years of experience were found to predict WFC (age: β=−0.12, p=0.03; years of experience: β=−0.11, p=0.04). In the second step, the included personal resources accounted for an additional 10% of the variance (R^2 increased to 0.15) (model 2). Personal resources like resilient coping were found to predict WFC (β=−0.18, p=0.01), similar to self-efficacy (β=−0.12; p=0.01) and optimism (β=−0.10, p=0.03), while pessimism did not.

The third step included 'quantitative demands' and 'emotional demands', both positive predictors for WFC. Quantitative job demands revealed a significant β weight (β=0.26, p=0.01). Emotional demands showed a non-significant β weight of β=−0.04. In the fourth step, physicians' job resources were included in the regression analysis (see table 5). The regression model explained 41% of the variance in the final model. The included organisational resources accounted for an additional 17% of the variance. Job resources revealed significant β weights for the following variables: influence at work (β=−0.12 p=0.03), possibilities for development (β=−0.23, p=0.01), degree of freedom at work (β=−0.16, p=0.01), sense of community (β=−0.18, p=0.01), feedback

Table 5 Multiple hierarchical regressions (ratios of variance and standardised β weights)

	WFC		
Explanatory variables	**β**	**R^2**	**R^2 change**
Step 1: Sociodemographic variables		0.05	0.05
Age	−0.12*		
Gender	0.07		
Marital status	0.05		
Children	0.06		
Years of experience	−0.11*		
Step 2: Personal resources		0.15	0.10
Resilience	−0.18**		
Optimism	−0.10*		
Pessimism	0.07		
Self-efficacy	−0.12*		
Step 3: Job demands		0.24	0.09
Quantitative demands	0.26**		
Emotional demands	−0.04		
Step 4: Job resources		0.41	0.17
Influence at work	−0.12*		
Possibilities for development	−0.23**		
Degree of freedom at work	−0.16*		
Sense of community	−0.18**		
Feedback	−0.10*		
Quality of leadership	−0.16**		
Social support	−0.14*		
Social relationships	−0.13*		
Total R^2	0.41		

β, standardised β-coefficients from the *final step* of the model. R^2, explanation rate. ΔR^2, change in the explanation rate *at each step*.
*p<0.05; **p<0.01.
WFC, work–family conflict.

(β=−0.10, p=0.04), quality of leadership (β=−0.16, p=0.01), social support (β=−0.14, p=0.02) and social relationships (β=−0.13, p=0.04). In addition, we used hierarchical multiple regression to conduct the moderation effect analysis. All variables entered the regression equation following the first regression analysis in table 6. In the first step, age and years of experience have been entered explaining 4% of the variance in WFC (R^2=0.04, p<0.05). In the second step, personal resources, job demands (quantitative and emotional demands) and job resources (degree of freedom at work, influence at work, social relations, social support, sense of community, quality of leadership) were entered together, explaining an additional 35% of the variance in WFC (R^2=0.35, p<0.01). In the third step, the interaction terms were significant (range between β=0.20 and 0.23, p<0.01), explaining an additional variance of 6% (R^2 final=0.45, p<0.01). As table 6 shows, there was a significant increase in R^2 as an indicator of the moderation effect.

DISCUSSION

By sampling German hospital physicians (n=727) working in different hospitals and medical disciplines, we conducted a cross-sectional study focusing on physicians' WFC, working conditions and personal resources. The present study aimed to discover person related and organisational circumstances in relation to WFC. In addition, we focused on gender differences in these issues.

In comparison to the study of Fuss *et al*,[3] we found similar levels of WFC among German hospital physicians. In accordance with other studies comparing male and female physicians,[55] this study did not find a gender difference for WFC. In contrast, a study by Dumelow[55a] found higher WFC levels for female physicians.[56] Adam[57] also reported that female physicians reported a significantly higher mean level and prevalence of WFC compared to men. Warde *et al*[58] demonstrated that more female than male physicians and more younger than older female physicians experienced levels of role conflict.

On the basis of gender role theory, some researchers confirm that women are more likely to report higher levels of WFC. Nevertheless, there are several studies that revealed the contrary.[35 59] A possible explanation for our findings might be the fact that men in our sample reported more often than women that they lived with children in their household.

Several predictive factors for WFC were identified in our study. In line with other research findings,[60] our study shows that quantitative job demands (defined as high workload and working under pressure) are a significant predictor for WFC. Previous research also showed that job demands such as high workloads and working under pressure are related to.[61 62] In addition, this result supports past findings by researchers such as Boles *et al*[63 64] and Noor[65] who also found significant positive

Table 6 Moderated multiple regression analyses testing the moderating effect of personal resources and job resources in the relationship between work–family conflict and job demands

	Step 1	Step 2	Step3
Criterion variable: work–family conflict			
Step 1: Control variables			
Age	−0.15*	−0.13*	−0.12*
Years of experience	−0.13*	−0.12*	−0.11*
Step 2: Main effects			
Resilience		−0.17**	−0.18**
Self-efficacy		−0.12**	−0.13**
Optimism		−0.10*	−0.10*
Job demands		0.25**	0.21**
Job resources		−0.18**	−0.22**
Step 3: Interaction			
Job demands×resilience			0.20**
Job demands×self-efficacy			0.21**
Job demands×optimism			0.23**
Job demands×job resources			0.21**
R^2	0.04	0.39	0.45
ΔR^2		0.35	0.06

Standardised regression coefficients are provided for each of the three steps; *p<0.05; **p<0.01.

relationships between WFC and working demands. In a meta-analysis of Allen *et al*,[23] all studies reviewed suggested a positive relationship between WFC and high job demands as well as for job-strain.

In line, our study also demonstrated relatively high scores for quantitative job demands (workload, working under pressure) compared with data of other studies performed in different work settings in Germany[66 67] With regard to the medical setting, this finding is not surprising since intensification of workload in the course of restructuring of the German health system has been identified as one of the most direct effects on German doctors.[68] Previous studies analysing job demands in the medical setting with the same questionnaire illustrated comparable scores of job demands (eg, quantitative job demands).[3 69] Study results describe that one of the sources of WFC lies in work schedule irregularities.[62] Previous studies also identified the frequent necessity of delaying planned holidays as a predictor for WFC. [70]

Similar to the results of studies on other professionals, 'influence at work', 'social support' and 'sense of community' were identified as protective factors against WFC: the high scores of these job resources predict low values of WFC and low scores predict WFC. These results indicate that a good working atmosphere and support among colleagues and teamwork should be encouraged in hospitals, and that satisfactory working conditions will be facilitated by supportive leadership behaviour.[71]

In addition, personal resources seem to help physicians balance WFC, that is, doctors who show high levels of self-efficacy, resilient coping behaviour and optimism may be more capable of preventing WFC. These physicians seem more likely to be able to recognise what role work and family play for them, and have a better insight into strategies of how job and family demands can be managed. In the case of managing conflicts between private and work responsibilities, self-efficacy and resilient coping behaviour can provide a perspective on what might ultimately help to reduce negative outcomes (such as lower life and/or job satisfaction).[72 73]

In line with previous findings,[3] we found younger (ie, less experienced) physicians scoring higher on the WFC scale than more mature ones. Advanced age could be a protective factor for WFC due to better coping strategies with job stress based on longer job experience.[74] Moreover, older physicians are not in the family-founding phase; thus, fewer conflicts in work-related and family-related fields may exist.

Limitations

Some limitations of the study shall be addressed: its cross-sectional design limits the value in supporting causal effects and generalisability of the findings. Since data on WFC, working conditions and personal resources were assessed by self-report measures and no observers' data are available to cross-validate the data of participants, we can only claim limited objectivity of our results. Furthermore, our study sample due to logistic and pragmatic reasons includes only physicians working in clinic departments of the northern and eastern parts of Germany, which may also limit the generalisability of the study findings.

Finally, additional variables should be included such as structure and composition of families as well as measures of conflict orientation.

CONCLUSIONS

The findings of this study provide new information on relations between German physicians' WFCs, working conditions and personal resources.

The study results can be summarised as follows:

1. Physicians working at German hospitals perceive levels of WFCs.
2. Physicians' WFCs are *negatively* associated with:
   A. Job resources, particularly influence at work, sense of community and social support;
   B. Personal resources (eg, self-efficacy and resilience).
3. Physicians' WFCs are *positively* associated with job demands such as workload.
4. Personal resources and job resources moderate the relationship between job demands and WFCs.
5. Significant relations between WFCs and sociodemographic variables could be identified (eg, age).

Our findings, in turn, have practical implications:

Hospital management/administration should provide more resources just enough to enable health professionals to balance work and family demands by offering support, influence at work and opportunities for personal development. In addition, to address the needs especially of younger physicians, the start of their

working life might be improved by, for example, structured vocational training,[21] mentoring programmes and supervision.[75] The compatibility between career and family should be improved (eg, by offering part-time jobs). Services such as in-house or supported childcare are suggested by different authors as another opportunity of support.[76 77] By improving these working conditions, not only would WFC be reduced but also the overall job satisfaction and job performance may be increased.

Author affiliations
[1]Institute for Occupational Medicine and Maritime Medicine (ZfAM), University Medical Center Hamburg-Eppendorf, Hamburg, Germany
[2]Institute of Occupational Medicine, Charité—Universitätsmedizin Berlin, Free University and Humboldt University, Berlin, Germany
[3]Institute of Occupational Medicine, Social Medicine and Environmental Medicine, Goethe-University, Frankfurt am Main, Germany
[4]Charité Center for Internal Medicine and Dermatology, Division of General Internal and Psychosomatic Medicine, Charité—Universitätsmedizin Berlin, Berlin, Germany

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Stefanie Mache, Monika Bernburg, Karin Vitzthum, David A Groneberg, Burghard F Klapp and Gerhard Danzer

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