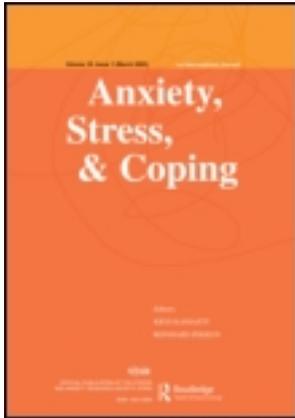


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Inequity in work and intimate relationships: a Spillover–Crossover model

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This study among 267 Greek teachers and their partners tested and expanded the recently proposed Spillover–Crossover model (SCM) of well-being. Accordingly, experiences built up at work spill over to the home domain, and then influence the partner. The authors integrated equity theory in the model by formulating hypotheses about exchange in interpersonal relationships. Structural equation modeling analyses supported the spillover hypothesis that teachers who lose their work engagement as a result of an inequitable relationship with their students invest less in the relationship with their partner. In addition, the results supported the crossover hypothesis that teachers' relationship investments, in turn, show a negative relationship with inequity in the intimate relationship as perceived by the partner; and inequity in the intimate relationship contributed to partner depression. The findings are discussed in light of the SCM of well-being.

Keywords: crossover; depression; employee engagement; inequity; spillover; work engagement

Introduction

Although there is an abundance of studies showing that work and family boundaries are permeable (Allen, Herst, Bruck, & Sutton, 2000; Byron, 2005; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005), the identification of processes through which work affects one's partner has received little research attention (Parasuraman & Greenhaus, 2002; Westman, 2001). Most researchers ask participants in their studies to report the extent to which work interferes with family life – importing subjectivity in the ratings. In the present study, we will follow an alternative approach by examining the statistical relationship between what happens at work and what happens at home. Specifically, we will examine how teachers' experience of inequity in work relationships may spill over to the home domain and be related to inequity in the intimate relationship with their partner and to partner depression.

The central aim of this study is to identify the psychological process through which work affects one's partner. To that end, we integrate basic principles from equity theory (Adams, 1965) in the recently proposed Spillover–Crossover model (SCM) (Bakker, Demerouti, & Burke, 2009; Bakker, Demerouti, & Dollard, 2008). Thus, we test a new version of the SCM by integrating equity perceptions of teachers

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and their partners in the model. Equity or reciprocity exists when a person's investments and outcomes in a relationship are proportional to the investments and outcomes of the other person in the relationship (Adams, 1965), or when a person's own investments equal his or her own outcomes (Pritchard, 1969). Inequity is expected to be stressful in both work relationships (resulting in decreased work engagement) and in close relationships (resulting in increased depression).

According to the SCM, experiences built up at work may spill over to the home domain, such that employees' work-related well-being affects their behavior at home – including their investments in the intimate relationship. Thus, we argue that those who lose their engagement as a result of an inequitable relationship at work will invest less in the relationship with their partner (*spillover hypothesis*). In addition, we argue that if employees invest less in the relationship with their partner, this will contribute to inequity in the intimate relationship as perceived by the partner, and indirectly to partner depression (*crossover hypothesis*). Figure 1 gives an overview of the research model. In what follows, we will use the literature to substantiate our hypotheses.

Theoretical background

According to equity theory (Adams, 1965), people evaluate their relationships with others in terms of investments and outcomes. A central proposition is that people have a deeply rooted tendency to pursue reciprocity in interpersonal relationships and that they feel distressed if they perceive these relationships as inequitable (Walster, Walster, & Berscheid, 1978). Buunk and Schaufeli (1999) have argued that reciprocity is a universal and evolutionary rooted psychological principle that increased the likelihood of our ancestors' survival in the evolutionary past.

How important is equity for teachers, the participants in the present study? One may argue that the relationship between teachers and their students is out of balance by its very nature, because teachers are supposed to give, whereas students are supposed to receive. Blau's (1964) social exchange theory suggests that even in such a relationship equity theory's propositions hold. At a conceptual level, Blau

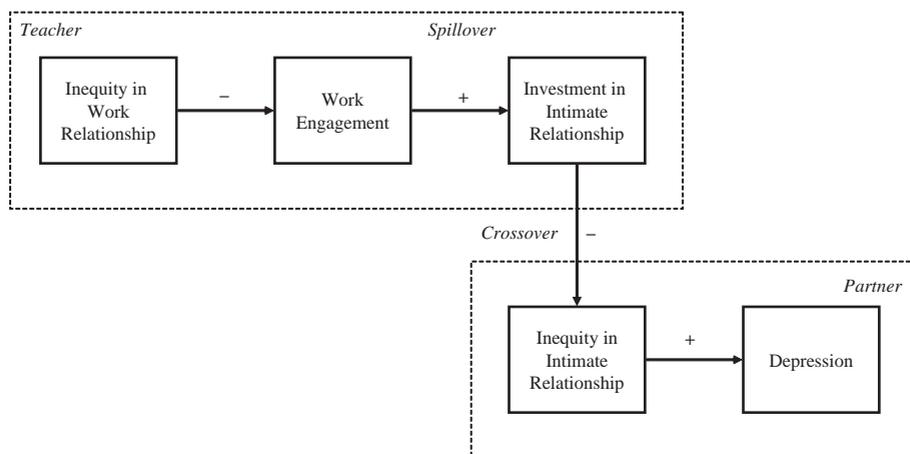


Figure 1. The hypothesized Spillover–Crossover model.

argues that individuals in high power positions expect deference and gratitude from those in low power positions. Deference and gratitude are exchanged for the services of the powerful in order to preserve equity in an otherwise lopsided relationship. In the relationship with students, teachers' investments may include, for example, their effort and enthusiasm. These investments are reciprocated when students react with gratitude, or when there exists a good classroom atmosphere. Investments are not reciprocated when students are inattentive, disrespectful, and bored. If this lack of reciprocity turns into a chronic condition, whereby teachers continuously give more than they receive in return, it may eventually deplete teachers' energy resources (Bakker et al., 2000; Farber, 1991).

Several studies have shown a positive relationship between inequity in work relationships and burnout among teachers (Bakker et al., 2000; Taris, Van Horn, Schaufeli, & Schreurs, 2004; Van Horn, Schaufeli, & Enzmann, 1999), and several other occupational groups (for an overview, see Schaufeli, 2006). In the present study, we will examine how inequity is related to the opposite of burnout – work engagement (Demerouti, Mostert, & Bakker, 2010; González-Romá, Schaufeli, Bakker, & Lloret, 2006). Engagement is defined as a positive, fulfilling, and work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli, Salanova, González-Romá, & Bakker, 2002). Engaged employees have high levels of energy and are enthusiastic about their work. In addition, often they are fully immersed in their work so that time flies (May, Gilson, & Harter, 2004). On the basis of equity theory, we formulate the following hypothesis:

Hypothesis 1: Inequity in work relationships is negatively related to work engagement.

Equity theory (Adams, 1965; Walster et al., 1978) is a general social exchange theory that is not limited to the occupational field. Indeed, Glass and Fujimoto (1994) have shown that a lack of reciprocity in the relationship between spouses regarding household labor is positively related to depressive symptoms. Moreover, Scafer and Keith (1980) found that husbands and wives who felt that there was equity in the performance of marital roles were less depressed than those who felt under- or over-benefited. These findings were conceptually replicated by Bakker et al. (2000), who showed that inequity in terms of giving support to and receiving support from the partner was related to higher levels of depression. Thus, we predict:

Hypothesis 2: Inequity in the intimate relationship is positively related to depression.

Spillover and Crossover

According to the recently formulated SCM (Bakker et al., 2008, 2009), strain built up at work (including perceptions of inequity) may spill over to the home domain by having an impact on (reduced) helping or (increased) undermining behaviors. In previous research, researchers have identified two different ways in which demands or strain is carried over (Bolger, DeLongis, Kessler, & Wethington, 1989; Westman, 2002): spillover and crossover. Negative *Spillover* or work–family conflict is a within-person across-domains transmission of demands and consequent strain from one area of life to another. Previous research has primarily focused on how reactions

experienced in the work domain are transferred to and interfere with the nonwork domain for the same individual (Eby et al., 2005).¹ For example, a teacher who returns home after a day full of demanding interactions with students may feel reduced work engagement (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007), and this may spill over to the family domain because the teacher lacks the energy to invest in private life.

Work–family conflict is defined as “a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. That is, participation in the work (family) role is made more difficult by virtue of participation in the family (work) role.” (Greenhaus & Beutell, 1985, p. 77). From a personal resources perspective (e.g., Hobfoll, 2002), high job demands require employees to devote more resources (e.g., time, emotions) to work, leaving them with fewer resources to devote to their family (Frone, Yardley, & Markel, 1997). Thus, employees who are confronted with work overload or with inequity at work have more problems in combining their work and family life (Butler, Grzywacz, Bass, & Linney, 2005; Demerouti, Bakker, & Bulters, 2004). Moreover, Bakker et al. (2008) found that men and women who experienced work–family conflict were inclined to initiate a negative interaction sequence with their partner. This social undermining behavior, in turn, increased the home demands for the partner. In line with this reasoning and the latter findings, we predict that teachers who feel low in work engagement (because of inequity in the relationship with their students) will invest less in the intimate relationship with their partner than those high in work engagement (see also Figure 1):

Hypothesis 3: Inequity in work relationships is negatively related to investments in the intimate relationship, through (reduced) work engagement.

In contrast to spillover, *crossover* involves transmission across individuals, whereby demands and their consequent strain cross over between closely related persons (Westman, 2002). 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 *intra-individual* transmission of stress or strain, crossover is a dyadic, *inter-individual* transmission of stress or strain (see also Figure 1).

Westman (2002) has described two different mechanisms through which stress or strain may cross over from one person to the other. The first mechanism concerns the direct transmission of stress and strain between partners. According to Westman, strain in one partner produces an empathic reaction in the other that increases his or her level of strain. Eckenrode and Gore (1981) suggested already more than 25 years ago that the effect of one’s strain on the spouse’s distress might be the result of empathy as expressed in reports such as “We feel their pain is our own” (p. 771). The second mechanism suggests that crossover may be the result of an indirect interaction process. Specifically, Westman has argued that social support or undermining behaviors may mediate the crossover of one partner’s strain to the other partner’s strain. Indeed, it has been shown that social undermining (i.e., to express negative affect, convey negative evaluation or criticism, or hinder the attainment of instrumental goals) mediates the crossover of depression from one partner to the other (e.g., Westman & Vinokur, 1998). In addition, Bakker et al.

(2008) have shown that work–family conflict leads to social undermining and indirectly contributes to (reduced) partner well-being (i.e., levels of exhaustion).²

The present study expands this latter spillover–crossover perspective by explicating the role of inequity in the exchange process. As can be seen in Figure 1, we predict that teachers' investments in the intimate relationship contributes to a lower level of inequity in the intimate relationship (as rated by their partners), which consequently reduces their partners' level of depression. Since we have already discussed the second part of this proposition (see Hypothesis 2) we will briefly discuss the link between teachers' investments in the intimate relationship and partner inequity. Pritchard (1969) has argued that equity exists when a person's own investments equal his or her own outcomes. In the SCM, teachers' investments are equal to their partners' outcomes. For example, teachers who invest in the intimate relationship with their partner by giving attention and respect to the partner, increase their partner's outcomes of the relationship (received attention and respect). Therefore, higher relationship investments by teachers will reduce the inequity as perceived by their partner. Since teachers' investments in the intimate relationship are a function of their work engagement, it is evident that this is an indirect crossover process. The lack of work engagement of teachers translates into strain for the partner (inequity) with increased depression as the final outcome. This leads to our last hypothesis:

Hypothesis 4: Teachers' investments in their intimate relationship are negatively related to partner depression, through partner's perceptions of reduced inequity.

Method

Participants and procedure

In total, 267 teachers and their partners participated in the present study. Most teachers were female ($N = 194$, 72.7%), and their mean age was 43.09 ($SD = 6.54$) years. The majority of the participants were married (95.5%), for an average of 15.55 years ($SD = 8.24$). Twenty-nine (10.9%) of them had no children, 52 (19.5%) had one child, 159 (59.5%) had two children, and 27 (10.1%) had three or more children. Regarding the type of school teachers were employed: 69 (25.8%) were working in a kindergarten, 33 (12.4%) in a primary school, and 163 (61.1%) in a high school. The mean working experience of the teachers was 15.60 ($SD = 7.75$) years. Finally, 110 (41.2%) teachers were working in the area of Athens and 154 (57.7%) in the Greek province; three participants (1.1%) did not report the location of their work.

As regards to teachers' partners, their mean age was 42.28 ($SD = 6.85$) years, and they were working in several different occupational sectors. In particular, 152 (56.9%) were working in the public sector, 61 (22.8%) were working in the private sector, and 49 (18.4%) were self-employed; 5 partners did not report the sector whether they were working in or were unemployed. Their mean working experience was 16.77 ($SD = 8.55$) years, and the majority of them had university education. Specifically, 6 partners (2.2%) were primary school graduates, 32 (19.5%) were high school graduates, 182 (68.1%) were university graduates, and 26 partners (9.7%) completed postgraduates studies. One partner (.4%) did not report his/her educational background.

Data were collected at the schools where the teachers were employed. In every school, the researcher was introduced to the teachers who had been asked to attend a short meeting in the director's office during a break of the day. They were informed about the background of the study and received general instructions about how to fill in the questionnaire. The teachers, who were willing to participate, were asked to take two questionnaires home, have one questionnaire filled in by their partners and return it along with their own in a sealed envelope to the director within a few days. All teachers were informed that participation was voluntary, and that data would be treated anonymously and confidentially. Because we were interested in the impact of inequity in the relationship with students on investments in the intimate relationship and partner well-being, we decided to include in the analyses only those teachers who scored greater than or equal to 1 on "inequity" ($N = 239$) – see below. Thus, the final sample on which the analyses are based included 239 couples (teachers and their partners).

Measures

Inequity in the relationship with students. To measure inequity in the work relationship of the teachers, we used Bakker et al.'s (2000) 12-item scale measuring inequity in the relationship with students (they use the phrase "lack of reciprocity"). The scale consisted of six items measuring investments (e.g., "How much do you invest in maintaining order in the classroom?" Cronbach's $\alpha = .64$). In addition, six items measured outcomes (e.g., "How many outcomes do you get from the orderly behavior of your students during the lessons?" $\alpha = .78$). Inequity was assessed by calculating the ratio term; investments were divided by outcomes (see also Bakker et al., 2000). Note that, in the original sample ($N = 267$), inequity in the relationship with students ranged from .76 to 1.92; and that 78.3% of the teachers scored greater than 1. This indicates that generally teachers invested more in the relationship than they received back. We decided to include in the analyses only the teachers who scored greater than or equal to 1 on "inequity" ($N = 239$). We did not include scores less than 1, since previous research has indicated that although inequity to one's advantage (higher outcomes than investments) is stressful, it is much less stressful than inequity to one's disadvantage (Van Dierendonck, Schaufeli, & Buunk, 2001).

Teachers' *Work Engagement* was measured with the Utrecht work engagement scale (Schaufeli et al., 2002). The scale measured the dimensions of *Vigor* (six items; e.g., "At my job, I feel bursting with energy"; $\alpha = .85$), *Dedication* (five items; e.g., "I am enthusiastic about my job"; $\alpha = .91$), and *Absorption* (six items; e.g., "When I am working I forget everything else"; $\alpha = .83$). All items were scored on a seven-point scale ranging from 0 ("never") to 6 ("always").

Inequity in the intimate relationship was assessed with Bakker et al.'s (2000) 16-item scale. This scale includes eight items measuring investments (e.g., "How much attention do you give to your partner?") and eight items measuring outcomes (e.g., "How much attention do you receive from your partner?"). Teachers' partners filled in both the investments scale ($\alpha = .86$) and the outcomes scale ($\alpha = .90$). Inequity scores were calculated by dividing the total investments score by the total outcomes score. Higher scores on this measure refer to less equity in the intimate relationship. In the present study, inequity in the intimate relationship ranged from .47 to 2.92. In total, 36.3% of the partners scored between .90 and 1.00,

and 54.3% of the partners scored greater than 1. This indicates that, generally, partners invested equally or more in the relationship than the teachers. In addition, teachers also reported on their investments in the intimate relationship ($\alpha = .82$).

Partners' *Depression* was measured with 10 items of Radloff's (1977) Center for Epidemiological Studies Depression (CES-D) scale. Respondents indicated how often during the preceding week they felt in the way each item described (e.g., "I was bothered by things that usually don't bother me") using a scale ranging from 1 = rarely or none of the time (<1 day) to 4 = most or all of the time (5–7 days). Cronbach's alpha of the overall scale was .90. The reliability coefficients of the two five-item subscales that were created for the structural equation modeling (SEM) analyses were .81 and .79.

Data analysis

The matched responses of both partners were analyzed with SEM techniques using the AMOS 5 software package (Arbuckle, 2003). We analyzed the covariance matrix using the maximum likelihood method of estimation. Besides the chi-square statistic, the analysis assessed the goodness-of-fit index (GFI), the root mean square error of approximation (RMSEA), the nonnormed fit index (NNFI), and the comparative fit index (CFI).

Because of the large number of indicators, it was not possible to conduct our SEM analysis on a full disaggregation model. For this reason, a *partial* disaggregation model (Bagozzi & Edwards, 1998) was tested by creating parcels of items as recommended by Hall, Snell, and Foust (1999). "Work engagement" was included as a latent factor with vigor, dedication, and absorption as the indicators. "Teacher investments" and "depression" were included as latent factors with as indicators two halves of the scales. Thus, for example, "teacher investments in the intimate relationship" was indicated by two parcels of four items. The items were randomly chosen, but decisions on item parceling were also dependent on whether the constructed composites had acceptable reliabilities. "Inequity at work" and "inequity in the intimate relationship" were both included in the model as a latent variable with one indicator, namely the ratio term (investments/outcomes). The paths from the latent factors to their indicators were fixed with the square roots of the scale reliabilities, whereas the error variances of each indicator were set equal to the product of their variances and one minus their reliabilities. For more details regarding the calculation of the reliability score of the ratio term, we refer to Cortina, Chen, and Dunlap (2001).

Using alternative models (see Lehmann, 2001) we tested whether work engagement is a mediator in the relationship between teachers' inequity at work and teachers' investments in the intimate relationship (Hypothesis 3). We compared the hypothesized model (including only the indirect paths) with a model in which the direct effect from inequity at work to investments in the relationship was added (this is the direct effects model). A similar procedure was followed to test Hypothesis 4.

In addition, we tested whether significant pathways between teachers' inequity at work and partner's depression represented indirect relationships by means of bootstrapping. The bootstrap is a statistical resampling method that estimates the parameters of a model and their standard errors strictly from the sample (Preacher & Hayes, 2008). Bootstrapping computes more accurate confidence intervals of indirect

effects ($x \rightarrow m \rightarrow y$) than the more commonly used methods, such as the causal steps strategy (Baron & Kenny, 1986), as it does not assume that the sampling distribution is normal (Preacher & Hayes, 2008). This is especially relevant for indirect effects, as their distributions are skewed away from zero (Shrout & Bolger, 2002). The null hypothesis that x has no indirect effect on y via m is rejected when the whole confidence interval lies above or below zero.

Results

Descriptive statistics

The means, standard deviations, and correlations between the study variables are displayed in Table 1. As can be seen, teachers and their partners are generally inclined to reciprocate investments in the intimate relationship; the correlation between teacher investments and partner investments is .38 ($p < .01$). In addition, teachers' investments in the intimate relationship are substantially positively related to their partner's outcomes ($r = .58$, $p < .001$), thus validating the equity approach used in the present study.

Test of the Spillover–Crossover model

As can be seen in the first row of Table 2, the hypothesized SCM fit well to the data. Consistent with Hypothesis 1, results showed that inequity in teachers' relationship with students was negatively related to their work engagement ($\beta = -.36$, $p < .01$; see also Figure 2). Work engagement, in turn, spilled over to the home domain: it was a significant predictor of teachers' investments in the intimate relationship with their partner ($\beta = .30$, $p < .001$). Furthermore, teachers' investments in the intimate relationship was significantly and negatively related to partners' perception of inequity ($\beta = -.40$, $p < .001$). Consistent with Hypothesis 2, partners' inequity was significantly related to their depression ($\beta = .17$, $p < .05$).

According to Hypothesis 3, inequity in work relationships is negatively related to investments in the intimate relationship, through work engagement. To test whether work engagement plays the role of a mediator, we compared the proposed mediation

Table 1. Means, standard deviations (SD), and correlations for the model variables, $N = 239$ couples (teachers and their partners).

Variable	Mean	SD	1	2	3	4	5	6
Teachers								
Inequity at work	1.18	.15						
Work engagement	4.65	.82	-.23**					
Investment in IR	4.15	.51	.01	.22**				
Partners								
Investment in IR	4.14	.62	-.02	-.02	.38**			
Outcome IR	3.97	.73	-.07	.20**	.58**	.59**		
Inequity IR	1.07	.24	.04	-.21**	-.27**	.12	-.66**	
Depression	1.48	.52	.08	-.04	-.20**	-.23**	-.29**	.13*

IR, intimate relationship.

** $p < .01$, * $p < .05$.

Table 2. Results of SEM analyses for alternative Spillover–Crossover models, maximum likelihood estimates, $N = 239$ couples.

Model	χ^2	df	GFI	RMSEA	NNFI	CFI
Proposed model	46.62	25	.96	.06	.96	.97
Partial mediation model (including the path inequity → investments IR)	45.96	24	.96	.06	.96	.97
Partial mediation model (including the path teachers' investments → partners' depression)	42.90	24	.96	.06	.97	.98
Alternative model (starting with work engagement → inequity at work → investments IR)	59.21	25	.95	.08	.94	.96
Null model	866.78	36	.56	.31	–	–

χ^2 , chi-square; df, degrees of freedom; GFI, goodness-of-fit index; RMSEA, root mean square error of approximation; NNFI, non-normed fit index; CFI, comparative fit index; IR, intimate relationship.

model with a model including an additional direct path from inequity in work relationships to investments in the intimate relationship in order to see which model fit better to the data (Frazier, Tix, & Barron, 2004). The results showed that the alternative partial mediation model did *not* fit better to the data than the proposed model, Delta $\chi^2(1) = .66$, *ns*, and that the direct path of inequity to investments was nonsignificant ($t = .82$, $p = .41$). In addition, we compared the proposed mediation model with a model starting with work engagement → inequity in work relationships → investments in the intimate relationship. As can be seen in Table 2, the chi-square value of this alternative model was 12.59 points higher than the chi-square value of the proposed model, and all other fit indices also indicated less optimal fit to the data. In addition, the path from inequity in work relationships to investments was nonsignificant ($t = -1.79$, $p = .07$). Taken together, these results indicate that work engagement mediated the relationship between inequity at work and investments in the intimate relationship. We also tested this indirect effect using the bootstrap analysis option in AMOS (MacKinnon, 2008). The results of the bootstrap analysis showed that this indirect effect was highly significant (estimate = $-.11$, $p < .001$). The bias-corrected confidence interval (B-CCI) ranged from $-.199$ to $-.049$. Taken together, these results provide strong evidence for Hypothesis 3.

According to Hypothesis 4, teachers' investments in their intimate relationship lead to lower levels of partners' depression, through their partner's perceptions of reduced inequity. To test whether partner inequity acts as a mediator, we compared the proposed mediation model with a model including an additional direct path from teachers' investments to partners' depression. The results showed that the alternative partial mediation model did *not* fit better to the data than the proposed model, Delta $\chi^2(1) = 3.72$, *ns*, and that the direct path of teacher investments to partner depression was nonsignificant ($t = -1.92$, $p = .06$). This suggests that partner inequity mediated the relationship between teacher investments in the intimate relationship and partner depression. However, the results of a bootstrap analysis indicated that the indirect effect was nonsignificant (estimate = $-.07$, $p = .161$; $-.140 \leq \text{B-CCI} \leq .021$). Thus, Hypothesis 4 was rejected.

The results of a final set of bootstrap analyses showed that the full sequential mediation effect from teacher inequity at work to partner depression was nonsignificant (estimate = $.007$, $p = .10$; $.000 \leq \text{B-CCI} \leq .021$). However, the

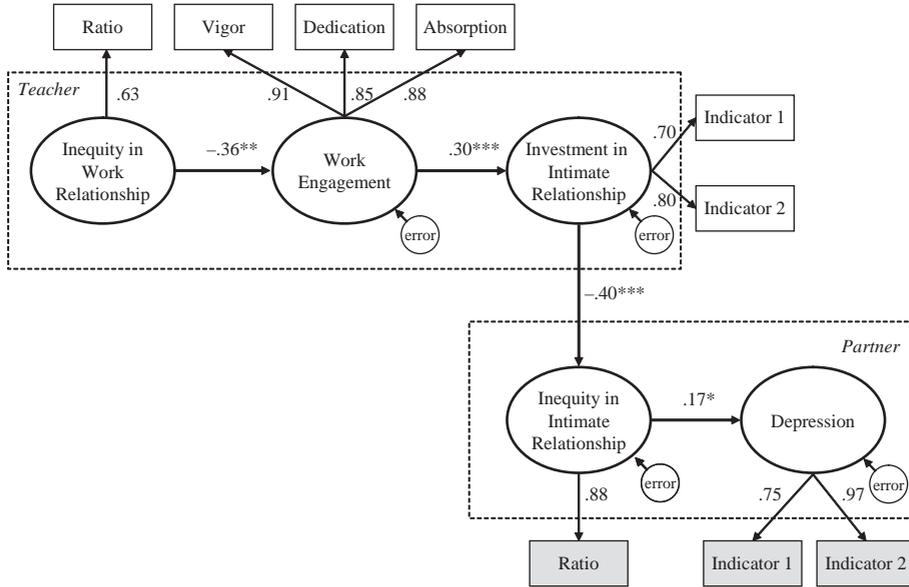


Figure 2. Standardized solution (maximum likelihood estimates) of the Spillover–Crossover model. Note: Dark shaded boxes indicate partner ratings. * $p < .05$, ** $p < .01$, *** $p < .001$.

sequence: teacher inequity at work \rightarrow work engagement \rightarrow teacher investment \rightarrow partner inequity in the intimate relationship was significant (estimate = .044, $p < .01$; $.016 \leq B\text{-CCI} \leq .090$). Taken together, these findings offer reasonable support for the hypothesized SCM.

Discussion

The present study among Greek teachers and their partners sought to test a SCM by using spillover and crossover theories, as well as equity theory. The central proposition of the SCM is that experiences built up at work spill over to the home domain and consequently cross over to the partner. Results of SEM and bootstrap analyses clearly suggest that inequity at work undermines work engagement and is indirectly related to teachers' behavior at home. Teachers low in engagement – a function of perceived inequity at work – invested less in the intimate relationship with their partner, thus contributing to the inequity felt by the partner. This inequity regarding the intimate relationship, in turn, contributed to partner depression. In what follows, we will outline the most important theoretical contributions of the study.

Theoretical contributions

The present study contributes to the literature in four ways. First, our findings add to the spillover literature by showing that stress at work spills over to the home domain using different sources of information (teachers and their partners). Most studies in the work–family interface domain used spillover measures asking respondents to what extent work influences the home domain (see Eby et al., 2005; Geurts &

Demerouti, 2003). Such self-reports are far from ideal, because employees may not be able to objectively report on the interference between work and family life. Moreover, work–family interference is a function of strain, and strain may affect self-report accuracy (Salancik & Pfeffer, 1978). We circumvented this problem by (1) examining the relationship between what happens at work and behaviors at home instead of looking at reports of this relationship (work–family interference) and (2) linking teachers' work engagement to their partner's evaluations of investments and outcomes at home, and well-being.

Second, the findings contribute to the crossover literature by illuminating the process that starts at work and then spills over to the home domain. Westman (2001) has argued that crossover research is in need of more theory-guided research. The present study shows how the spillover and crossover literatures can be integrated, by demonstrating how strain built up in one life domain (work) may spill over to another life domain (private life), and have implications for one's relationship and partner's well-being. Our findings are conceptually in line with one earlier test of a SCM and shed more light on the mediating process. Whereas previous research (Bakker et al., 2008) has shown that high job demands and work–family interference contribute to partner strain through a process of social undermining, the present study shows a more subtle process of withdrawal (reduced investments) from the exchange relationship with one's partner. Further, our findings expand a recent event sampling study (Song, Foo, & Uy, 2008) showing that mood at work influences mood at home, and consequently crosses over to the spouse.

Third, the present study adds to the equity literature by showing that inequity is not only applicable to different domains (work and private life) and has negative consequences for *personal* well-being, but also for the well-being of one's partner. Thus, the consequences of inequity seem far-reaching and have a clear social component. One's perception of equity is dependent on own investments and on others' investments (one's own outcomes). Moreover, our study shows that when teachers believe their investments in work exceed their outcomes they lose their engagement, that is, their energy, dedication, and absorption. This is in line with previous research on the relationship between inequity and burnout (see Bakker, Schaufeli, Sixma, Bosveld, & Van Dierendonck, 2000; Schaufeli, 2006). The present findings clearly expand this research by showing that teachers' reduced work engagement consequently has an impact on the investments in their personal relationship at home. Specifically, lack of reciprocity at work coincides with reduced investments at home, which is then predictive of more inequity in the relationship with the partner. Our study is one of the first to really include both parties involved in the exchange relationship, and thus adds significantly to the equity literature.

Finally, earlier qualitative research has suggested that engaged employees are not only more productive at work (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009) but also more active during off-job time (Schaufeli et al., 2001). Indeed, some diary studies have shown that engaged employees are more actively engaged in creative hobbies and sports (Sonnentag, 2003; Winwood, Bakker, & Winefield, 2007), and seem more inclined to take over responsibilities regarding household work. The results of the present study show that engaged teachers invest more in their close relationship – as indicated by their partners. This finding extends previous research on work engagement, and is conceptually consistent with the findings of Repetti and colleagues (Repetti, 1992; Repetti & Wood, 1997). Their research showed that

mothers tend to withdraw emotionally and behaviorally after a stressful workday – this pattern of relationships conceptually mirrors the effects found in the present research.

In short, the present study shows how the well-being of intimate partners is related through a process of give and take. The findings show how teachers' engagement is indirectly related to their partners' depression through investments in the relationship. This central finding is in line with our proposed SCM. It illustrates work–family facilitation in that positive experiences at work spill over to the home domain – an under researched process (Grzywacz & Marks, 2000). In addition, the findings show how the behavior at home is consequently related to partner's well-being. Bakker et al. (2008) have shown that work–family conflict may result in social undermining and consequently in higher home demands and exhaustion for the partner. The present study expands this research by showing the positive chain – engagement at work seems to foster positive behaviors at home.

Limitations and future research

Although a strength of the study design is the exploration and matching of data within and between couples, some limitations of the present study must be mentioned as well. First, the design of our study was cross-sectional thus preventing conclusions regarding causality. However, we used two sources of information, and our hypotheses were firmly rooted in theory. We showed that teachers' well-being is related to their partner's well-being through a process of give and take. Nevertheless, it should be noted that this process could also start at home, where the depression built up as a consequence of inequity in the intimate relationship influences the investments in the relationships with clients (students) or colleagues. Moreover, the partners may also react to teachers' low levels of investments by reducing their own investments in the relationship. Future research should examine possible causal and reversed causal (i.e., reciprocal) relationships between the work and home domains of both partners.

Second, the present 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 one country – Greece, 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.

Third, our analyses were restricted to testing an indirect crossover process; we did not test direct crossover effects of work engagement and depression. Previous studies have shown that work-related and context-free well-being can cross over between partners, most probably as a result of empathy (Bakker & Demerouti, 2009; Westman, 2001). Future studies may integrate these direct crossover effects in the SCM. Fourth, although we did find evidence for the proposed model, some of the relationships found in the present study were relatively small – particularly the relationship between inequity in the intimate relationship and depression. Future studies should investigate the robustness of the model by testing the model among other occupational groups. Finally, we did not distinguish between the genders, although some studies have shown that there may be gender effects in crossover.

Note, however, that the gender distribution in our sample was skewed; most teachers were female. In addition, although gender differences in spillover and crossover do exist, the differences in terms of processes do not seem to be extremely robust (Bakker et al., 2008).

Conclusion

The present study answers the call for research on processes through which work affects one's partner (Parasuraman & Greenhaus, 2002; Westman, 2001). We proposed a SCM of well-being to show how employee well-being may spill over to the home domain and cross over to the partner. We hope that this study will encourage researchers to simultaneously consider spillover and crossover effects, since work and family boundaries are highly permeable and individuals' behaviors at home are dependent on their experiences at work.

Notes

1. However, evidence is accumulating that interference also occurs from family to work (for a meta-analysis, see Byron, 2005).
2. Westman (2002) has argued that there is a third reason why the strain of two partners may be connected – a spurious relationship between the strain of two partners may be found if both partners are exposed to the same stressor (e.g., financial problems). With increasing financial problems, both partners may show an increase in psychological strain, and therefore the strain of one partner may be correlated with the strain of the other partner. It should be noted that this spurious relationship cannot be taken as evidence for crossover.

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