



Work engagement versus workaholism: a test of the spillover-crossover model

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Abstract

Purpose – The purpose of this study is to examine how two different types of heavy work investment – work engagement and workaholism – are related to family satisfaction as reported by employees and their intimate partner.

Design/methodology/approach – In total, 398 Japanese couples completed self-reported questionnaires including the model variables. One year later, participants reported again on their family satisfaction. Structural equation modelling analyses were used to test the hypotheses.

Findings – As hypothesized, work engagement was positively related to work-family facilitation, which, in turn, predicted own and partner's family satisfaction, also one year later. In contrast, workaholism showed a positive relationship with work-family conflict, and had an indirect negative effect on own and partner's family satisfaction. The structural relationships between the variables from husbands to wives were similar to those from wives to husbands.

Research limitations/implications – The use of a non-experimental design does not allow for definitive conclusions regarding causality.

Practical implications – The findings contribute to the work-family interface literature by showing how experiences built up at work can have a positive or negative impact on one's partner's family satisfaction. The study highlights a growing need to promote work engagement and discourage workaholism within organizations since engagement has positive and workaholism has negative implications for employees' private life.

Originality/value – This study clearly shows the differences between two important work experiences – work engagement and workaholism. Using the spillover-crossover model, the study sheds a new light on the process through which employee work engagement and workaholism influence one's partner at home.

Keywords Employee engagement, Employee relations, Work engagement, Workaholism, Dual-career couples, Family life

Paper type Research paper



Heavy work investment characterised by a strong focus on the task at hand and a high level of dedication to work generally has positive consequences for job performance (Beal *et al.*, 2005; Demerouti and Cropanzano, 2010). However, what are the consequences of heavy work investment for one's private life? Do highly engaged employees come home cheerful or too occupied with work to be able to enjoy family life? In the present longitudinal study among Japanese couples, we use the spillover-crossover model (Bakker *et al.*, 2009, 2008) to examine how two different types of work investment – work engagement and workaholism – are related to family satisfaction as reported by employees and their partner over time.

The spillover-crossover model

According to the Spillover-Crossover model, there are two different ways in which experiences are carried over from the work to the family domain. Spillover is a within-person, across-domains transmission of demands and consequent strain from the work domain to the nonwork domain (e.g. Byron, 2005; Lambert, 1990). This process is also called work-family conflict, referring to the interference of work with private life – for example when work-related strain is transferred from work to home. In contrast, crossover involves transmission across individuals, whereby demands and their consequent strain cross over between closely related persons (Bakker *et al.*, 2009; Westman *et al.*, 2001). This is particularly likely when partners are high in empathy (Bakker and Demerouti, 2009), and when individuals frequently discuss their work life (Bakker and Schaufeli, 2000). Thus, in crossover, stress experienced in the workplace by an individual may lead to stress being experienced by the individual's partner at home. Whereas spillover is an intraindividual transmission of stress or strain, crossover is a dyadic, interindividual transmission of stress or strain.

The spillover-crossover model (SCM) combines the spillover and crossover literatures, and proposes that work-related strain first spills over to the home domain, and then crosses over to the partner through social interaction. For example, in a study among Dutch dual-earner couples, Bakker *et al.* (2009) found that workaholism was positively related to work-home interference (spillover), and consequently impacted on own and partner's relationship satisfaction (crossover) through reduced levels of social support. This indicates that employees who had the tendency to work excessively hard were more likely to bring their work home, which resulted in lower efforts to help the partner. This reduced social support had a negative impact on partner's relationship satisfaction. In a similar vein, in their study among Japanese dual-earner parents, Shimazu *et al.* (2009) found that job demands had a positive impact on self- and partner-ratings of work-family conflict, which, in turn, had a negative impact on partner's reports of relationship satisfaction and physical and psychological health. Several other studies have provided evidence for the SCM by showing that work-related strain first spills over to the home domain, and then affects the partner (Bakker *et al.*, 2008; Shimazu *et al.*, 2011).

It should be noted that although the focus in previous work-family studies has primarily been on negative spillover, research has clearly indicated that positive spillover is also possible. Work-family conflict is 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). Thus, in the case of work-family conflict, participation in the family role is made more difficult by virtue of

participation in the work role. In contrast, work-family facilitation is defined as “the extent to which participation at work (or home) is made easier by virtue of the experiences, skills, and opportunities gained or developed at home (or work)” (Frone, 2003, p. 145). In the latter case, participation in the family role is facilitated by what has happened at work. In the present study, we investigate for the first time how two types of work investment, workaholism and work engagement, influence one’s partner’s family satisfaction through a process of negative or positive spillover. Thus, the current study expands previous research with the SCM by focusing on two types of spillover simultaneously in one overall SCM. In addition, contrary to all previous studies on the SCM that were cross-sectional, the current study also examines the long-term impact of work on one’s partner’s well-being.

Work engagement vs workaholism

Work engagement and workaholism are two active, work-related states that are indicative of heavy work involvement. However, whereas work engagement usually combines high effort with positive affect and has favourable consequences, workaholism usually combines high effort with negative affect (Bakker and Oerlemans, 2011). Work engagement is most often defined as “a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption” (Schaufeli *et al.*, 2002, p. 74). In essence, work engagement captures how workers experience their work: as stimulating and energetic and something to which they really want to devote time and effort (the vigour component); as a significant and meaningful pursuit (dedication); and as engrossing and something on which they are fully concentrated (absorption). Unlike workaholics, engaged employees do not work hard because of a strong and irresistible inner drive, but because for them working is fun (Gorgievski *et al.*, 2010).

According to Oates (1971, p. 11), workaholism is “the compulsion or the uncontrollable need to work incessantly” because it is an addiction akin to alcoholism. For workaholics, the need to work is so exaggerated that it endangers their health, reduces their happiness, and deteriorates their interpersonal relations and social functioning (Bakker *et al.*, 2009; Gorgievski *et al.*, 2010). First, workaholics spend a great deal of time in work activities when given the discretion to do so: they are excessively hard workers. Second, workaholics are reluctant to disengage from work and they persistently and frequently think about work when they are not at work. Third, workaholics work beyond what is reasonably expected from them to meet organisational or economic requirements.

Recent empirical evidence among different employee samples shows evidence for the contention that the fundamental difference between workaholism and work engagement is that workaholism lacks the positive affective (fun) component of work engagement, whereas work engagement does not comprise the compulsive element of workaholism (Van Wijhe *et al.*, 2011). Moreover, work engagement relates only moderately to excessive working and not to compulsive working, whereas the relationship between excessive and compulsive working is high (Taris *et al.*, 2010). Hence, excessive working can be considered a correlate but not a component of work engagement.

The present study

The model that will be tested in the present study is graphically presented in Figure 1. As can be seen, we predict that workaholism will have a negative impact on one’s own

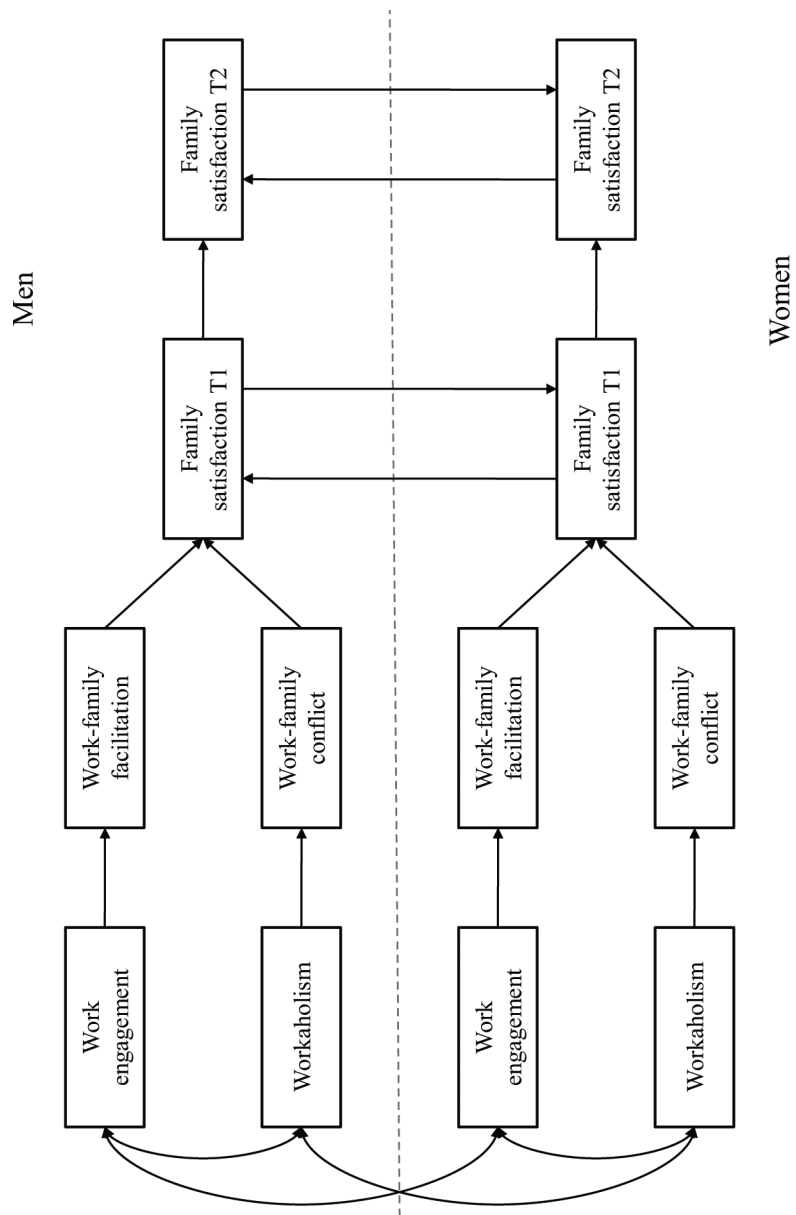


Figure 1.
The model in the present study

family satisfaction, because workaholism increases the likelihood of work-family conflict. Bakker *et al.* (2009) found evidence for a positive path between workaholism and work-family conflict, for both genders. People who have a compulsive drive to work excessively hard are likely to invest time and effort in their work at the expense of their private life (Taris *et al.*, 2005). Such behaviour is likely to have a negative

impact on well-being and satisfaction in life. According to Hobfoll's (2002) conservation of resources theory, individuals seek to acquire and maintain resources. Resources may include conditions (e.g. married status, tenure), personal characteristics (e.g. self-esteem), or energies (e.g. time, money and knowledge that allow one to acquire other resources). Stress reactions develop when there is a threat of loss of resources, an actual loss of resources, or lack of an expected gain in resources. COR theory proposes that work-family conflict may lead to a wide variety of stress reactions (i.e. dissatisfaction, depression, anxiety, or physiological tension), because valued resources are lost in the process of juggling both work and family roles. This means that compulsive tendencies make workaholics to devote more resources (e.g. time, emotions) to work, leaving them with fewer resources to devote to their family.

In addition, role scarcity hypothesis (Edwards and Rothbard, 2000) postulates that people possess limited and fixed amounts of resources (e.g. time and energy). Managing multiple roles (e.g. of employee, spouse and parent) is problematic as they draw on the same, scarce resources. Previous research has demonstrated that especially time- and strain-based conflict (i.e. fulfilment of demands in one domain is difficult owing to the time devoted to and strain produced in the other domain, respectively) are associated with various negative work-, family- and stress-related outcome variables (see, for a meta-analysis, Allen *et al.*, 2000). Thus, we predict:

H1. Workaholism has a negative relationship with family satisfaction, through work-family conflict.

In contrast to workaholism, work engagement is expected to have a positive impact on one's own family satisfaction, because work engagement increases the likelihood of work-family facilitation. According to Greenhaus and Powell (2006), interrole facilitation can occur through one of two pathways. The first is an instrumental pathway and occurs when resources such as skills and opportunities for self-growth gained from one role directly improve functioning in another role. The second pathway is affective and occurs when experiences in one domain produce positive affect such as positive emotions and levels of energy within that domain, which, in turn, improves individual functioning in another domain (Wayne *et al.*, 2007). Research has generally indicated that work engagement has a positive impact on performance, and this is one possible reason why engaged workers are more likely than workaholics to experience positive emotions (Bakker and Oerlemans, 2011). These positive emotions are likely brought home, with the possibility of impacting family life in a positive way. Thus, we predict:

H2. Work engagement has a positive relationship with family satisfaction, through work-family facilitation.

The SCM proposes that experiences built up at work spill over to the home domain, and consequently cross over to the partner. Indeed, since partners are likely to discuss their feelings and be attuned to each other, it is rather likely that their states cross over. Demerouti *et al.* (2005) found that women's job demands were positively related to their own exhaustion via work-family conflict; women's exhaustion consequently predicted their partner's level of exhaustion. Additionally, they found that men's job demands were negatively related to their own life satisfaction via work-family conflict; men's life satisfaction consequently predicted their partner's level of life satisfaction.

Furthermore, Bakker *et al.* (2009) found that workaholism was related to reduced own and partner's relationship satisfaction, through work-family conflict and reduced social support offered to the partner. On the basis of the SCM and these previous findings, we formulated our next hypothesis (see also Figure 1):

- H3.* Workaholism has a negative relationship with one's partner's family satisfaction, through work-family conflict and own family satisfaction (sequential mediation).

Finally, we expected that work engagement would have a positive impact on own and partner's life satisfaction. Although previous studies have only tested the negative pathway from workaholism to own and partner's relationship satisfaction, several previous findings suggest that the spillover and crossover process can also be positive. First, many studies have now provided evidence for positive spillover, as discussed above (see Byron, 2005, for a meta-analysis). The typical study shows that positive experiences at work (e.g. confrontation with job resources) can lead to work-family facilitation, which in turn, has a positive impact on own well-being. Since positive experiences are just as likely to cross over to the partner as negative experiences (Bakker *et al.*, 2009; Bakker and Demerouti, 2009), we formulated our final hypothesis:

- H4.* Work engagement has a positive relationship with one's partner's family satisfaction, through work-family facilitation and own family satisfaction (sequential mediation).

Method

Procedure and participants

The present study is a part of the Tokyo Work-family INterface (TWIN) study, a large cohort study. The TWIN study aims at examining intra-individual (i.e. spillover) and inter-individual (i.e. crossover) processes of well-being among all dual-earner couples with preschool children in the Setagaya ward, Tokyo, Japan. To the best of our knowledge, this is one of the largest work-family interface studies that collected data from dual-earner couples. In the present study, we analysed the first and second waves of data collected in 2008 and 2009, respectively.

In 2008, working partners were approached through the nursery schools where they brought their children. With the help of the Child-raising Assistance Department of the Setagaya ward in Tokyo, a letter was sent to all directors of nursery schools in this ward to approach all dual-earner couples there. The letter explained the aims, procedure, and ethical considerations of the study. A total of 81 out of all 82 schools agreed to participate. The researchers distributed two identical questionnaires, one for each partner, through the nursery schools. Participants were included in the study on a voluntary basis. The partners were kindly asked to fill out the questionnaires independently. Respondents returned their questionnaires in closed, pre-stamped envelopes to a researcher at the University of Tokyo. Of the 8,964 questionnaires distributed, 2,992 were returned, resulting in a response rate of 33.4 per cent. In 2009, questionnaires were again sent to 1,466 respondents who agreed to participate in the follow-up survey, and 960 were returned (423 men and 517 women: 32.1 per cent of the initial respondents).

In this study, the matched responses of 796 parents (i.e. 398 couples) who answered both the first and second wave surveys were analysed. Men were almost two years

older than women, $t(389) = 8.39, p < 0.001$ (Men Mean = 38.1, SD = 5.1; Women Mean = 36.3, SD = 3.8). There were also differences between men and women regarding educational background, occupation, and job contract ($\chi^2(4) = 65.81, p < 0.001$; $\chi^2(6) = 22.67, p < 0.01$; $\chi^2(2) = 77.37, p < 0.001$). With regard to education background, the most frequently mentioned level of education for men was university (60.1 per cent) followed by high school (23.4 per cent) and graduate school (14.2), whereas that for women was university (54.4 per cent) followed by high school (20.5 per cent) and junior college (18.5 per cent). With regard to occupation, more men worked for private companies (72.4 per cent) than women (62.6 per cent). Regarding job contracts, most men (94.6 per cent) were full-time workers (i.e. more than 40 hours per week), whereas 73.2 per cent of all women were full-time workers. With regard to the number of children, most couples had one child (46.5 per cent) or two children (43.5 per cent).

In order to examine potential selection bias due to panel loss, we compared couples from the panel group (i.e. both men and women answered both surveys: $n = 796$) with the couples who dropped out (i.e. both men and women answered the first-wave survey, but only men, only women, or neither men nor women, answered the second-wave survey: $n = 1,671$) with respect to their baseline levels on the study variables. The panel group reported a higher level of job satisfaction than the dropout group, although the difference was marginal (Mean = 3.2, SD = 0.7 vs Mean = 3.1, SD = 0.7; $t(2462) = 2.50, p < 0.05$). There were also small differences between the two groups regarding educational background and job contract ($\chi^2(4) = 18.27, p < 0.01$; $\chi^2(2) = 6.19, p < 0.05$). With regard to education background, the percentage of individuals who completed higher education (i.e. university and graduate school) was higher in the panel group (67.6 per cent) than in the dropout group (60.5 per cent). Regarding job contract, the proportion of part-time workers (i.e. less than 40 hours per week) was lower in the panel group (10.2 per cent) than in the dropout group (13.2 per cent). The whole procedure followed in the present study was reviewed and approved by the Ethics Committees of the Graduate School of Medicine at the University of Tokyo.

Measures

Work engagement was measured with the nine-item version of the Utrecht work engagement scale (UWES) (Schaufeli *et al.*, 2006). The UWES reflects three underlying dimensions, which are measured with three items each: vigour (e.g. "At my work, I feel bursting with energy"), dedication (e.g. "My job inspires me"), and absorption (e.g. "I get carried away when I am working"). High scores on all three dimensions indicate high work engagement. Items were scored on scale ranging from (0) "never" to (6) "always". The nine items were summed to form one overall index of work engagement.

Workaholism was measured with the Dutch workaholism scale (DUWAS) developed by Schaufeli *et al.* (2009). The scale consists of two subscales; working excessively (e.g. "I stay busy and keep many irons in the fire") and working compulsively (e.g. "I feel guilty when I take time off work"). Each subscale consists of five items that were rated on a four-point Likert scale (1 = totally disagree, 4 = totally agree). All items were summed to form one overall index of workaholism.

Work-family conflict was measured with eight items from the Survey Work-home Interaction-Nijmegen (SWING) (Geurts *et al.*, 2005). An example item is "How often

does it happen to you that your work schedule makes it difficult for you to fulfil your domestic obligations?" (0 = never, 3 = always).

Work-family facilitation was assessed with five items from the SWING (Geurts *et al.*, 2005). An example item is "How often does it happen to you that you manage your time at home more efficiently as a result of the way you do your job?" (0 = never, 3 = always).

Family satisfaction was assessed using a single item, that is, whether or not the participant was satisfied with his/her family (Shimazu and Schaufeli, 2009). This item was scored on a four-point Likert scale ranging from "1 = dissatisfied" to "4 = satisfied".

Strategy of analysis

Our panel data were analysed by means of structural equation modelling (SEM) techniques using the AMOS software package (Arbuckle, 2006). All variables in the model were included as manifest variables, i.e. there is only one indicator for a particular construct representing the mean of each variable (cf. Jöreskog and Sörbom, 1993). To test our hypotheses, a number of competing models were fit to the data consecutively. As all our hypotheses suggest mediation, we first examined whether the direct relationships were significant. In the next step, we included the indirect paths in the model. In a final step, we examined whether the individual paths as well as the indirect effects were significant.

Next to the chi-square (χ^2) statistic we inspected the goodness of fit index (GFI) and the root mean square error of approximation (RMSEA). In addition, three fit indices that are less sensitive to sample size were used: the comparative fit index (CFI), the incremental fit index (IFI), and the Tucker-Lewis index (TLI). For each of these statistics, values of 0.90 are acceptable and of 0.95 or higher are indicative of good fit (Hu and Bentler, 1999), except for the RMSEA for which values of 0.05 indicate good fit and values up to 0.08 represent reasonable errors of approximation (Browne and Cudeck, 1993).

Results

Descriptive statistics

Table I shows the means, standard deviations, correlations, and the internal consistencies of all scales included in this study. As can be seen, the reliabilities were acceptable for all scales. Furthermore, while one's own work engagement and workaholism is unrelated to those of the partner, men and women family satisfaction is related within and over time providing a first indication of direct crossover. Moreover, for both men and women work engagement is related to work-family facilitation (WFF) while workaholism is related to work-family conflict (WFC).

Test of the spillover-crossover model

As all hypotheses suggest mediation, it was first examined whether the direct effects were significant. *H1* states that WFC mediates the relationship between workaholism and family satisfaction, while *H2* suggests that WFF mediates the relationship between work engagement and family satisfaction. The effect of workaholism and work engagement on family satisfaction was significant for men ($\beta = 0.12$, $p < 0.05$; $\beta = 0.12$, $p < 0.05$, respectively) as well as for women ($\beta = 0.13$, $p < 0.05$; $\beta = 0.12$,

	Means	SD	1	2	3	4	5	6	7	8	9	10	11	12
<i>Men</i>														
1. Work engagement	27.89	9.36	0.92											
2. Workaholism	21.61	6.00	0.11*	0.84										
3. WFC	7.79	4.32	0.01	0.59**	0.84									
4. WFF	6.12	2.94	0.30**	0.06	-0.00	0.74								
5. Family satisfaction T1	3.23	0.71	0.10*	-0.11*	-0.22**	0.18**	-							
6. Family satisfaction T2	3.27	0.68	0.04	-0.07	-0.12*	0.16**	0.46**	-						
<i>Women</i>														
7. Work engagement	28.78	8.89	0.10	-0.06	-0.04	0.10*	-0.03	-0.00	0.92**					
8. Workaholism	20.08	5.73	-0.04	0.05	0.05	-0.02	-0.07	-0.02	0.22**	0.81				
9. WFC	6.57	4.39	-0.03	0.00	0.04	-0.08	-0.10*	-0.07	0.10*	0.54**	0.84			
10. WFF	6.57	3.13	0.05	0.03	0.00	0.09	0.00	0.04	0.38**	0.13**	0.05	0.75		
11. Family satisfaction T1	3.17	0.73	-0.02	-0.03	-0.14**	0.10*	0.28**	0.18**	0.09	-0.10*	-0.16**	0.21**	-	
12. Family satisfaction T2	3.15	0.72	0.02	0.04	-0.03	0.09	0.17**	0.31**	0.07	-0.12*	-0.12*	0.13**	0.45**	-

Notes: * $p < 0.05$; ** $p < 0.01$; Cronbach's alpha on the diagonal

Table I.
Means, standard deviations (SD), correlations and reliabilities of the study variables

$p < 0.05$, respectively). This means that mediation can be tested for *H1* and *H2*. *H3* suggests that WFC and family satisfaction mediate the relationship between workaholism and partner's family satisfaction, while *H4* suggests that work engagement has a positive relationship with partner's family satisfaction, through WFF and own family satisfaction. As none of the paths between work engagement, workaholism, and partner's family satisfaction was significant, we can only test whether the indirect effects suggested in *H3* and *H4* were significant.

Next, we added all hypothesised relationships and tested the proposed model displayed in Figure 2. As can be seen in this figure partner's family satisfaction was reciprocal within time 1 and within time 2 as men's family satisfaction influences women's family satisfaction and vice versa. The same applies for both time 1 and time 2 family satisfaction. For both reciprocal relationships the stability index was 0.18. This is far below the criterion of one indicating that our nonrecursive model is stable (Arbuckle, 2006). Moreover, constraining the reciprocal paths within each time point to be equal for men and women did not deteriorate the fit of the model to the data ($\Delta \chi^2(2) = 3.13, n.s.$). Therefore, for time 1 the crossover path of men's family satisfaction to women's family satisfaction was constrained to be equal to the crossover path from women's family satisfaction to men's family satisfaction. Similarly, for time 2 both crossover paths were constrained to be equal irrespective of the direction.

This model had an excellent fit to the data as the chi square was non-significant and the fit indices had the value one except for the RMSEA that approached zero ($\chi^2 = 42.76, df = 50, p = 0.756, GFI = 0.98, RMSEA = 0.01, CFI = 1.00, IFI = 1.00, TLI = 1.00$). Note that our model is far from saturated. For both men and women, workaholism was positively related to WFC which was negatively related to one's own family satisfaction. The bootstrap method indicated that this indirect effect was significant for men (-0.118 ; 95 per cent CI between -0.171 and -0.065), and for women (-0.089 ; 95 per cent CI between -0.014 and -0.040). This provides support for *H1*. Similarly, for both men and women work engagement was positively related to WFF, which in its turn was positively associated with one's own family satisfaction. The bootstrap method indicated that this indirect effect was significant for men (0.050; 95 per cent CI between 0.021 and 0.082), and for women (0.084; 95 per cent CI between 0.051 and 0.118). Thus, *H2* was also confirmed.

As we found that the effects of women's family satisfaction on men's family satisfaction and the other way around are significant both at time 1 and time 2 we continued to examine the indirect effect of one's workaholism on partner's family satisfaction via WFC and own family satisfaction (cf. *H3*), and the indirect effect of one's work engagement on partner's family satisfaction via WFF and own family satisfaction (cf. *H4*). The bootstrap method indicated that the indirect effect of men's workaholism on women's family satisfaction was significant (-0.015 ; 95 per cent CI between -0.025 and -0.008). The same was found with respect to the effect of women's workaholism on men's family satisfaction (-0.012 ; 95 per cent CI between -0.020 and -0.005). This provides support for *H3*.

In a similar vein, the bootstrap method indicated that the indirect effect of men's work engagement on women's family satisfaction was significant (0.006; 95 per cent CI between 0.002 and 0.012). In addition, an indirect effect was found of women's work engagement on men's family satisfaction (0.012; 95 per cent CI between 0.006 and 0.018). This provides support for *H4*.

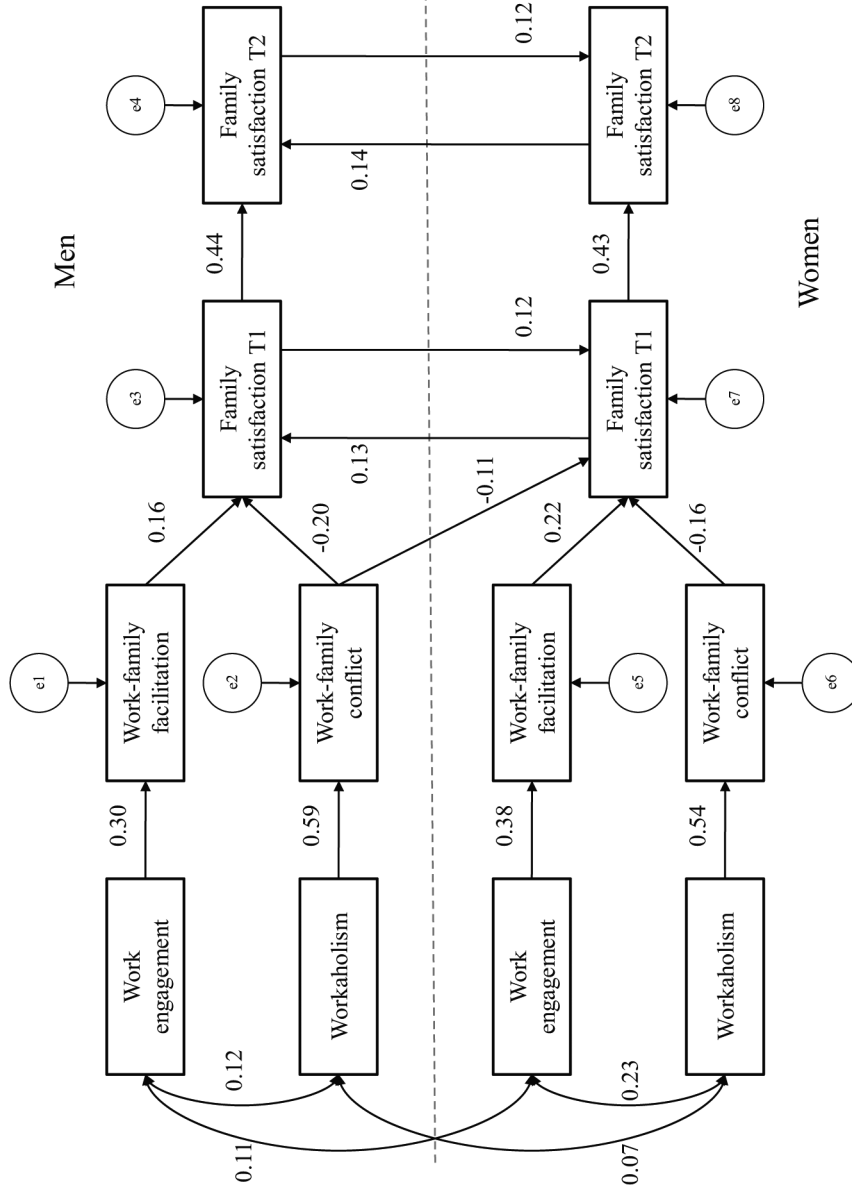


Figure 2.
All resulting path
coefficients

Not only was the sequential effect of one's own workaholism on partner's family satisfaction significant within time; this was found to be significant over time as well. Specifically, we found that the indirect effect: T1 men workaholism → T1 men WFC → T1 men family satisfaction → T2 men family satisfaction → T2 women family satisfaction was significant but marginal (-0.013; 95 per cent CI between

– 0.022 and – 0.007). The same applies to the indirect effect of T1 women workaholism on T2 men family satisfaction (– 0.011; 95 per cent CI between – 0.017 and – 0.005). Similarly, we found that the indirect effect: T1 men work engagement → T1 men WFC → T1 men family satisfaction → T2 men family satisfaction → T2 women family satisfaction was significant but marginal (0.006; 95 per cent CI between 0.002 and 0.010). The same applies to the indirect effect of T1 women work engagement on T2 men family satisfaction (0.010; 95 per cent CI between 0.006 and 0.015).

In a final step, we added crossover paths from men's WFC and WFF to women's family satisfaction as well as from women's WFC and WFF to men's family satisfaction. Only the path from men's WFC to women's family satisfaction was significant ($\beta = -0.11$, $p < 0.05$). We found no evidence for an effect of men's workaholism or work engagement on women's family satisfaction; or effects of women's workaholism or work engagement on men's family satisfaction. All resulting path coefficients are presented in Figure 2.

Discussion

The central aim of the present study among Japanese dual earner couples was to investigate the possible consequences of two types of heavy work investment – work engagement and workaholism – for one's private life over time. We hypothesised that work engagement would have positive, and that workaholism would have negative consequences for one's own and partner's family satisfaction. The results of structural equation modelling analyses offered clear support for our spillover-crossover model. We found that work engagement was positively related to work-family facilitation, which, in turn, predicted own and partner's life satisfaction, also one year later. In contrast, workaholism showed a positive relationship with work-family conflict, and had an indirect negative effect on own and partner's family satisfaction. In what follows, we will discuss the most important contributions of the present study.

Contributions

The present study makes several contributions. First, the findings offer support for the Spillover-Crossover model (Bakker *et al.*, 2008, 2009). The results indicate how work-related experiences can spill over from the work domain to the home domain, and consequently have an impact on the partner. Results clearly supported our spillover hypothesis by showing that workaholism is positively related to work-family conflict, for both genders. Thus, those employees with compulsive tendencies to spend an extremely high percentage of their time on work showed more interference of work with private life. They were more inclined to think and worry about their work when at home, to give priority to their work, and neglect their domestic obligations (cf. Bakker *et al.*, 2009). As a consequence, their partner was less satisfied with family life. These findings are in line with Hobfoll's (2002) conservation of resources theory. Accordingly, compulsive tendencies make workaholics to devote more resources (e.g. time, emotions) to work, leaving them with fewer resources to devote to their family. In addition, our results are consistent with the role scarcity hypothesis (Edwards and Rothbard, 2000) postulating that people possess limited and fixed amounts of resources (e.g. time and energy). Managing multiple roles (e.g. of employee, spouse and parent) is problematic as they draw on the same, scarce resources. Overall, the findings support the SCM stating that work-related strain may crossover to the partner and intrude into

family life. The findings are consistent with Bakker *et al.* (2009) and Shimazu *et al.* (2011) who found a comparable effect of workaholism. The findings are also in line with Demerouti *et al.* (2005), who found that demands in the workplace relate negatively with own and partner's life satisfaction, through work-family conflict. The present study expands these earlier findings by showing that the effect persists over the period of one year.

Second, the present study expands previous research on the SCM by also showing evidence for a positive spillover-crossover effect. Both men and women reported on their own work engagement and work-family facilitation. Results clearly supported our positive spillover hypothesis by showing that work engagement is positively related to work-family facilitation, for both genders. Thus, employees with high levels of vigour, dedication, and absorption reported a higher level of facilitation of work with private life. They were more likely to come home with a positive mood that influenced the mood at home in a positive way. As a consequence, their partner was more satisfied with family life, also over time. The findings indicate that positive spillover is as likely as negative spillover, and has a comparable impact on family satisfaction.

Taken together, these findings challenge the results of a recent study conducted in the US showing that work engagement has unfavourable consequences for one's private life. Halbesleben *et al.* (2009) found a positive relationship between work engagement and work-family conflict, through increased organisational citizenship behaviour. Thus, in that study, employees who were more engaged, were more likely to help their colleagues, which consequently resulted in the interference of work with family life. The different cultural context may be responsible for the observed differences. Whereas workers in western countries like the US and the UK increasingly come to see their private life apart from (and more important than) their work life, Japanese workers tend to believe that their private lives depend on the success of the organisation (Mouer and Kawanishi, 2005). Japanese workers and their families may therefore be more likely to be positively influenced by their work engagement. It is also conceivable that our study offers a more complete test of the spillover effect, since we included work-family conflict and work-family facilitation as possible mediators in our model, and we used two sources of information (husbands and wives).

A third contribution of this study is that our findings clearly suggest that there exist two unique spillover-crossover pathways, starting with work engagement and workaholism. This is in line with the work of Vallerand (2008), who identified two forms of passion – “harmonious passion” and “obsessive passion”. In the case of harmonious passion, the person controls the activity, and the activity occupies a significant, but not overpowering space in peoples' lives. In contrast, in the case of “obsessive” passion, the activity controls the person, because of which this activity eventually takes disproportionate space in the person's identity and causes conflicts with other life domains. Thus, while engaged employees are driven by their full involvement in their work activities, workaholics are driven by an inner obsessive but not satisfying need which is not linked to the work activity *per se*. Therefore in the first case positive load effects are created at work while in the second negative ones. Consistent with this framework, we found that work engagement facilitated family life, whereas workaholism interfered with family life. It can be concluded that work engagement and workaholism are both a form of heavy work investment, but the consequences are opposite (see also Shimazu and Schaufeli, 2009). This is the more

remarkable since in the present study both concepts were positively related. The positive relationship between work engagement and workaholism was weak but suggests that engaged employees had (in addition to their full involvement in their work tasks) also a slight tendency to work excessively hard and to feel compelled to work (which is also characteristic of workaholism).

We found evidence for symmetric crossover, meaning that both partners influence each other at both times. We did not find any longitudinal crossover effects, which indicates that one partner's family satisfaction crosses over to the other partner but has no lasting effects over time. Our findings agree with earlier studies (e.g. Bakker and Demerouti, 2009; Demerouti *et al.*, 2005; Westman *et al.*, 2009) that also found crossover of positive experiences between partners. Apparently, when individuals are satisfied with their family life they share this experience which influences the experience of the other partner as well. Alternatively, partners are empathetic to their partner and by taking the perspective of the partner, they also get "infected" by the satisfaction of their partner (Bakker and Demerouti, 2009).

Finally, our findings contribute to the work-family literature. The results confirm that work-family conflict and work-family facilitation have different origins (cf. Bakker and Geurts, 2004). Additionally, the findings show that work-family conflict and work-family facilitation can independently predict family satisfaction of employees and their partner at home. The latter finding also expands the crossover literature, by showing that spillover from work to home precedes crossover of life satisfaction. Results indicated that the crossover was bidirectional, and we generally found no large differences between both genders suggesting that the experience was similar for men and women. In Japan, women play a more important role in child care in dual-earner couples with child(ren) of six years or younger (Cabinet Office, 2006). Nevertheless, our findings are consistent with earlier studies in western, family-friendly societies that found no consistent gender pattern (Bakker *et al.*, 2008, 2009). This suggests that the hypothesised spillover-crossover model does apply equally well in western societies as in non-western societies (at least in Japan).

Strengths and limitations

Although a strength of our study design is the exploration and matching of data within and between couples, there are some limitations that need to be raised. This study focused on inter-gender relationships, and the generalizability of the results to same gender couples is unknown. In addition, our study was conducted in Japan, which limits the external validity of our findings. There is a growing recognition that larger social, cultural, and political contexts may affect individuals' perceptions and experiences within the work-family domain (e.g. Lewis, 1997; Westman, 2002). The specific cultural context may have affected our findings, which therefore need to be interpreted with care. Note, however, that the findings were consistent with previous studies conducted in Europe (Bakker *et al.*, 2008, 2009). Furthermore, our initial response rate was relatively low (33.4 per cent), which may question the generalizability of our findings. It should be noted, however, that low response rates are not uncommon in crossover research (e.g. Demerouti *et al.*, 2005; Mauno and Kinnunen, 1999). Dual earner couples are often too busy with their work and private life to respond. Also, for a large part of our model, we used a cross-sectional design which precludes causal inferences. This means that the relationships proposed by our

model await further testing in longitudinal research. This is the more important since work engagement and workaholism may also partly be a consequence of life satisfaction. Finally, although the present study provides clear support for the hypothesised relationships, a structural equation model cannot reveal the rich content of the phenomena responsible for the effects. Therefore, it would be interesting if future research would include a qualitative examination of the processes proposed by the spillover-crossover model.

Conclusion

Despite these limitations, the current study suggests that work engagement has positive, whereas workaholism has negative consequences for life satisfaction. Engaged workers come home cheerfully and seem inclined to help the partner if needed with household chores. Workaholics let their work interfere with private life, and seem less inclined to help their partners, which reduces their partner's life satisfaction. This ultimately seems to fire back, since partners' life satisfaction is reciprocally related.

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