

STUDY OF WORK–FAMILY CONFLICT (WFC), BURNOUT AND PSYCHOSOCIAL HEALTH AMONG HUNGARIAN EDUCATORS

BETTINA PIKO*, MARIA MIHALKA**

*University of Szeged, Department of Behavioural Sciences, Szeged, Hungary

**University of Szeged, Department of Social Work & Social Policy and Doctoral School of Educational Sciences, Szeged, Hungary

ABSTRACT

Introduction. Education, as a people-oriented job, has always been identified as a stressful occupation since educators should face organizational problems as well as interpersonal conflicts. Among others, work–family conflict (WFC) is one of the main sources of occupational stress and burnout. These problems may lead to negative job and health consequences, e.g., psychosomatic symptoms, health risk behaviours, mental and physical symptoms and deteriorated quality of life. In a word, prevention of educators' health problems stemming from job stress is a great challenge for public health. *Objectives.* The main goal of the present study was to investigate how different indicators of work–family conflict were related to educators' psychosocial health including psychosomatic symptoms, satisfaction with life, health behaviour, and burnout beyond sociodemographics, such as gender and age. *Methods.* Using a multistage sampling method, our sample consisted of educators (primary, secondary and grammar school teachers, nursery school teachers, special education teachers, etc.; N = 2,068 aged between 23-74; mean = 48.1 years, S.D. = 8.9 years; 83.5% females). Besides descriptive statistics, correlation analyses were applied to detect bidirectional relationships between variables. *Results.* Among sociodemographics, certain subscales of WFC showed negative correlations with age. Whereas females experienced WIF (work interference with family) more often, males experienced FIW (family interference with work) slightly more frequently. Occurrence of substance use was more favourable compared to the average Hungarian population, particularly smoking. However, smoking and drinking were weakly but significantly correlated with WFC scales. Burnout and the psychosomatic symptoms were the most significant correlates of the WFC factors, particularly emotional exhaustion. Satisfaction with life was negatively correlated with WFC factors. Finally, those reported WFC tended to be physically less active. *Conclusions.* These findings reassured that WFC had many job and health-related correlates. Therefore,

Corresponding author: Prof Dr. Bettina Piko, M.D., D.Sc.,

University of Szeged, Department of Behavioural Sciences,

5 Szentharomsag street, 6722 Szeged, Hungary.

Tel./fax: +36 62 420-530

E-mail: fuzne.piko.bettina@med.u-szeged.hu

interventions at both individual (e.g., developing effective coping skills) and organizational (e.g., clear role description, screening for burnout) levels should be necessary.

KEY WORDS: educators, health behaviour, burnout, work-family conflict, satisfaction with life, psychosomatic health

ABBREVIATIONS:

FIW = family interference with work

WFC = work-family conflict

WIF = work interference with family

INTRODUCTION

Teaching has always been identified as a stressful occupation with many negative aspects (Russel et al., 1987). Since education is a people-oriented job, teachers should face a number of interpersonal conflicts with students due to disciplinary problems or lack of the students' motivation as well as with colleagues or demanding parents. Organizational problems, such as crowded classrooms, excessive administration or lack of social support may also contribute to job stress, burnout and job dissatisfaction (Schwarzer et al., 2000; Malinen and Savolainen 2016). The negative consequences may also include psychosomatic symptoms, health risk behaviours, mental and physical health problems (Kovess-Masféty et al., 2006). In a word, prevention of educators' health problems stemming from job stress is a great challenge for public health.

One of the sources of occupational stress is work-family conflict (WFC). Families with the dual-career couple model often face the challenge of work-family conflicts (Allen et al., 2000). This type of conflict has been defined as "a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect" (Greenhaus and Beutell, 1985, p. 77). Work-family conflict may influence job satisfaction and organizational commitment, job turnover as well as the employee's quality of life (e.g., satisfaction with life) and psychosomatic health. It may contribute to burnout in people oriented jobs, prone to depression or substance use (Allen et al., 2000).

After the years when only the impact of work on family had been investigated, in the 1990s, a bidirectional model of work-family conflict was introduced suggesting that both directions should be considered, namely, work interference with family (WIF) and family interference with work (FIW) (Frone et al., 1997). This model gives an equal emphasis on the consequences of work on family life and the impact of family duties on work capacity. Later, researchers expanded this integrated model with different forms of work-family conflicts and made difference among: time-based (i.e., due to shortage of time), strain-based (i.e., due to strain from role discrepancy) and behaviour-based (i.e., due to differences in behavioural expectations) conflicts (Carlson

et al., 2000). Each of these has two directions: conflict stemming from work interference with family (WIF) and conflict stemming from family interference with work (FIW). Altogether, six dimensions of work–family conflict result from the combination of these three forms and two directions: (1) time-based WIF, (2) time-based FIW, (3) strain-based WIF, (4) strain-based FIW, (5) behaviour-based WIF, and (6) behaviour-based FIW. Recently, more comprehensive indicators have also been considered, such as the composite measure of time/strain/behaviour based WFC or the composite WIF or FIW indicators (Ádám and Konkoly, 2017).

WFC may have a great impact on employee's quality of life and life satisfaction (Yucel, 2017). A meta-analytic review came to a conclusion that regardless of the type of measure used (work to family or family to work directions) a consistent negative relationship could be found among all forms of work–family conflict and job–life satisfaction (Ernst Kossek and Ozeki, 1998). A Hungarian study also supports a relationship between WIF and job–life satisfaction in a sample of diverse employees (Molnár, 2014). This study also suggests that the role of destructive competition may contribute to work–family conflict. Some studies also reported the role of value attainment as a possible mediator between the work–family conflict and job–life satisfaction. Namely, being able to attain values at work or family may help prevent dissatisfaction (Perrewé et al., 1999). Otherwise work–family conflict may result in negative emotions, dissatisfaction with life, health-related behaviour, and physical health symptoms (Greenhaus et al., 2006).

A number of stress–related health consequences were identified in relation to WFC, among others, depression, vital exhaustion, burnout, alcohol abuse and other aspects of health behaviour (Allen et al., 2000; Allen and Armstrong, 2010; Ádám and Konkoly, 2017). As a study pointed out, there was a negatively significant association between WIF and overall burnout as well as emotional exhaustion, whereas FIW was significantly associated with depersonalization (Bagherzadeh et al., 2016). A recent study reported that work–family conflicts predicted burnout and burnout negatively influenced personal protective equipment compliance and adherence to safety work practices, among career firefighters in the USA (Smith et al., 2018). Another study reported a robust relationship between WFC and smoking (Nelson et al., 2012). In addition, alcohol is often used as a tension reducing technique against WFC (Wolff et al., 2013; 2014). Among Japanese civil servants work–family conflict was the highest in the professional and technical workers, and women were more likely than men to experience high level of WFC (Koura et al., 2017). In a sample of nurses from India, stress acted as a mediator between work–family conflict and their psychological health (Sharma et al., 2016). Among Turkish teachers, more WFC than FWC (family-work conflict) was reported: they most commonly experienced that physical and mental fatigue at work made difficult responsibilities and caused tension at home (WFC). On the other hand, unexpected situations at home (e.g., illness, marital crisis) made difficulties at work. Particularly females and young teachers went through WFC and while females experienced WIF more often, males experienced FIW slightly more frequently (Erdamar and Demirel, 2014). Among school teachers in Malaysia, work-family conflict (particularly WIF) had negative influence on life satisfaction and mental health (Pantik et al., 2011). A recent study concluded that the associations of WFC with employees' mental health and subjective well-being were robust, whereas the association with health behaviour was generally limited (Oshio et al., 2017).

Although WFC among educators has not yet been explored in Hungary, we assume that – based on the international literature above – it may also be related to the negative job and health consequences. Therefore, the main goal of the present study was to investigate how different indicators of work–family conflict were related to educators’ psychosocial health (psychosomatic symptoms, satisfaction with life and health behaviour), their level of burnout as well as their gender and age. Based on the literature we hypothesized a positive relationship of the indicators of WFC with burnout, psychosomatic symptoms and risky health behaviour and a negative relationship with life satisfaction and preventive health behaviour. Moreover, we also hypothesized a positive correlation with female gender and younger age.

METHODS

Study population

Data were collected during a one-month-period between December, 2016 and January, 2017. A multistage sampling method was used to reach educators (primary, secondary and grammar school teachers, music teachers, nursery school teachers, school principals, special education teachers, etc.) using the Central Information System of the National Educational Office (KIR). From the central data file of e-mails of the institutions (altogether = 14,000), every 10th was randomly selected and posted about the main goal of the study. After receiving ethical approval from the IRB of the Doctoral School, University of Szeged data were collected via online survey by means of a link distributed by e-mails. The final sample size was 2,068 (aged between 23-74; mean = 48.1 years, S.D. = 8.9 years; 83.5% females). Participation of the survey was anonymous and based on self-reported data, and the participants agreed that completion and return of the questionnaire was construed as consent. The questionnaire contained items on the educators’ health and work-related experiences, besides sociodemographics.

Measures

The Work-Family Conflict Scale (Carlson et al., 2000) is a self-report measure composed of 18 items assessing six conceptually and empirically distinct dimensions (Time-based work interference with family; Time-based family interference with work; Strain-based work interference with family; Strain-based family interference with work; Behaviour-based work interference with family; Behaviour-based family interference with work). Each of the six dimensions is assessed with three items. The scale has been validated on Hungarian samples (Ádám & Konkoly, 2017). Responses were measured on 5-point Likert-type scales (1= strongly disagree to 5 = strongly agree). Cronbach’s reliability was 0.88 with the current sample for the total scale and it varied between 0.70 and 0.92 for the subscales.

The Maslach Burnout Inventory, Educator Survey (Maslach and Jackson, 1986) was designed to assess job stress in teaching professionals. The 22-item MBI has three factoranalytically derived scales: emotional exhaustion, depersonalisation (positively related to burnout) and personal accomplishment (negatively related to burnout). Responses were assessed by a

seven-point Likert response format ranging from 'almost never' (= 0) to 'almost always' (=6). Cronbach's alpha reliability values with the current sample were the following: 0.89 (MBI), 0.89 (Emotional exhaustion), 0.73 (Depersonalization) and 0.77 (personal accomplishment).

Life satisfaction was measured using the Satisfaction With Life Scale (Diener et al., 1985). The participants indicated how strongly they agreed with each of the five items and responses ranged from 1 = strongly disagree to 7 = strongly agree. The final scale had a range of 5-35 and was reliable with a Cronbach's alpha of 0.89 with the current sample.

The Psychosomatic symptom Index included the following self-reported symptoms: lower-back pain, tension headache, sleeping problems, chronic fatigue, stomach pyrosis, tension diarrhoea and heart palpitation (Pikó et al., 1997). This measure was used in order to obtain information on the frequency of these symptoms during the last 12 months (21). Respondents were asked: "During the past 12 months, how often have you had a back-pain?"...etc. Responses were coded as often (3), sometimes (2), seldom (1), and never (0). The final scale had a range of 0-21 and was reliable with a Cronbach's alpha of 0.78.

Finally, the following health behaviours were included in the study: smoking, drinking, binge drinking and sporting. All the measures were from the European Health Interview Survey (ELEF, 2014) indicating the frequency of each behaviour during the past 12 months. For the analytical purpose of this study, substance use items were applied in dichotomized format (yes/no).

RESULTS

Table I presents descriptive statistics for dimensions of WFC. As it seems WIF indicators show higher levels than FIW factors, except for behaviour-based indicators where the levels were nearly equal. Among the composite indicators, Time-based WFC showed the highest value and the indicator 'Work interferes with family' scored higher than 'Family interferes with work'.

TABLE I.

Descriptive statistics for the indicators of work-family conflict (WFC)

Indicators	Mean (min.- max.)	S.D.	Cronbach alpha
Time-based WIF	10.5 (3-15)	3.5	0.87
Time-based FIW	6.8 (3-15)	2.8	0.70
Time-based WFC	17.3 (6-30)	5.1	0.78
Strain-based WIF	10.0 (3-15)	3.4	0.86
Strain-based FIW	5.0 (3-15)	2.4	0.88
Strain-based WFC	14.9 (6-30)	4.7	0.80
Behaviour-based WIF	7.6 (3-15)	3.3	0.86
Behaviour-based FIW	7.8 (3-15)	3.4	0.92
Behaviour-based WFC	15.4 (6-30)	6.0	0.90
Work interferes with family	28.0 (9-45)	7.8	0.85
Family interferes with work	19.6 (9-45)	6.1	0.80

Correlation coefficients between sociodemographics (age, gender) and WFC are displayed in *Table II*. WIF factors and the composite indicator ‘Work interferes with family’ were associated with female gender, whereas ‘Family interferes with work’ with male gender. Time-based WIF showed the strongest association with gender ($r = 0.09$, $p < 0.001$). In terms of the behaviour-based indicators, all of them were related to male gender. This indicates that for males more problems may stem from a need to change roles and the associated behaviours.

Age was negatively correlated with ‘Time-based FIW’ ($r = -0.08$, $p < .001$) and ‘Time-based WFC’ ($r = -0.05$, $p < 0.05$) as well as all indicators of strain-based conflicts (r 's = -0.05 and -0.06 respectively, $p < 0.05$ and 0.01). In contrast with this, behaviour-based indicators did not show any association with age. As to the composite indicators, the relationship was negative with ‘Family interferes with work’ ($r = -0.06$, $p < 0.01$) whereas it was nonsignificant with ‘Work interferes with family’. However, all the correlation coefficients between sociodemographics and indicators of work-family conflict were relatively low in value.

TABLE II.

Associations [Pearson correlation coefficients (r)] between the indicators of work-family conflict (WFC) and sociodemographics (gender, age)

Indicators	Gender (female =2)	Age
Time-based WIF	0.09***	- 0.01
Time-based FIW	- 0.02	- 0.08***
Time-based WFC	0.05*	- 0.05*
Strain-based WIF	0.06*	- 0.05*
Strain-based FIW	- 0.04	- 0.05*
Strain-based WFC	0.02	- 0.06**
Behaviour-based WIF	- 0.05*	0.01
Behaviour-based FIW	- 0.07**	- 0.01
Behaviour-based WFC	- 0.07**	- 0.01
Work interferes with family	0.04*	0.02
Family interferes with work	- 0.06**	- 0.06**

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

In *Table III* descriptive statistics for psychosocial variables can be seen. Among the educators, 16.8% were current smokers, the prevalence of alcohol drinking was 51.2% whereas that of binge drinking was 33.3% during the past 12 months. On an average they spent about 120 minutes with sports activity. Mean scores for the psychological scales (burnout, satisfaction with life) and psychosomatic index are also displayed in this table.

TABLE III.

Descriptive statistics for the psychosocial health indicators

Indicators	Mean (min.—max.)	S.D.	Frequency (%)
Burnout total score	51.5 (8—118)	17.7	
Emotional exhaustion	23.7 (0—54)	10.5	
Depersonalization	7.2 (0—30)	5.3	
Decreased personal accomplishment	20.7 (8—54)	6.3	
Psychosomatic symptoms	16.0 (7—28)	4.4	
Satisfaction with life	24.6 (5—35)	5.9	
Smoking			
No			83.2
Yes			16.8
Drinking			
No			48.8
Yes			51.2
Binge drinking			
No			66.7
Yes			33.3
Sports (minutes/week)	119.3 (0—3600)	170.1	

Table IV shows associations between the indicators of WFC and (subdimensions) of burnout. All indicators of work-family conflict were related to each burnout factor at a significance level of 0.001. Associations were the strongest with emotional exhaustion, particularly with the strain-based indicators ('Strain-based WIF': $r = 0.61$, $p < 0.001$; 'Strain-based WFC': $r = 0.58$, $p < 0.001$).

TABLE IV.

Associations [Pearson correlation coefficients (r)] between the indicators of work-family conflict (WFC) and burnout

Indicators	Burnout total score	Emotional exhaustion	Depersonalization	Decreased personal accomplishment
Time-based WIF	0.35***	0.47***	0.15***	0.07**
Time-based FIW	0.29***	0.26***	0.22***	0.18***
Time-based WFC	0.39***	0.46***	0.22***	0.14***
Strain-based WIF	0.52***	0.61***	0.28***	0.21***
Strain-based FIW	0.31***	0.27***	0.27***	0.20***
Strain-based WFC	0.54***	0.58***	0.34***	0.25***
Behaviour-based WIF	0.34***	0.31***	0.27***	0.20***
Behaviour-based FIW	0.40***	0.36***	0.31***	0.27***
Behaviour-based WFC	0.41***	0.37***	0.32***	0.26***
Work interferes with family	0.53***	0.61***	0.30***	0.21***
Family interferes with work	0.47***	0.42***	0.38***	0.31***

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Finally, *Table V* displays associations between the indicators of WFC and variables of psychosocial health. All the indicators of WFC show a significant positive relationship with psychosomatic symptoms; the strongest association could be found with 'Strain-based WIF' ($r = 0.47, p < 0.001$) and 'Strain-based WFC' ($r = 0.46, p < 0.001$). On the contrary, all indicators of WFC were significantly and negatively correlated with satisfaction with life. Among the types of health behaviour, sporting can play the most important role: it was negatively correlated with all indicators of WFC at different p levels. Smoking showed a significant relationship only with the strain-based indicators ('Strain-based WIF': $r = 0.16, p < 0.01$; 'Strain-based WFC': $r = 0.14, p < 0.05$). Among the composite indicators, 'Work interferes with family' was also correlated with smoking ($r = 0.12, p < 0.05$). In terms of alcohol use, WIF factors (namely, time-based and strain-based factors) seem to show a negative relationship, whereas FIW factors a positive one. The strongest association can be found in the case of 'Time-based WIF' ($r = -0.09, p < 0.001$). A similar association was justified between binge drinking and 'Time-based WIF' ($r = -0.05, p < 0.05$) and the association with 'Strain-based FIW' was also positive ($r = 0.10, p < 0.001$).

TABLE V.

Associations [Pearson correlation coefficients (r)] between the indicators of work-family conflict (WFC) and psychosocial health

Indicators	Psychosomatic symptoms	Satisfaction with life	Smoking	Drinking	Binge drinking	Sports
Time-based WIF	0.35***	- 0.23***	0.09	- 0.09***	- 0.05*	- 0.14***
Time-based FIW	0.15***	- 0.16***	- 0.04	0.05*	0.02	- 0.05*
Time-based WFC	0.32***	- 0.24***	0.04	- 0.03	- 0.02	- 0.12***
Strain-based WIF	0.47***	- 0.33***	0.16**	- 0.05*	0.01	- 0.18***
Strain-based FIW	0.22***	- 0.24***	0.04	0.05*	0.10***	- 0.05*
Strain-based WFC	0.46***	- 0.36***	0.14*	- 0.01	0.05*	- 0.15***
Behaviour-based WIF	0.25***	- 0.29***	0.04	0.02	0.04	- 0.11***
Behaviour-based FIW	0.22***	- 0.26***	0.07	- 0.02	- 0.01	0.08**
Behaviour-based WFC	0.26***	- 0.30***	0.06	0.01	0.01	- 0.10***
Work interferes with family	0.47***	- 0.37***	0.12*	- 0.05*	- 0.01	- 0.19***
Family interferes with work	0.28***	- 0.31***	0.04	0.03	0.04	- 0.08***

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

DISCUSSION

Work-family conflict (WFC) is a key issue in occupational health (Allen et al., 2000; Ádám and Konkoly, 2017; Koura et al., 2017; Smith et al., 2018). Since this field has not yet been explored among Hungarian educators, we have focused how different indicators of work-family conflict are related to their psychosocial health including psychosomatic symptoms, satisfaction with life and, health behaviour and level of burnout. Therefore, we applied Carlson's model based on a comprehensive multidimensional measure of work-family conflict (Carlson et al., 2000). A previous study reported appropriate psychometric properties of the Hungarian adaptation with this measurement (Ádám and Konkoly, 2017).

We hypothesized that WFC might be more related to female educators and those who are younger. A previous study indicated that females and young teachers more often went through WFC (Erdamar and Demirel, 2014). Our findings are in concordance with this, although we have to note that the associations are rather weak. Certain subscales of WFC showed negative correlations with age indicating that this was mainly the problem for younger educators who rear little children and/or those who happen to start a family. We assume that they do not have yet enough routine to harmonize these two fields of life. In terms of the different directions of WFC and their associations with gender, the above mentioned paper also found that whereas females experienced WIF more often, males experienced FIW slightly more frequently (Erdamar and Demirel, 2014). Our results dominantly support these tendencies, although again we should be cautious about the slight power of associations. Work interferes with family was correlated with female gender indicating that conflicts from workplace might have interference with family for women. On the other hand, for men conflict with family might have interference with work. This means that work conflicts might have a negative influence on their family life among females, whereas family conflicts might make it difficult to cope with work for males.

Similarly to sociodemographics, smoking and drinking significantly but weakly correlated with WFC scales. Occurrence of substance use was more favourable among educators as compared to the average Hungarian population (ELEF, 2014), particularly smoking which was substantially lower (16.8% vs. 27.5%). Smoking was associated with 'Strain-based WIF' indicating that smoking can serve as a way of coping with strains due to role discrepancy. In a previous study this relationship was dependent on the direction of the conflict: the authors discovered a robust relationship between home-to-work conflict and smoking likelihood, but the relationship between smoking and work-to-home conflict was much weaker (Nelson et al., 2012). We found the reverse: smoking was associated with WIF factors, when educators reported being preoccupied with work problems while at home. We assume that conflicts at work and job stress may go together with a higher likelihood of smoking particularly when this strain is brought home. In terms of alcohol use, the picture was different: WIF factors had negative relationships, whereas FIW factors had positive ones. Binge drinking was positively correlated with 'Strain-based FIW'. We assume that alcohol may serve as a way of coping when there are family problems which might have an influence also at work. A previous study also confirmed that strain-based forms of work-family conflict were related to increased problematic alcohol use controlling for age (Wolff et al., 2014). Overall, alcohol use may be used as a tension-reducing technique against WFC (Wolff et al., 2013).

As it has been expected, burnout subscales and the psychosomatic symptom index were found to be the most significant correlates of the WFC factors, particularly emotional exhaustion. A previous study also found that emotional exhaustion showed a positive correlation with WIF (Bagherzadeh et al., 2016). Likewise, depersonalization was more significant correlates of FIW factors. Our findings are consistent with these results. Decreased personal accomplishment plays a lesser role. A possible explanation is that experiencing burnout and especially emotional exhaustion (and also psychosomatic symptoms as a health consequence) may have negative influence on family life. On the other hand, family problems may be linked to depersonalization at work. While these job and health-related factors were positive correlates, satisfaction with life was a negative one. Not surprisingly, WFC often goes together with a decreased level of life satisfaction. This finding is consistent with those reporting a negative relationship between WFC and quality of life (Ernst Kossek and Ozeki, 1998; Greenhaus et al., 2006; Md-Sidin et al., 2010; Molnár, 2014; Yucel, 2017).

Finally, we must highlight the possible role of sporting. Although the values of the correlation coefficients were slightly significant, this variable was negatively correlated with all WFC factors. As a previous study argued, despite a relationship between WFC and employee health, the role of health-related behaviours such as diet and exercise have been overlooked (Allen and Armstrong, 2010). As the authors concluded, FIW was associated with less physical activity and with eating more high fat foods. In our study, WIF factors showed slightly higher values for the associations. Since this is a cross-sectional study, causal relationship cannot be justified but it means that those reporting WFC tend to be physically less active.

The findings should be evaluated in the light of some limitations e.g., the cross-sectional study design does not allow us to justify cause-and-effect relationships. In addition, the on-line data collection does not lead to a statistically representative sample, although the great sample size is an important factor of strength. Finally, some correlations, although significant, were rather weak in nature. Overall, we really think that this study is unique since very few studies in Hungary have focused on educators' job-related problems and even less on WFC. Since WFC has many job and health-related consequences, interventions at both individual and organizational levels should be necessary. At individual level, educators (possible during their years of training) should learn effective coping techniques to prevent burnout and manage conflicts in family and at work. At the organizational level, providing clear role descriptions, screening for burnout and job stress as well as organizing supervision may help prevent conflicts.

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