

Exploring Occupational Differences in Work–Family Interaction: Who Is at Risk?

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The aim of this study was to explore occupational differences in work–family interaction (WFI), both regarding the direction of influence (work-to-family vs. family-to-work), and the type of effect (conflict vs. facilitation). A large sample of 8 occupational groups in Norway (lawyers, physicians, nurses, teachers, church ministers, bus drivers, and people working in advertising and information technology; $N = 3,313$) was used to examine which occupational groups are likely to be at risk for work–family conflict and which find WFI the most facilitating. Strong tests for factorial invariance supported the use of the WFI scale and found that it was comparable for the 8 occupational groups. Follow-up analysis demonstrated significant latent mean differences in the 4 dimensions of WFI among the 8 groups. In general, the analyses indicate that those experiencing the least conflict are also among those experiencing the least facilitation. Similarly, with few exceptions, those experiencing the most conflict are also among those experiencing the most facilitation. Subsequent analyses indicate that this applies for both men and women. These

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results empirically support the orthogonal nature of WFI and suggest that the interaction between work and family may be more permeable in some occupations than others.

Keywords: work–family conflict, work–family facilitation, occupational differences, latent mean analysis

Over the past 20–30 years, there has been a virtual explosion of research into the relationship between paid work and family life. Work–nonwork research spans multiple disciplines (e.g., psychology, sociology, social work, business, and nursing) and specialty areas within disciplines (Westman & Piotrkowski, 1999) and has generated a multitude of approaches and research questions. Work–family interaction (WFI) has been shown to be a universal phenomenon reported across different cultures (Lu et al., 2009; Spector et al., 2004), as well as in a range of occupations. For example, Grzywacz, Frone, Brewer, and Kovner (2006) found that 92% of a sample of nurses reported that work interfered with family life, and 63% reported family interfering with work. This finding gives empirical evidence of the magnitude of WFI among nurses, although little is known about how, for example, the prevalence of WFI among nurses compares with other occupational groups. Thus, even though it has been recognized that certain work–family experiences and pressures may be common to all workers, other experiences are likely to be specific to particular occupations or types of work arrangements (Edwards & Rothbard, 2000; Parasuraman & Greenhaus, 2002); little is known of how the WFI of one particular occupation differs from that of another. Similarly, derived from a scarcity perspective (Goode, 1960), most research has focused on the construct of work–family conflict (for a review, see Casper, Eby, Bordeaux, Lockwood, & Lambert, 2007), resulting in a one-sided and negative view of WFIs (Voydanoff, 2004). Hence, we know even less about the positive side of the interaction across occupational groups.

The dearth of research measuring WFI in large, representative samples from different occupational groups makes it difficult to identify which occupational groups are at particular risk for work–family conflict. Knowledge of how occupational groups differ from one another in this respect is important for researchers, work organizations, and clinicians. The visualization of how some occupations cluster or differ from each other might engender theory building and further hypotheses testing. Practically, it can lead to the identification of who is in the greatest need of prevention and intervention (i.e., for work organizations) as WFI have been associated with the health and well-being of employees (Innstrand, Langballe, Espnes, Falkum, & Aasland, 2008). Several authors have advocated the need for large samples with individual and organizational diversity (Bacharach, Bamberger, & Conley, 1991; Geurts, Kompier, Roxburgh, & Houtman, 2003; Kirchn-

eyer, 1992; Kirchmeyer & Cohen, 1999; Kossek & Ozeki, 1998; Wayne, Musisca, & Fleeson, 2004). Moreover, there has been a demand for the validation of scales across occupations (Netemeyer, McMurrian, & Boles, 1996).

The present study examined both the positive and the negative sides of WFI and tested its measurement invariance across eight occupational groups in Norway.

OCCUPATIONAL DIFFERENCES AND WFI

It is widely recognized today that a comprehensive understanding of WFI should include components of both conflict and facilitation, and that these components should be regarded as bidirectional: Work can interfere with family and family can interfere with work (Byron, 2005; Carlson & Frone, 2003; Carlson, Kacmar, Wayne, & Grzywacz, 2006; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Ford, Heinen, & Langkamer, 2007; Frone, 2003; Greenhaus & Powell, 2006). *Work-family facilitation* refers to the experience that participation in one role is made better or easier because of participation in another role (Wayne et al., 2004). Conversely, *work-family conflict* refers to “the extent in which participation in one role makes it more difficult to fulfill the requirements of another role” (van Steenbergen, Ellemers, & Mooijaart, 2007, p. 280). Overall, empirical evidence indicates that WFI has a more profound effect on women compared with men (for a review, see Eby et al., 2005). However, a recent study based on the same data set as the present study indicated that gender differences in WFI might vary across occupations (Innstrand, Langballe, Falkum, Espnes, & Aasland, 2009).

Although certain work-family experiences and pressures may be common to all workers, others may be specific to particular occupations or work arrangements (Edwards & Rothbard, 2000; Parasuraman & Greenhaus, 2002). Previous studies have found that different occupations may experience different job stressors, and that job strain may differ as a function of occupation (i.e., Liu, Spector, & Shi, 2008; Narayanan, Menon, & Spector, 1999). For example, Cinamon, Rich, and Westman (2007) found that teachers' investment in student behavior problems and establishing and maintaining relationships with the students' parents were associated with increased work-family conflict. Messersmith (2007) suggested that information technology workers may be more prone to the effect of work-life conflicts than other occupations because of extended work schedules and unrealistic deadlines. However, because there are only a few studies in this field that compare occupational groups, it is hard to predict who would experience the most or least WFI.

There is both theoretical and empirical evidence indicating occupational differences in the experience of WFI. Both work–family border theory (Clark, 2000) and boundary theory (Ashforth, Kreiner, & Fugate, 2000) address the integration and blurring of boundaries between work and family life. Boundary/border theory predicts that the strength of these borders is determined by their permeability and flexibility. High levels of flexibility and permeability are assumed to foster integration and hence work–family conflict. Conversely, low levels of flexibility and permeability provide greater segmentation and may decrease role blurring (Ashforth et al., 2000). Building on the boundary/border theory, Schieman, Whitestone, and Van Gundy (2006) found that high levels of job demands and involvement and long hours contributed to occupation-based differences in work-to-home conflict among individuals in high-status occupations. Conversely, Grzywacz and Butler (2005) found higher levels of work-to-family facilitation among individuals in jobs requiring social skills, and explained that a high degree of social skills may also be reflected in workers' interpersonal skills at home, thereby enriching their ability to maintain or promote intimate family relations. However, neither of these studies measured the amount of conflict and facilitation across occupational groups, but rather they referred to characteristics associated with the work role.

Unfortunately, most work–family research is based on studies involving only one or two occupations or on studies that examine a range of occupations grouped together. One exception is a recent study by Dierdorff and Ellington (2008), who found that individuals working in occupations that necessitate substantial interaction with other individuals or other work roles or professional responsibility for others appeared to experience more work-to-family conflict. Thus, most work-to-family conflict was reported among police detectives, firefighters, and family and general practitioners. Conversely, little conflict was reported among taxi drivers, insurance adjusters and examiners, and bank tellers. However, their findings are limited by the use of only one directional, single-item measure of work-to-family conflict. To our knowledge, the amount of work–home facilitation across occupational groups remains to be explored. In this study, we expanded on this previous work by using the approach of latent mean analysis to evaluate occupational differences in WFIs, both in terms of the direction of influence (work–family vs. family–work) and the type of effect (conflict vs. facilitation).

This study had two aims. First, we attempted to confirm the measurement invariance of the four-factorial model—as proposed by Frone (2003) and others—across occupational groups. This work is a necessary test of the assumptions required for accurately comparing WFI across occupational groups (Chen, 2008; Cheung & Rensvold, 2002; Steinmetz, Schmidt, Tina-

Booh, Wieczorek, & Schwartz, 2007) and a contribution to what is still a very small collection of empirical studies exploring both positive and negative WFI in different occupational groups.

The second purpose of the study was to explore occupational differences in WFI in our sample by means of latent mean analysis. In latent mean analysis, the difference between the means of a construct across groups is estimated by fixing one of the construct means to zero (Hong, Malik, & Lee, 2003). In line with Hardy's guidelines (1993) for choosing a reference group in the upper or lower boundary to ease interpretation, bus drivers were used as a reference group, with the latent mean parameters fixed at zero. Building on boundary/border theory, bus drivers were expected to experience the least interaction, as they are the occupational group with the most segregated roles of the included professions. To investigate the possibility that occupational differences reflects gender differences within the organizations, we performed subsequent analyses in the male and female subsamples.

METHOD

Data Collection

Data in this study were collected in the first survey round of a two-wave panel study in Norway. The complete survey was designed to address a broad number of issues concerning work stress and occupational development. Representative national samples of eight occupational groups (lawyers, physicians, nurses, teachers, church ministers, bus drivers, and people working in advertisement and information technology) were drawn by Statistics Norway. A description of each occupational group is presented below. Random samples of each occupation ($n = 1,000$) were drawn from the central Norwegian registers of employees and employment; 5,017 respondents returned the questionnaire at Time 1, a response rate of 63%. Equal numbers of men and women were drawn from all occupations, except for the population of church ministers, which contained 599 men and 401 women.

For the purpose of the present study, we restricted our sample to those with a "family" (i.e., cohabitant, married with a registered partner or with children). Thus, the final panel consisted of 363 bus drivers, 369 lawyers, 453 nurses, 511 physicians, 527 church ministers, 492 teachers, 338 employees in information technology, and 260 people working in advertising ($N = 3,313$).

Participants

Advertisement

The advertisement group consisted of decorators, designers, art directors, distributors of commercial advertisement, and others doing different work tasks within the advertisement industry. About half of the people working in advertising were women (50.4%), and the mean age was 38 years ($SD = 9.8$). The average working hours per week were 40.5 ($SD = 10.4$), as compared with the Norwegian standard of 37.5. The average number of children was 2.0 ($SD = 0.9$).

Bus Drivers

The sample included both bus and tram drivers. They transported both passengers and cargo. Some of the drivers were also responsible for keeping the vehicle in good condition and for selling or controlling tickets. Ambulance personnel and long-distance drivers were not included. The mean age of this group was 46 years ($SD = 9.7$), and 55% of the respondents were men. The bus drivers worked 35.7 hours a week ($SD = 8.68$), and the mean number of children was 2.5 ($SD = 1.1$).

Church Ministers

This group consisted mainly of church ministers, but it also included some other respondents in clergy positions, such as catechists and missionaries; 68% were men, their mean age was 46 years ($SD = 10.8$), and their average weekly working hours were 42.4 ($SD = 9.14$). The average number of children was 2.9 ($SD = 1.1$).

Information Technology Workers

This occupational group include workers doing a wide variety of tasks such as programming; research; development of new data tools for administration, communication, and information purposes; testing of data programs; design and implementation of new systems; user assistance; installation of new programs; and the like. This group contained 49% men, the mean age was 41 years ($SD = 8.2$), and the mean weekly working hours were 40.8 ($SD = 8.2$). The average number of children was 2.1 ($SD = 1$).

Lawyers

Lawyers in this sample included people doing all kinds of work tasks within law, such as assisting private and business clients in court; designing contracts, business deals, and wills; and giving legal advice in the bank, industry, and insurance businesses. The mean age was 42 years ($SD = 10.2$), and the number of male respondents was 52%. The average weekly working hours of the lawyer group were 44.8 ($SD = 8.5$), and the number of children was 2.1 ($SD = 0.9$).

Nurses

This group included ordinary nurses, midwives, and nurses with some sort of specialization. The tasks included treatment and the caring and guidance of sick or wounded individuals; 52% of the nurses were women, and the mean age was 41 years ($SD = 10.1$). The nurses worked 34.2 hours a week ($SD = 7.9$), and their average number of children was 2.4 ($SD = 1.1$).

Physicians

This subsample included public and private practitioners (specialists and nonspecialists) doing clinical, administrative, or scientific work within the medical field; 51% of the sample were women, and the mean age was 45 years ($SD = 10.7$). The physicians worked 46.3 hours a week ($SD = 8.4$) on average, and their mean number of children was 2.5 ($SD = 1$).

Teachers

This occupational group consisted of teachers working within the Norwegian school system, in both public and private schools, with students between 6 and 19 years of age (from the first grade through high school); 49% of the teachers were men, and the mean age was 46 years ($SD = 11$). They worked 37.9 hours a week ($SD = 9.5$) on average, and their mean number of children was 2.3 ($SD = 0.9$).

Measure

WFI was measured by 12 items from a study by Wayne et al. (2004). Three items measured work-to-family conflict (e.g., "My job reduces the

effort I can give to activities at home”), four items measured family-to-work conflict (e.g., “Responsibilities at home reduce the effort I can devote to my job”), three items measured work-to-family facilitation (e.g., “The things I do at work help me deal with personal and practical issues at home”), and two items measured family-to-work facilitation (e.g., “Talking with someone at home helps me deal with problems at work”). The participants responded on a 5-point scale ranging from *totally disagree* to *totally agree*. The Cronbach’s alphas were satisfactory: work-to-family conflict, $\alpha = .71$; work-to-family facilitation, $\alpha = .72$; family-to-work conflict, $\alpha = .78$; and family-to-work facilitation, $\alpha = .70$.

Data Analysis

Occupational differences were examined by using multigroup latent mean analysis (LISREL 8.72; Jöreskog & Sörbom, 2004) with maximum likelihood estimations as preliminary analyses of the distribution of the data indicated no serious departures from normality (West, Finch, & Curran, 1995). Missing values were treated listwise. Given the sensitivity of sample size in chi-square statistics (Diamantopoulos & Siguaw, 2000; Hair, Anderson, Tatham, & Black, 1998; Hu & Bentler, 1995; Sharma, 1996), we used the root-mean-square error of approximation (RMSEA), the nonnormed fit index (NNFI), and the comparative fit index (CFI) as additional measures of fit. By convention, there is a good model fit if the RMSEA is less than or equal to .05, and there is an adequate fit if the RMSEA is less than or equal to .08. The NNFI and CFI should be equal to or greater than .90 for the model to be accepted (Diamantopoulos & Siguaw, 2000).

Occupational differences were examined in two steps. First, before testing the between-groups differences, we examined a series of measurement invariance tests. Meaningful comparison can be made only if the measure is comparable across different groups (Chen, 2008). Thus, the measurement structure has to be equivalent (invariant), albeit not perfect (Byrne, Shavelson, & Muthén, 1989). To allow the model to be fit to several samples simultaneously, we performed a different invariance constraint test by using multigroup covariance structure latent means, following the procedure suggested by Bollen (1989) and Millsap and Everson (1991). Testing for invariance involves specifying a model in which certain parameters are free to take any value across groups (the variant model), and then comparing that model with the more restrictive case in which these parameters are constrained to be equal across groups (the invariant model). If the difference in fit ($\Delta\chi^2$) is not significant, the hypothesis of equal parameter estimates across multiple samples is considered to be tenable. However, given the limitations of the chi-square statistics with large sample sizes, and in line with the

recommendations set forth in the literature (Cheung & Rensvold, 2002; Steenkamp & Baumgartner, 1998; Vandenberg & Lance, 2000), we examined the change in CFI along other indices of practical fit, including the RMSEA and the NNFI. As a rule of thumb, it has been recommended that changes in CFI should not exceed $-.02$. Nevertheless, as the literature on the critical values for the change in CFI is rather new, it is recommended that the CFI criterion only be used as a supplement (Vandenberg & Lance, 2000). Consequently, no restrictions were specified in the first model (configural invariance). In the second model, we set the factor loadings to be invariant across the different samples (metric invariance), whereas the indicator intercepts were set to be invariant in the third model (scalar invariance). Finally, both factor loadings and indicator intercepts were set to be invariant across all samples (metric and scalar invariance).

Second, to study occupational differences along the four dimensions of WFI, we examined the latent mean (κ) in the final model (both factor loadings and intercepts equate). Constraining invariant factor loadings and intercepts across groups simplifies the interpretation of mean differences (Millsap & Everson, 1991). Given that the four dimensions of WFI are conceptualized as latent constructs that cannot be measured directly, traditional approaches to assessing between-groups differences (i.e., t test, multivariate analysis of variance) can give misleading results as they are based on the scores of measured or composed variables that are subject to measurement error. In contrast, latent mean analysis tests the latent construct of interest and is not associated with measurement error. Hence, latent mean analysis is more sensitive and accurate than traditional statistical techniques and more likely to detect differences between groups (Hong et al., 2003; Steenkamp & Baumgartner, 1998). In latent mean analysis, the mean of the latent variable cannot be directly estimated. Instead, the difference between the means of a construct across groups is estimated by fixing one of the construct means to zero (Hong et al., 2003). In line with Hardy's guidelines (1993) for choosing a reference group in the upper or lower boundary to ease interpretation, we used bus drivers as a reference group, with the latent mean parameters fixed at zero.

First, the latent mean analyses were performed in the whole sample and then in the male and female subsamples.

RESULTS

Table 1 displays the means and standard deviations of the four work-family factors separately for each of the eight occupations, as computed by SPSS. Overall, as hypothesized, bus drivers experienced less conflict and facilitation than the other occupational groups.

Table 1. Means and Standard Deviations of Work–Family Interaction Across Occupational Groups

Occupation	Work-to-family conflict		Work-to-family facilitation		Family-to-work conflict		Family-to-work facilitation	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Bus drivers	2.42	0.95	2.18	0.88	1.87	0.83	3.45	0.95
Lawyers	2.90	0.83	2.68	0.85	2.30	0.80	3.60	0.99
Information technology	2.70	0.89	2.29	0.75	2.23	0.73	3.44	0.88
Physicians	2.84	0.86	2.60	0.84	2.16	0.83	3.66	0.92
Teachers	2.61	0.91	2.60	0.82	1.93	0.75	3.57	0.85
Church ministers	2.85	0.81	2.82	0.75	2.16	0.78	3.84	0.75
Advertising	2.86	0.90	2.50	0.79	2.22	0.85	3.47	0.85
Nurses	2.47	0.85	2.69	0.84	2.07	0.83	3.54	0.82

Tests of Measurement Invariance in Occupational Groups

Separate confirmatory factor analyses revealed a good model fit of the four-factor model in all of the occupational groups (see Table 2). The RMSEA ranged from .040 (information technology workers) to .076 (teachers), and the NNFI and CFI were above the .90 threshold.

Table 3 displays the fit indices for the models that tested measurement invariance. The configural model provided a good fit to the data (RMSEA = .064, NNFI = .94, CFI = .95). These results indicate that occupational groups agree on the number of work–family dimensions and on the particular items associated with each dimension. The hypothesis of metric invariance was tested by constraining the matrix of factor loadings to be invariant across occupations. Although the chi-square increase was significant, $\Delta\chi^2(46) = 125.46$, $p < .001$, the metric model is no worse than the configural invariance model in terms of the other fit indices; NNFI and CFI are the same, whereas the RMSEA actually improved. These results indicate that the different occupational groups agree on the relative importance of the items as indica-

Table 2. Separate Confirmatory Factor Analysis of the Measurement Model for Each Occupational Group

Occupation	χ^2	df	RMSEA [90% CI]	NNFI	CFI
Bus drivers	108.20	48	.060 [.045, .076]	.96	.97
Lawyers	142.63	48	.074 [.060, .088]	.91	.94
Information technology	73.03	48	.040 [.020, .058]	.96	.97
Physicians	160.51	48	.069 [.057, .081]	.93	.95
Teachers	177.59	48	.076 [.065, .089]	.91	.93
Church ministers	146.60	48	.064 [.052, .076]	.93	.95
Advertising	110.45	48	.073 [.055, .091]	.92	.94
Nurses	92.25	48	.047 [.032, .061]	.97	.98

Note. RMSEA = root-mean-square error of approximation; NNFI = nonnormed fit index; CFI = comparative fit index.

Table 3. Test for Measurement Invariance Across Eight Occupational Groups

Variable	χ^2	<i>df</i>	RMSEA [90% CI]	NNFI	CFI
No common parameters	1011.25	384	.064 [.060, .069]	.94	.95
Invariant factor loadings	1136.71	440	.063 [.059, .068]	.94	.95
Invariant indicator intercepts	1406.66	440	.075 [.070, .079]	.91	.93
Invariant factor loadings and indicator intercepts	1656.13	496	.077 [.073, .081]	.91	.91

Note. RMSEA = root-mean-square error of approximation; NNFI = nonnormed fit index; CFI = comparative fit index.

tors of the latent construct. Scalar invariance (i.e., equal item intercept) was partly demonstrated as the change in CFI did not exceed $-.02$ (Vandenberg & Lance, 2000) and the change of RMSEA was less than $.015$ (Chen, 2007). Consequently, between-groups differences in latent means could be calculated (Chen, 2008; Cheung & Rensvold, 2002; Steenkamp & Baumgartner, 1998), and a model with both factor loadings and intercepts equated was performed (RMSEA = $.077$, NNFI = $.91$, CFI = $.91$).

Test for Latent Mean Differences

Occupational differences in WFI were tested by latent mean analysis. As can be seen from Table 4, all the occupational groups had significantly higher mean levels of work-to-family conflict than bus drivers (reference group). The highest work-to-family conflict scores were found among people working in advertising, followed by lawyers and church ministers. Similarly, all occupational groups reported significantly higher work-to-family facilitation scores than bus drivers. The highest scores were found among church ministers, lawyers, and nurses. Except for teachers, all groups also reported significantly more family-to-work

Table 4. Latent Means Structure Analysis

Occupation	Kappa			
	WFC	WFF	FWC	FWF
Bus drivers	0.00	0.00	0.00	0.00
Lawyers	0.35 ^a	0.49 ^a	0.39 ^a	0.15 ^a
Information technology	0.26 ^a	0.14 ^a	0.34 ^a	0.00
Physicians	0.29 ^a	0.42 ^a	0.26 ^a	0.18 ^a
Teachers	0.20 ^a	0.40 ^a	0.04	0.10
Church ministers	0.35 ^a	0.62 ^a	0.26 ^a	0.38 ^a
Advertising	0.40 ^a	0.32 ^a	0.35 ^a	0.03
Nurses	0.12 ^a	0.48 ^a	0.18 ^a	0.09

Note. The latent mean values for bus drivers were set to zero (reference group). Kappa is the latent mean of each factor generated by LISREL. WFC = work-to-family conflict; WFF = work-to-family facilitation; FWC = family-to-work conflict; FWF = family-to-work facilitation.

^a Statistical significance determined by the *t* value of the latent mean.

conflict, with lawyers reporting the most, followed by people working in advertising and people working in information technology. Far more family-to-work facilitation was reported among church ministers, physicians, and lawyers, who reported significantly more family-to-work facilitation than bus drivers. Besides bus drivers, the least work-to-family conflict was experienced among nurses. The least family-to-work conflict was experienced among teachers. On the other hand, the least bidirectional facilitation was experienced among people working in information technology.

Subsequent analyses in the male and female subsamples indicate that most of these occupational differences apply to both men and women (see Table 5). Generally, men reported the most or least conflict and facilitation in the same occupational groups that women also reported the most or least conflict and facilitation. One exception was male lawyers, who did not report significantly more family-to-work facilitation than male bus drivers, whereas female lawyers reported significantly more family-to-work facilitation than female bus drivers.

DISCUSSION

There were two main aims of this study. First, we attempted to confirm the measurement invariance of the four-factorial model of WFI (Frone, 2003) across occupational groups. The second purpose of this study was to explore occupational differences in these four dimensions of the WFI. Strong tests for factorial invariance supported the use of the scale; in addition, it was comparable for the eight occupational groups. Follow-up analysis demonstrated significant latent mean differences among the eight groups.

Table 5. Latent Means Structure Analyses in Male and Female Subsamples

Occupation	Kappa							
	WFC		WFF		FWC		FWF	
	Men	Women	Men	Women	Men	Women	Men	Women
Bus drivers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lawyers	0.37 ^a	0.35 ^a	0.47 ^a	0.52 ^a	0.38 ^a	0.38 ^a	0.01	0.32 ^a
Information technology	0.32 ^a	0.20 ^a	0.03	0.22 ^a	0.36 ^a	0.29 ^a	-0.10	0.08
Physicians	0.29 ^a	0.32 ^a	0.37 ^a	0.48 ^a	0.26 ^a	0.25 ^a	0.16	0.20 ^a
Teachers	0.15 ^a	0.23 ^a	0.35 ^a	0.47 ^a	0.06	-0.01	0.13	0.07
Church ministers	0.38 ^a	0.42 ^a	0.67 ^a	0.58 ^a	0.30 ^a	0.30 ^a	0.44 ^a	0.35 ^a
Advertising	0.41 ^a	0.40 ^a	0.32 ^a	0.32 ^a	0.34 ^a	0.33 ^a	0.02	0.03
Nurses	0.15 ^a	0.07	0.40 ^a	0.55 ^a	0.29 ^a	0.02	0.12	0.05

Note. The latent mean values for bus drivers were set to zero (reference group). Kappa is the latent mean of each factor generated by LISREL. WFC = work-to-family conflict; WFF = work-to-family facilitation; FWC = family-to-work conflict; FWF = family-to-work facilitation.

^a Statistical significance determined by the *t* value of the latent mean.

As anticipated, and in line with the findings of Geurts et al. (2003), bus drivers had the lowest conflict and facilitation scores, which applied to both male and female bus drivers. They particularly reported less conflict and facilitation from work to family. Thus, despite shift patterns and inflexible running times, which are found to be precursors to work–family conflict among bus drivers (Tse, Flin, & Mearns, 2006), they did not report as much work–family conflict or facilitation as the other occupational groups in the present study. In the language of boundary/border theory, bus drivers probably have a greater segmentation between work and family roles and, subsequently, lower levels of flexibility and permeability. These results are in line with previous findings (e.g., Grzywacz & Butler, 2005; Grzywacz & Marks, 2000; Wayne et al., 2004), suggesting that conflict and facilitation are orthogonal rather than opposite constructs, such that it is possible to experience high or low levels of both simultaneously.

The orthogonal nature of the constructs was also supported by the findings regarding male and female church ministers, who reported high levels of both conflict and facilitation. The role as church minister is characterized by highly permeable borders between work and family life and differs from most other professions as it is hard to resign from the role. The church ministers are always “on duty” and are exempted from the Health and Safety at Work Act § 5 with regard to working hours. This may induce high risk of work–family conflict among the church ministers. However, the church ministers also reported substantially high levels of facilitation between work and family life. This accords with a recent Norwegian study of church ministers (Nordeide, Skogstad, & Einarsen, 2008), which indicated that despite high perceived workload and hardworking constraints, the church ministers describe their work as personally rewarding, challenging, and deeply meaningful. The findings of Nordeide and colleagues (2008) suggest that being a church minister is an identity as much as a profession. Workers are found to report more positive influence from work on their home lives when they experience increased job resources (e.g., learning opportunities, meaningful work, autonomy, performance feedback, and possibilities for professional development) and high levels of work engagement (Voydanoff, 2004, in Geurts et al., 2005). Even though many people may see their work as a calling (i.e., work that a person perceives as his or her purpose in life; Hall & Chandler, 2005), a religious connotation may provide an even deeper purpose in life and hence a higher level of facilitation among the church ministers. More research on why the church ministers experience such strong facilitation in the interaction of work and family life as compared with other occupational groups is clearly warranted.

In general, people working in advertising, church ministers, and lawyers reported the most conflict, whereas bus drivers, teachers, and nurses reported the least. This applied to both men and women. Thus, whereas previous

studies have indicated a relatively high prevalence of work-to-family conflict among nurses (Grzywacz et al., 2006), our findings suggest that this group is not at a higher risk for work–family conflict than the other occupational groups. These occupational differences in work–family conflict are in line with previous studies (e.g., Crompton & Lyonette, 2006; Schieman et al., 2006), suggesting more work–family conflict among managerial workers and higher status occupations.

The present study extends previous studies by examining occupational differences in the level of work–family facilitation. Except for male information technology workers, all occupational groups reported significantly more work-to-family facilitation than bus drivers. Whereas only male church ministers reported more family-to-work facilitation than male bus drivers, female church ministers, physicians, and lawyers reported more family-to-work facilitation than female bus drivers. These three latter occupational groups are characterized by a strong declaration of confidentiality in their profession. There is reason to believe that family support (i.e., “Talking with someone at home helps me deal with problems at work”) may be of high significance to these occupations, at least for women.

In sum, although a previous study has suggested that gender differences in WFI might vary across occupations (Innstrand et al., 2009), the present study suggests that between-occupations differences in the experience of WFI are more or less similar for men and women. Thus, the occupational groups reporting the most or least conflict and facilitation are the same occupational groups reported by both men and women to be the most or least conflicting and facilitating. Research on occupation-specific antecedents to work–family facilitation is still in its infancy, and more studies are clearly needed before firm conclusions can be made. The present study provides a first glance to this direction in which theory building and further hypotheses testing might ensue.

Strengths, Limitations, and Future Research

Tests of latent mean invariance are methodologically superior to traditional tests that simply assume metric and scalar invariance. Nonetheless, there are some limitations. First, like other simple mean comparisons or zero-order relationships, tests of mean invariance across groups cannot rule out the possibility of spurious relationships or unmeasured third variables (Steinmetz et al., 2007). Although this study demonstrated significant differences between different occupations according to WFI, the forces behind these differences have not been identified. Comparing four organizations in Finland, Mauno, Kinnunen, and Piitulainen (2005) found occupational dif-

ferences in work–family culture. Whether our findings are caused by selection mechanisms, different occupational cultures, or specific work demands should be further examined in longitudinal studies. Nevertheless, it should be noted that any similarities in the factor structures of the WFI scale across the eight subsamples in the present study reflect similarities in the measurement properties of the scale, despite age, gender, and work culture differences across occupational groups. Thus, our test of measurement invariance across occupational groups represents a conservative test of measurement equivalence given that age, gender, and work culture differences across occupational groups would be expected to exacerbate, not attenuate, group-related differences in factor structures (Greguras, 2005).

Second, although a difference between .01 and .02 in CFI indicates that a researcher has to beware that differences might exist (Vandenberg & Lance, 2000), it should be noted that this cutoff point is based on Monte Carlo studies performed on two groups only. Chen's (2007) findings show that invariance tests may falsely indicate noninvariance due to a mixed pattern of invariance or a large sample size. The changes in fit statistics are more likely to be affected by a mixed pattern of invariance in the present study as the multigroup invariance tests were performed on eight groups. More simulation studies on the sensitivity of goodness-of-fit indexes to a lack of measurement invariance in broad samples are needed.

Third, all of the variables in the present study were measured using self-report instruments. Such measures may have introduced common method variance, inflating the relationship among the study variables. Finally, it should be noted that in companion with most studies on WFI, work–family conflict and facilitation were measured as multidimensional facets in the present study. Further occupational differences may be identified by testing different aspects of conflict and facilitation (e.g., strain- vs. time-based conflict).

Despite these limitations, it is important to establish the existence of differences as a first stage in the research. The strength of this study is the use of latent mean analysis and the large representative samples of eight occupational groups in Norway. The inclusion of work–family facilitation provides new insight into the benign aspect of the interactions across occupational groups.

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