

Relations Among Work–Home Culture, the Utilization of Work–Home Arrangements, and Work–Home Interference

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In the present study, we examined the associations among work–home culture (WHC), the utilization of work–home arrangements (WHAs), and work–home interference (WHI) among 638 workers from a Dutch financial consultancy firm. We (a) developed a typology of WHC, (b) examined whether the utilization of 6 WHAs differed for various types of WHC, (c) determined whether various types of WHC and the utilization of WHAs were related to WHI, and (d) studied these associations for subgroups of workers. Results showed that WHCs can be characterized by 2 dimensions, i.e., support and hindrance. More supportive and less hindering WHCs were not associated with a higher utilization of WHAs, but did covary with lower levels of WHI.

KEY WORDS: work–home culture; utilization of work–home arrangements; work–home interference; subgroups

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A direct consequence of the incremental role women play in the labor market today is the rise in the number of dual-earner families in Western countries. This societal shift has—aside from its benefits for female emancipation—challenged working men and women to find a new balance between work and domestic obligations. A survey conducted among a representative sample of the U.S. workforce indicated that 30% of all employees encountered interference from their work in their private life (Bond, Galinsky, & Swanberg, 1998). This was true for an even higher proportion (40%) of employed American parents (Galinsky, Bond, & Friedman, 1993). In the present study, *work-home interference* (WHI) is defined as the extent to which a worker's functioning at home is hampered by demands from the work domain (Geurts & Demerouti, 2003; Geurts et al., 2004). In the literature, two different (though related) types of WHI are generally distinguished (Greenhaus & Beutell, 1985): (a) Time-based WHI develops when time devoted to work obligations makes it physically impossible to meet obligations in the private domain, and (b) strain-based WHI refers to the extent to which strain developed in the work domain hampers functioning in the private domain. In the current study, we took both types of WHI into account.

A considerable amount of knowledge on WHI and its presumed detrimental effects have been gathered (for reviews, see Frone, 2003; Geurts & Demerouti, 2003). A meta-analysis by Allen, Herst, Bruck, and Sutton (2000) showed that WHI was associated with work-related outcomes (e.g., diminished organizational commitment and intention to turnover), non-work-related outcomes (e.g., life and marital dissatisfaction, family performance), and particularly stress-related outcomes (e.g., burnout, general psychological strain, depressive symptoms). Many companies in Western countries have acknowledged the existence and detrimental impact of WHI and have therefore introduced work–home arrangements (WHAs) that may enable employees to better coordinate their work and domestic obligations. Recently, many national governments have also made the interface between work and nonwork a leading element of their policy while introducing legislation in this area. WHAs issued by companies and governments can globally be grouped into two categories: (a) flexible WHAs enlarging workers' temporal and spatial flexibility at work (e.g., flexitime, telecommuting, and part-time work) and (b) dependent-care WHAs enabling workers to combine their work and caring responsibilities (e.g., subsidizing child care and allowing temporary leave periods for taking care of dependent family members).

Although previous research has shown that employees who used WHAs were significantly more committed to the organization and had lower intentions to quit than those who did not use WHAs (Eaton, 2003; Grover & Crooker, 1995), many employees do not use available WHAs or

do not benefit from them in terms of an improved work–home balance (Allen, 2001; Anderson, Coffey, & Byerly, 2002; Eaton, 2003; Lobel, 1999; Thompson, Beauvais, & Lyness, 1999; Williams, 2000). Not using accessible WHAs may be due to poor communication between supervisors and employees. There is also evidence (Starrels, 1992, for a review), however, that the corporate culture may hinder employees from using such arrangements (Thompson et al., 1999). For instance, in some organizational cultures, the amount of time visibly spent at work is considered an indication of employees' investments and career dedication (Lewis & Taylor, 1996), and these organizational norms may deter employees from taking time off for family responsibilities. Thus, despite offering formal access to WHAs introduced by the organization, unsupportive work–home cultures (WHCs) may undermine the utilization and, therefore, the effectiveness of such arrangements in terms of an improved balance between both life spheres (Anderson et al., 2002; Eaton, 2003; Kossek & Ozeki, 1998; Thompson et al., 1999).

RESEARCH QUESTIONS

The current study was designed to shed light on the associations among WHC, the utilization of WHAs, and WHI. We addressed these associations by (a) developing a measure and typology of WHCs, (b) examining whether the actual utilization of WHAs differs for various types of WHC, and (c) determining whether various types of WHC and the utilization of WHAs are related to time- and strain-based WHI. In contrast with previous studies, the associations of the utilization of WHAs with WHC and WHI were not only investigated on a general level, but also for each WHA separately, as well as for different subgroups of workers (i.e., men vs. women and parents vs. nonparents).

Our research was guided by the following questions.

1. How many and what type of WHAs are used, and which subgroups of workers are most likely to use (certain types of) arrangements?
2. Which dimensions typify WHC, and which subgroups perceive what type of culture?
3. Are certain types of WHC associated with higher utilization of (certain types of) WHAs, and do these associations differ for certain subgroups of workers?
4. Are the utilization of WHAs and/or certain types of WHC associated with less (time- and strain-based) WHI, and do these associations differ for certain subgroups of workers?

The Utilization of WHAs

WHAs can be described as arrangements that enable employees to better manage their work–home interface (cf. Thompson et al., 1999). Few studies have addressed the question of to what extent employees actually use such arrangements and whether certain subgroups of workers are more likely to use certain types of WHAs than other subgroups of workers (Research Question 1). Some studies suggest that flexible arrangements (providing more control over work schedule and work location) are used more frequently than, for instance, child-care arrangements (Allen, 2001; Grover & Crooker, 1995). However, many studies have overlooked the fact that certain types of WHAs are not eligible to all employees. For instance, flexible working times and flexible work locations are not accessible to most shift workers, and child-care arrangements are only profitable for working parents (with young children living in the household). Therefore, the question remains as to whether flexible WHAs are still used frequently by subgroups (e.g., parents) that also get access to other (child-care related) arrangements. The current study incorporates both flexible WHAs (i.e., flexible starting and finishing times, telecommuting, working from home occasionally, and part-time work) and child-care related WHAs (i.e., subsidized child care and parental leave). Empirical research indicates that, on average, women use slightly more and parents use far more WHAs than men and workers without children, respectively (Allen, 2001; Haas & Hwang, 1995; Lyness & Thompson, 1997; Thompson et al., 1999). The gender difference might be explained by the fact that in many countries, including the Netherlands (the country for which this study presents its findings), women perform two thirds of the care-giving and household tasks at home (Sociaal en Cultureel Planbureau, 2000). This makes them more eligible for using facilities aimed at improving the coordination between work and domestic obligations. Consequently, we expect that women (Hypothesis 1a) and parents (Hypothesis 1b) will use more WHAs than men and nonparents, respectively.

WHC

One of the most recent and complete definitions of WHC has been provided by Thompson et al. (1999), that is, “the shared assumptions, beliefs and values regarding the extent to which an organization supports and values the integration of employees’ work and family lives” (p. 394). Thompson et al. (1999) contributed to the literature by constructing the first (20-item) measure of WHC, incorporating three components: (a) supervisory support and sensitivity to employees’ responsibilities, (b) nega-

tive career consequences associated with utilizing WHAs, and (c) organizational time expectations that employees prioritize work above family. The first component was also addressed by Allen (2001). She defined WHC in terms of “the global perceptions that employees form regarding the extent to which the organization is family-supportive” (p. 416) and constructed a 14-item measure of family-supportive organization perceptions (FSOP). Allen criticized Thompson et al.’s (1999) measure of supervisory support, since it confounded support on a specific level (from supervising persons) with support on a more general level (from the organization). Therefore, Allen (2001) disentangled these two levels of support by constructing separate measures for family friendliness from either direct supervisors or the organization. Clark (2001) also made an attempt to capture companies’ family friendliness by developing a 13-item questionnaire that measured three components: (a) temporal flexibility (flexible work scheduling), (b) operational flexibility (flexible work processes), and (c) supervisors’ support for employees’ family activities (resembling the supervisory support construct of Allen, 2001). However, we believe that temporal and operational flexibility should not be considered cultural characteristics since they typically characterize job content (resembling decision latitude in the classical job demand–control model; Karasek, 1989).

Considering these operationalizations of WHC, *support* for use of WHAs is clearly a central dimension. Support from colleagues regarding the usage of WHAs has thus far been ignored. We can imagine, though, that employees feel more entitled to use WHAs when direct colleagues are sensitive to family responsibilities of workers and express positive attitudes toward the utilization of such arrangements. Apart from support, *hindrance* should be considered a second central dimension of WHC since workers are less inclined to use WHAs when they believe this might negatively affect their career and performance appraisal (Thompson et al., 1999). In the current study, we therefore expected to find that WHC is characterized by a two-dimensional structure, distinguishing between support and hindrance (Hypothesis 2a). Hereby, support refers to the extent to which the organization, direct supervisors, and colleagues are perceived to be supportive of the integration of employees’ work and private lives and the utilization of WHAs. Hindrance reflects the extent to which organizational norms and expectations (i.e., time expectations and related negative career consequences) are perceived to impede employees’ work–home balance and the use of WHAs. These two dimensions are expected to be negatively associated: Perceptions of high support will covary with perceptions of low hindrance (i.e., approving culture), and perceptions of low support will be associated with high hindrance (i.e., obstructing culture). We can also imagine, however, that different combinations of these two dimensions may occur. For instance, workers may feel supported by direct

supervisors and colleagues but simultaneously expect negative career consequences when they would actually use WHAs (high support and high hindrance; i.e., contradictory culture). Workers may also perceive the WHC as indifferent when they experience low hindrance but also low support regarding the utilization of WHAs. In the current study, an attempt is made to create such a WHC typology by crossing the dimensions of support and hindrance (Research Question 2).

Regarding the question whether certain subgroups of workers have different perceptions of WHC, previous research has not shown significant differences across gender and parental status (Behson, 2002; Berg et al., 2003; Clark, 2001; Thompson et al., 1999). Accordingly, we hypothesize (Hypothesis 2b) that the subgroups under study (i.e., men vs. women and parents vs. nonparents) do not differ in their perceptions of WHC.

The Relationship Between WHC and Utilization of WHAs

Although the association between WHC and the actual utilization of WHAs (Research Question 3) has rarely been studied, empirical findings indicate a relationship between a supportive WHC and higher utilization of WHAs (Allen, 2001; Thompson et al., 1999; Williams, 2000), supporting our earlier proposition that employees feel more entitled to use such arrangements if this is enforced by the organizational culture. There are indications, though, that a supportive WHC is related to the utilization of flexible but not child-care WHAs. However, it is likely that a lower utilization of the latter type of arrangements (which are potentially profitable for working parents only) may have reduced the statistical power of this association. Therefore, in the present study, the relationship between WHC and usage of (the number and type of) WHAs is examined for women versus men and parents versus nonparents, separately. In general, we expect that WHAs are used most frequently in a WHC that is characterized by high support and low hindrance (Hypothesis 3).

The Relationship of WHC and Utilization of WHAs with WHI

Only a scarce amount of literature reports on the association between the utilization of WHAs and WHI (Research Question 4; Kossek & Ozeki, 1998, for a review). None of the studies reported has made the current distinction between time- and strain-based WHI, well known from the

work-home literature. Empirical findings are supportive of a lower level of WHI among workers that used WHAs compared with workers not using such facilities. Again, this association was predominantly found for the use of flexible WHAs as opposed to child-care arrangements (Allen, 2001; Bailyn, 1993; Goff, Mount, & Jamison, 1990; Miller, 1984; Thomas & Ganster, 1995; Thompson et al., 1999). This differential relationship may again be caused by the fact that not all employees profit from the latter type of arrangements, whereas the former type is potentially profitable for every worker. Therefore, in the current study, the relationship between the utilization of WHAs and (time- and strain-based) WHI is examined by differentiating among certain types of WHAs, as well as among certain subgroups of workers (i.e., women vs. men and parents vs. nonparents).

The association between WHC and WHI has been studied more extensively but without notifying the distinction between various types of WHI (i.e., time vs. strain based). There is ample evidence for lower levels of WHI in cultures that are typified by high support and low hindrance regarding the usage of WHAs (Allen, 2001; Batt & Valcour, 2003; Bowen, 1998; Carlson & Perrewe, 1999; Thomas & Ganster, 1995; Thompson et al., 1999). It is, therefore, expected that employees report lower levels of (both time- and strain-based) WHI, the more they use (potentially profitable) WHAs (Hypothesis 4a) and the more supportive and less hindering they perceive the WHC to be (Hypothesis 4b). Since these associations have, thus far, not been examined for various subgroups, no specific hypotheses were formulated for the subgroups under study.

In sum, a fine-grained analysis was made of the associations among WHC, the utilization of WHAs, and WHI by (a) developing a new measure and typology of WHC, (b) examining whether the actual utilization of (certain types of) WHAs is higher in a more supportive WHC, (c) determining whether a more supportive WHC and the utilization of (certain types of) WHAs are associated with less (time- and strain-based) WHI, and (d) examining whether the associations between WHC, the utilization of WHAs, and WHI differ for various subgroups of workers (men vs. women and parents vs. nonparents).

METHOD

Participants

Data for the current study were collected through a survey held among employees of a Dutch subsidiary of a financial consultancy firm headquartered in the United States. This company is a typical example of a postindustrial knowledge company. Of all 5,200 employees working in this com-

pany, a random sample of 1,604 workers was drawn. In total, 638 questionnaires were completed (40% response rate). The response group ($N = 638$) was quite representative of the total company population with respect to gender (response group: 44% female vs. 56% male; company: 43% female vs. 57% male) as well as age (response group: ≤ 29 years: 40%; 30–39 years: 35%; 40–49 years: 15%; ≥ 50 years: 10%; company: ≤ 29 years: 44%; 30–39 years: 33%; 40–49 years: 12%; ≥ 50 years: 10%). Most workers were educated at an academic level (38%), followed by a large proportion of employees educated at the higher vocational level (31%); 11% and 1% of all participants were educated at average and lower vocational levels, respectively. About one third of all employees (34%) had children living in the household, and a large proportion of workers (69%) had a partner with whom they were married or cohabiting.

Measures

Utilization of WHAs

Employees were given a short introduction into the availability of WHAs both within the general Dutch legal context and within their company. The current study included six arrangements that were actually available to them, that is, four flexible WHAs: (a) flexible working times (i.e., variability in starting and finishing times), (b) telecommuting (i.e., working at or nearby home to avoid commuter traffic), (c) working from home occasionally, and (d) working part time; and two child-care WHAs: (e) financial support for child-care costs and (f) parental leave. For each WHA, employees were asked to indicate whether or not they (had) used this arrangement (0 = *no*; 1 = *yes*). The total number of *yes* responses constituted the measure of *total utilization of WHAs* (i.e., *sum score*) and could range from 0 (*none of the arrangements were used*) to 6 (*all of the arrangements were used*; $M = 1.47$, $SD = 1.23$).

WHC

WHC was measured with a self-developed, 18-item instrument inspired by the questionnaires constructed by Thompson et al. (1999) and Allen (2001). We measured the support dimension of WHC by using three subscales: (a) organizational support, consisting of four items (e.g., “In general, this company is considerate towards employees’ private situation” and “This company is supportive of employees who want to switch to less

demanding jobs for private reasons”), (b) supervisor support, measured by three items (e.g., “My direct supervisor supports employees who want to switch to a less demanding job because of their private situation” and “My direct superior supports employees who (temporarily) want to reduce their working hours for private reasons”), and (c) collegial support, consisting of four items of which three were mirror images of the supervisor items (e.g., “My colleagues support employees who [temporarily] want to reduce their working hours for private reasons”), and one was a unique, additional item (“My colleagues help me out if I am having a hard time coping with my caregiving responsibilities”). Answer alternatives ranged from *totally disagree* (1) to *totally agree* (5). A support score was calculated by averaging the scores on the three subscales (i.e., organizational, supervisor, and collegial support), with higher scores reflecting a more supportive WHC ($M = 3.30$, $SD = .60$, $\alpha = .73$).

Hindrance, the second WHC dimension, was measured by using two subscales: (a) career consequences, consisting of four items (e.g., “Employees who turn down a promotion because of private circumstances will suffer negative career consequences within this company” and “In this company, employees who [temporarily] reduce their working hours for private reasons are considered less ambitious”), and (b) time expectations, measured by three items (e.g., “If necessary, employees within this company are expected to prioritize their work over their private situation” and “In order to be taken seriously in this company, employees should work long days and be available all the time”). Answer alternatives again ranged from *totally disagree* (1) to *totally agree* (5). A hindrance score was calculated by averaging the scores on the two subscales (i.e., negative career consequences and organizational time expectations), with higher scores signifying a more hindering WHC ($M = 3.61$, $SD = .70$, $\alpha = .64$).

WHI

Time- and strain-based WHI were measured by using a newly developed questionnaire, that is, the Survey Work–Home Interaction Nijmegen-SWING (Geurts et al., 2004; Van der Hulst & Geurts, 2001). For both WHI scales, answer alternatives were *never* (1), *sometimes* (2), *often* (3), and *always* (4). For each WHI scale, the four items were averaged, with higher scores reflecting higher levels of WHI. *Time-based WHI* was measured by four items (e.g., “How often does it happen that” . . . “your work schedule makes it difficult for you to fulfill your domestic obligations?” and “your work takes up time that you would have liked to spend with your spouse/family/friends?”; $M = 1.98$, $SD = .53$, $\alpha = .79$). *Strain-based WHI* was also measured by four items (e.g., “How often does it happen that” . . . “you

find it difficult to fulfill your domestic obligations because you are constantly thinking about your work?" and "your work obligations make it difficult for you to feel relaxed at home?"; $M = 1.86$, $SD = .49$, $\alpha = .82$).

Subgroups

Subgroups were created based on gender and parental status. *Gender* was measured with a single question (i.e., "What is your gender?"; 1 = *female* and 2 = *male*). *Parental status* was measured by asking, "Do you have children living in the household, and if you do, what is the age of each child?" Since only parents of young children were eligible to use child-care arrangements and parental leave, respondents' answers were used to create three parental groups, that is, those *without children living in the household* (0), those *with older children (≥ 12 years) living in the household* (1), and those *with young children (< 12 years) living in the household* (2). In case employees had children of different age groups, they were placed in the category of the oldest child (1).

Statistical Analyses

To make sure that time-based WHI and strain-based WHI were indeed empirically distinct constructs, we first conducted two preliminary confirmatory factor analyses (CFA; Jöreskog & Sörbom, 1993). We tested the fit of two alternative models for the relations among the eight WHI items. In a first model, all eight items were forced to load on one latent factor. In a second model, we created two latent factors: one for the four time-based items and one for the four strain-based items. If the second model provides a better (and good) fit compared with the first model, then the two WHI indicators can be considered empirically distinct constructs. The fit of the respective models was compared in terms of their chi-square value, as well as the goodness-of-fit index (GFI), the nonnormed fit index (NNFI), the comparative fit index (CFI), and the root-mean-square error of approximation (RMSEA). Values of .90 and over (for GFI, NNFI, and CFI) or .08 and under (RMSEA) signify acceptable fit (Byrne, 2001).

To determine whether women (Hypothesis 1a) and parents (Hypothesis 1b) used more WHAs than men and nonparents, respectively, we performed a univariate analysis of variance (ANOVA) with the utilization of WHAs (0–6) as the dependent variable and gender (1, 2) and parental status (0, 1, 2) as independent variables (in case the three parental groups differed from each other in their utilization of WHAs, post hoc Bonferroni

tests were conducted to find out which of the three parental groups differed from one another). To determine whether women versus men (1, 2) or the three parental groups (0, 1, 2) used different types of WHAs, we performed a series of chi-square tests for each specific WHA (0 = *not used* vs. 1 = *used*).

To test Hypothesis 2a that WHC is best characterized by a two-dimensional structure, we compared the fit of several alternative factor models with the help of CFA (Jöreskog & Sörbom, 1993). We first selected a 50% random exploratory sample ($N = 316$) of the total sample. Then, in a first-factor model (M1, one-factor model), the 18 WHC items were forced to load on one single latent factor. In a second model (M2, five-factor model), five latent factors were created in line with the five subscales of WHI: one for the four items representing organizational support, one for the three items measuring supervisor support, one for the four items reflecting colleague support, one for the four items representing negative career consequences, and one for the three items reflecting organizational time expectations. In a third model (M3, 1 second-order factor model), one higher order factor was added based on the assumption that one higher order factor underlies the five subscales. In a fourth model (M4, 2 second-order factor models), two higher order factors were created assuming that two higher order factors, that is, the proposed central dimensions of WHC (support and hindrance), underlie the five subscales. Again, the fit of the respective models was compared in terms of their chi-square value, as well as GFI, NNFI, and CFI ($\geq .90$) and RMSEA ($\leq .08$). Subsequently, the analyses were cross-validated in an independent 50% random confirmatory sample ($N = 319$).

To develop a WHC typology (Research Question 2), we crossed the two proposed dimensions of WHC (support and hindrance) by splitting both the support and the hindrance scale into high (≥ 3) and low (< 3) scores. By combining the low and high scores on each dimension, four types of WHC were created in accordance with the earlier suggested WHC typology: (a) an approving culture (high support and low hindrance), (b) an indifferent culture (low support and low hindrance), (c) a contradictory culture (high support and high hindrance), and (d) an obstructing culture (low support and high hindrance). To determine whether each of the four proposed types of WHC included a relatively low or high proportion of men (1) versus women (2) or of nonparents (0) versus parents of older children (1) versus parents of young children (2), we performed chi-square tests.

To test Hypothesis 3 that WHAs are used most frequently in a more supportive and less hindering WHC (i.e., the approving culture), we performed a one-way ANOVA with total WHA utilization (0–6) as the dependent variable and the WHC typology (1–4) as the independent variable (the relationships of gender and parental status with the general utilization was already assessed; see Hypotheses 1a and 1b). In addition, chi-square

tests were performed to examine whether the use of a specific WHA (0 = *not used* vs. 1 = *used*) differed among the four types of WHC. To explore whether the various subgroups of workers (gender and parental status) used certain types of WHAs more often in specific types of WHCs, we replicated the chi-square tests for men versus women (1, 2), as well as for parents versus nonparents (0, 1, 2), separately.

To test Hypothesis 4 that workers experience less WHI, the more they use WHAs (Hypothesis 4a) and the more favorable (i.e., approving: high support, low hindrance) they perceive the WHC (Hypothesis 4b) to be, we performed a multivariate ANOVA (MANOVA) with time- and strain-based WHI as dependent variables. As independent variables, we entered employees' utilization score (categorized into three categories: 0 = *no utilization used*, 1 = *one arrangement used*, 2 = *two or more arrangements used*), the WHC typology (1–4), and the subgroup variables of gender (1, 2) and parental status (0, 1, 2; in case the three parental groups differed from each other in experienced WHI, post hoc Bonferroni tests were conducted to find which groups differed from each other). In addition, we performed six separate MANOVAs to determine whether the use of each of the specific WHAs was associated with less WHI in one of the four types of WHC and/or for specific subgroups. Again, the various types of WHC (1–4), gender (1, 2), and parental status (0, 1, 2) were entered as factors, but this time together with the utilization of one specific WHA (0, 1). Time- and strain-based WHI were again inserted into the analyses as dependent variables.

RESULTS

Preliminary Analyses

Our CFA revealed that the model in which two latent factors were distinguished for time-based and strain-based WHI, respectively, fit the data well, $\chi^2(19, N = 638) = 95.28, p < .001$ (GFI = .93, NNFI = .94, RMSEA = .07, CFI = .96), and significantly better, $\Delta\chi^2(2, N = 638) = 481.23, p < .001$, than the one-factor model, $\chi^2(21, N = 638) = 576.51, p < .001$ (GFI = .68, NNFI = .59, RMSEA = .20, CFI = .70). Thus, the two WHI measures in our study may be regarded as two different, albeit related ($r = .56, p < .001$), constructs.

Utilization of (Certain Types of) WHAs Across Subgroups

Table 1 shows the proportion of workers that (have) used each of the specific WHAs. In addition, the proportions are presented for the various

Table 1. Utilization of (Specific Types of) WHAs by (Subgroups of) Workers

WHA	Total (N = 638)		% Men Women PY PO NC				
	N	%					
Flexible working times	316	51	52	46	62**	50	47
Working from home occasionally	245	40	46***	29	55***	51	32
Working part time	179	29	13	47***	45***	24	23
Telecommuting	79	13	16	9	24***	18	8
Financial child-care support	70	12	8	14**	42***	0	1
Parental leave	30	5	2	8***	18***	0	0
<i>n</i>			354	284	166	60	412

Note. WHA = work-home arrangement; PY = parents of young children (<12 years); PO = parents of older children (≥ 12 years); NC = no children.

** $p < .01$. *** $p < .001$.

subgroups under study (gender and parental status). On average, the employees used between one and two arrangements ($M = 1.47$, $SD = 1.23$). A large proportion of employees (51%) used flexible working times. A substantial proportion of workers also worked from home occasionally (40%) or worked part time (29%). The WHAs that were used least frequently were telecommuting (13%), subsidized child-care support (12%), and parental leave (5%).

Although the total utilization of WHAs did not differ for men and women, $F(1, 626) = 3.56$, ns , the chi-square tests for specific WHAs revealed that women did work more often part time, $\chi^2(1, N = 616) = 93.77$, $p < .001$, and they more frequently used child-care arrangements, $\chi^2(1, N = 606) = 7.25$, $p < .01$, and parental leave, $\chi^2(1, N = 604) = 11.67$, $p < .001$, compared with men. Men, on the other hand, worked occasionally from home more frequently than women, $\chi^2(1, N = 614) = 18.03$, $p < .001$. Parents of young (<12 years) children used substantially more WHAs ($M = 2.43$, $SD = 1.35$) compared with workers with older ($M = 1.41$, $SD = 0.97$) or no children ($M = 1.09$, $SD = 0.97$), $F(2, 626) = 98.06$, $p < .001$. In fact, parents of young children used all six specific WHAs more often than the other two parental groups. In sum, our hypothesis that women and parents use more WHAs than men and nonparents, respectively, was fully supported for the parents of young children (Hypothesis 1b) and for three of the six WHAs supported for women (Hypothesis 1a).

WHC and WHC Typology Across Subgroups

To test Hypothesis 2a that WHC is best characterized by two dimensions, that is, support and hindrance, we compared four alternative models

(M1M4; see statistical analyses section) for the relationships among the 18 WHC items within the exploratory subsample ($N = 316$, Table 2).

Clearly, the one-factor model (M1) did not account well for the data, $\chi^2(135, N = 316) = 1,288.43, p < .001$ (GFI = .64, NNFI = .45, RMSEA = .19, CFI = .51). The five-factor model (M2), however, fit the data well, $\chi^2(125, N = 316) = 338.35, p < .001$ (GFI = .89, NNFI = .89, RMSEA = .08, CFI = .91). This model, extended with 1 second-order factor (M3), had a worse fit than M2, $\Delta\chi^2(5, N = 316) = 61.09, p < .001$. The five-factor model (M2), extended with 2 second-order factors (M4) fit the data almost as equally well as M2, $\Delta\chi^2(4, N = 316) = 29.83, p < .001$: All fit indices were (CFI) or approached (GFI, NNFI) .90, and the RMSEA was not over .08. Although this was also true for M2, M4 was a more parsimonious model (four extra *dfs*). Moreover, the small difference in chi-square value between M4 and M2 should not be considered meaningful given the large number of observations ($N = 316$). Therefore, M4 was preferred as the model that best fit the data of the exploratory sample.

To examine the robustness of this model, we cross-validated M4 in the confirmatory sample ($N = 319$, see Table 2). The results show that M4 also fit the data of the confirmatory sample acceptably well, $\chi^2(125, N = 319) = 389.04, p < .001$ (GFI = .88, NNFI = .87, RMSEA = .08, CFI = .89). On the basis of the findings of both the exploratory and confirmatory samples, M4—reflecting five lower order factors (i.e., organizational, colleague, and supervisor support; negative career consequences; and organizational time demands) and two higher order factors (support and hindrance)—was considered the most parsimonious model that fit the data of both subsamples well. This result is supportive of our Hypothesis 2a that the WHC is characterized by two different (albeit related, $r = -.42$) dimensions, that is, support and hindrance.

To develop the proposed WHC typology, we split both dimensions into high (≥ 3) and low (< 3) scores. Of the total sample ($N = 638$), a majority of employees (72%) scored high on the support dimension, and an even

Table 2. Comparison of Four Different Factor Models Within the Exploratory ($N = 316$) and Confirmatory ($N = 319$) Sample

Model	χ^2	<i>df</i>	GFI	NNFI	RMSEA	CFI
<i>Exploratory sample</i>						
M1 (1-factor model)	1,288.43	135	.64	.45	.19	.51
M2 (5-factor model)	388.35	125	.89	.89	.08	.91
M3 (One 2nd-order factor model)	399.44	130	.87	.87	.08	.89
M4 (Two 2nd-order factor model)	368.18	129	.88	.88	.08	.90
<i>Confirmatory sample</i>						
M4 (Two 2nd-order factor model)	389.04	129	.88	.08	.08	.89

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

greater proportion of employees (80%) experienced high hindrance. By crossing the high or low scores of each dimension, we created four types of WHC. The largest proportion of workers ($N = 337$) was found in a contradictory WHC, that is, one with high support ($M = 3.6$, $SD = 0.45$) and high hindrance WHC ($M = 3.8$, $SD = 0.46$). Lower, but still substantial proportions of workers were incorporated in the obstructing WHC—that is, one with low support ($M = 2.6$, $SD = 0.42$) and high hindrance ($M = 4.1$, $SD = 0.49$; $N = 163$)—and the approving WHC, that is, one with high support ($M = 3.7$, $SD = 0.49$) and low hindrance ($M = 2.6$, $SD = 0.38$; $N = 114$). Only a small number of employees was categorized in the indifferent WHC, that is, one with low support ($M = 2.7$, $SD = 0.32$) and low hindrance ($M = 2.6$, $SD = 0.55$; $N = 15$). Because of the small proportion of workers in this latter type of WHC (as opposed to the other three types of WHC), these 15 workers were excluded from further analyses.

A comparison of the three remaining types of WHC across subgroups (gender and parental status) revealed that the approving culture group included a relatively high proportion of women (56%) and a relatively low proportion of men (44%) compared with the contradictory WHC (45% female vs. 55% male) and the obstructing WHC (37% female vs. 63% male), $\chi^2(2, N = 614) = 9.53, p < .01$. Parents (of young or older children) did not differ in their perceptions of WHC from nonparents. In sum, Hypothesis 2b that the various subgroups would not differ in their perceptions of WHC was supported for parents versus nonparents but did not seem to be supported for men versus women, since women perceived the WHC as more favorable than men.

WHC Typology and the Higher Utilization of (Certain Types of) WHAs Across Subgroups

A one-way ANOVA did not show an association between the WHC typology (approving vs. contradictory vs. obstructing) and the utilization of WHAs, $F(2, 603) = 1.04, ns$. Thus, in contrast with our expectation (Hypothesis 3a), WHAs were not used more frequently, the more favorably the WHC was perceived. When examining this association for each of the six WHAs separately, we found that part-time work was used more frequently in an approving WHC (36% of all workers in this WHC utilized this possibility) than in an obstructing WHC (only 22% of these workers utilized this possibility), $\chi^2(2, N = 594) = 6.20, p < .05$. Taking into account the various subgroups, we observed that the higher utilization of part-time work in the approving culture could primarily be attributed to parents of young children: Whereas parents of young children more often

worked part time in an approving than in an obstructing WHC, $\chi^2(2, N = 154) = 6.15, p < .05$, this was not true for the workers with older children, $\chi^2(2, N = 51) = 1.55, ns$, or without children, $\chi^2(2, N = 389) = 1.99, ns$. In sum, Hypothesis 3 (i.e., WHAs are used more frequently, the more favorably the WHC is perceived) is generally not supported, except for one type of WHA (i.e., part-time work) among one specific subgroup of workers (i.e., parents of young children).

WHC Typology, the Utilization of WHAs, and WHI Across Subgroups

To test our expectations that experienced levels of time- and strain-based WHI are lower, the more workers use WHAs (Hypothesis 4a) and the more supportive and less hindering (i.e., approving) the WHC is perceived to be (Hypothesis 4b), we performed a MANOVA with time- and strain-based WHI as dependent variables, and we categorized WHA utilization (0, 1, 2), the three types of WHC (1, 2, 3), gender (1, 2), and parental status (0, 1, 2) as independent variables (see Table 3).

As one can see, workers that used no (0), one (1), or two or more WHAs (2) did not differ from each other in terms of experienced levels of time- or strain-based WHI, $F(2, 638) = 1.11, ns$. This indicates that our expectation that workers would report less WHI, the more they used WHAs (Hypothesis 4a), was not supported. In the three types of WHC, however, different levels of both time-based and strain-based WHI were reported, $F(2, 638) = 9.34, p < .001$, and $F(2, 638) = 13.47, p < .001$, respectively, and these associations were in line with our Hypothesis 4b: Workers in an approving culture reported less time- and strain-based WHI

Table 3. MANOVA With Time- and Strain-Based WHI Dependent Variables and the Utilization of WHAs, WHC, Gender, and Parental Status as Independent Factors

Factor	F		
	Multivariate	Univariate time-based WHI	Univariate strain-based WHI
1. Use of WHAs (0, 1, 2)	1.11	2.02	0.67
2. WHC typology (1, 2, 3)	7.44***	9.34***	13.47***
3. Gender (1, 2)	4.40*	6.18*	0.01
4. Parental status (0, 1, 2)	1.00	0.79	0.41

Note. MANOVA = multivariate analysis of variance; WHI = work-home interference; WHA = work-home arrangement; WHC = work-home culture; Use of WHAs: 0 = no WHA used, 1 = one WHA used, 2 = two or more WHAs used; WHC typology: 1 = approving culture, 2 = contradictory culture, 3 = obstructing culture; Gender: 1 = female, 2 = male; Parental status: 1 = parents of young children, 2 = parents of older children, 3 = no children.

* $p < .05$. *** $p < .001$.

($M = 1.68$, $SD = 0.48$, and $M = 1.63$, $SD = 0.40$, respectively) than those in a contradictory ($M = 1.98$, $SD = 0.51$, and $M = 1.85$, $SD = 0.48$, respectively) and in an obstructing culture ($M = 2.22$, $SD = 0.51$, and $M = 2.04$, $SD = 0.48$, respectively). With respect to the subgroups under study, the three parental groups did not differ in their experience of either type of WHI, but men and women did. In fact, men experienced more time-based WHI ($M = 2.09$, $SD = 0.50$) than did women ($M = 1.86$, $SD = 0.54$). None of the interaction effects among the independent factors were significant, indicating that the associations of the WHC typology and the utilization of WHAs with WHI were not different for specific subgroups. Also, additional MANOVAs that we performed for each specific WHA separately did not reveal any significant interaction effects, indicating that the associations between the utilization of specific WHAs and WHI also did not differ across subgroups.

DISCUSSION

The purpose of the present study was to enlighten the associations among WHC, the utilization of WHAs, and time- and strain-based WHI among a representative sample (regarding gender and age) of 638 workers from a Dutch financial consultancy firm. We studied the utilization of six different WHAs (four flexible WHAs and two child-care WHAs) that were available to the respondents at the time this study was conducted. Moreover, we studied the associations across various specific subgroups, that is, men versus women and parents versus nonparents.

Utilization of WHAs and WHC Typology

In line with previous findings (Allen, 2001; Grover & Crooker, 1995) and not surprisingly, flexible WHAs (particularly flexible working times, working from home occasionally, and to a lesser extent part-time work) were used more frequently than the two child-care arrangements (i.e., financial child-care support and parental leave). An interesting finding was that parents of young children not only used subsidized child-care WHAs, but also flexible WHAs (e.g., flexible working times, working from home occasionally, and part-time work) quite often. In general, parents of young children used all WHAs more frequently than workers with older or no children (supporting Hypothesis 1b).

With respect to gender, we found that women used certain (but not all) facilities (i.e., part-time work and the two child-care WHAs) more fre-

quently than men (partially supporting Hypothesis 1a). In contrast, men occasionally worked from home more frequently than women. This finding raises the question whether men used this facility to improve their work-home balance or for other purposes. Taking a closer look at the motives reported by the respondents, it appeared that more than half of the men used this facility to "get their work finished" rather than to improve their work-home balance.

The results supported our assumption (Hypothesis 2a) that two dimensions, that is, support and hindrance underlie our newly developed measure of WHC. By crossing these two dimensions, a WHC typology was created, distinguishing among an approving, an obstructing, a contradictory, and an indifferent culture (owing to the low proportion of workers, this latter type of WHC was excluded from the analyses). A remarkable finding was that more than half of the workers were incorporated in the contradictory WHC, reflecting perceptions of relatively high (organizational, supervisory, and collegial) support, as well as relatively high hindrance (high time expectations and negative career consequences). This finding subscribes to our assumption that high support and high hindrance are *not* two ends of the same continuum but are in fact two dimensions that are not identical or exchangeable (though related, $r = -.42$). Apparently, many workers in this study perceived their company, supervisor, and colleagues as considerate of employees' private situation and of those who want to switch to less demanding jobs for private reasons but simultaneously reported that these workers would be perceived as less ambitious and would encounter negative career consequences.

Whereas parents versus nonparents did not differ in their perception of the WHC (Hypothesis 2b supported), women perceived the WHC as more supportive and less hindering (i.e., approving) than men. We must note here that half of the women (49%) worked part time compared with only 13% of the men and that the approving WHC also included a relatively high proportion of workers using this facility compared with the other types of WHC. In fact, post hoc chi-square tests revealed that part-time working men and part-time working women did not differ in their WHC perception, $F(2, 174) = 1.41, ns$, nor did the two gender groups that did not use this facility, $F(2, 420) = 2.70, ns$. Thus, when we controlled for part-time work, men and women no longer differed in their perceptions of the WHC (supporting Hypothesis 2b when controlled for part-time work).

We did not find that WHAs were utilized more frequently in an approving WHC than in less favorable WHCs (i.e., obstructing and contradictory). The only exception was that, as just discussed, part-time work was used more frequently in this type of culture, but particularly parents of young children were held accountable for this relationship. How can we explain the lack of any association between WHC and the utilization of

WHAs? One explanation might be that workers who actually (intend to) use WHAs are particularly at risk of being confronted with resistance from the company, their supervisor, or their colleagues. Those who have no intention of using WHAs have not been confronted with such resistance and may, therefore, have (too) favorable perceptions of how supportive the WHC is. Although the three WHCs did not significantly differ with respect to the utilization of WHAs, we do notice a cautious trend of higher utilization in the contradictory and obstructing WHCs ($M = 1.45$ and $M = 1.54$, respectively) than in the approving culture ($M = 1.35$), which may be regarded as slight support for this reasoning.

Utilization of WHAs and WHI

Our assumption that WHI would be lower, the more workers utilize WHAs (Hypothesis 4a) was not supported. However, the conclusion that workers apparently did not benefit from WHAs in terms of WHI is premature. First, we must realize that workers who experience problems in combining work and family are exactly those who utilize WHAs. Possibly, we did not observe a lower level of WHI among workers who used WHAs because these workers still experienced a higher level of WHI than their colleagues who did not have any problems with their work–family balance. As long as we do not examine changes in WHI over time among workers who started to utilize one or more WHAs, a possible beneficial impact of utilizing WHAs cannot be confirmed nor excluded. A second explanation, also discussed earlier, is that certain facilities (e.g., occasionally working from home) may not have been used to improve the work–home balance but for other purposes (e.g., getting the job done). When workers use the same facility for different purposes (e.g., caregiving tasks vs. getting the work finished), possible favorable effects in terms of WHI for some workers may have been covered by possible unfavorable effects in terms of WHI for others.

WHC Typology and WHI

In line with previous studies (e.g., Allen, 2001; Thompson et al., 1999), we found support for our assumption (Hypothesis 4b) that workers experience lower levels of time- and strain-based WHI in a more favorable culture (i.e., approving WHC). This finding may be interpreted in two ways. First, a favorable organizational climate concerning the use of WHAs may be sufficient for workers to experience lower levels of time- and

strain-based WHI. However, the query remains as to why (i.e., by what underlying psychological or behavioral mechanisms) a favorable WHC would have such positive impact, if it is *not* the utilization of WHAs. An alternative and perhaps even more plausible interpretation is that workers who experienced hardly any problems in combining work and family may have more (and possibly too) favorable perceptions of the WHC.

Limitations and Future Research

A first and obvious limitation of the current study was the use of a cross-sectional design, making it impossible to verify the assumptions concerning the underlying causal directions of relationships among WHC, the utilization of WHAs, and WHI. Therefore, different interpretations of the same finding were plausible. Moreover, this design restricted us in establishing whether the utilization of certain WHAs was effective in terms of lower levels of WHI. We suggest that future researchers look for opportunities to conduct “natural experiments” among workers who start using flexible WHAs or child-care WHAs and to investigate changes in WHI in a longitudinal design (cf. Kompier & Kristensen, 2000; Westman & Piotrkowski, 1999). Thus far, studies that used such opportunities are scarce (Geurts & Demerouti, 2003, for a review). If longitudinal research might reveal that the use of certain facilities is beneficial in terms of reduced levels of WHI, this would have important practical implications for the prevention of WHI and the improvement of employees’ work–home balance. We need to bear in mind here that what is helpful for one subgroup (e.g., parents of young children) may not be beneficial for others (e.g., workers without children) and that taking into account specific subgroups is necessary to shed light on the possible effectiveness of various types of WHAs (cf. Taris & Kompier, 2003).

A second limitation concerned our measurement of the utilization of WHAs. We asked whether workers used or had used certain facilities at the time of study, reflecting not only present but also past utilization. For three facilities, we were able to examine the possible discrepancy between past and present utilization. There was 89% correspondence between the actual proportion of part timers and the ones that reported to (have) used this facility; for telecommuting and occasionally working from home, the degree of correspondence was 77% and 82%, respectively, indicating that our measure of utilization strongly represented actual utilization.

A third limitation is that only one sample was used in the current study. Possibly as a consequence, the indifferent culture type included an insufficient proportion of workers. To adequately validate the proposed WHC typology, future research should incorporate a wider variation of compa-

nies. It would be interesting to find out if there is support for the proposed WHC typology and, if so, on what level (e.g., company level, departmental level, subgroup level).

A final limitation is that only associations with WHI were examined in the current study. In line with recent studies (Geurts et al., 2004; Grzywacz & Marks, 2000), we would suggest that future researchers also include positive indicators of work–home balance, as well as other types of outcome measures (e.g., health and well-being indicators and organizational commitment).

We hope that the present study contributed to current literature in this area both theoretically and methodologically and that the proposed WHC typology and the fine-grained analysis of the associations among this typology, the utilization of (certain types of) WHAs, and WHI among subgroups of workers inspire future researchers and alert them to the risk of a bias to the positive among workers without work–home problems.

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