

Children's Life Satisfaction: The Roles of Mothers' Work Engagement and Recovery from Work

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Abstract The present study examines whether mothers' positive work-related experiences, work engagement and recovery from work, are indirectly linked to their children's life satisfaction via mothers' perceived life satisfaction and closeness with their children. Theoretically the study is based on the spillover and crossover models of work–family interface with a particular focus on positive interface, as this is a gap in the existing research. The sample consisted of 671 Finnish mother–child dyads. Survey-based data were analyzed using structural equation modeling. The results showed that mothers' work engagement and recovery from work were positively and indirectly associated with children's life satisfaction via mothers' life satisfaction and closeness with their children. The findings suggest that work-to-family crossover of positive work-related experiences does indeed occur from mothers to children. Employers should pay attention to mothers' work engagement and recovery from work, because these positive work-related experiences are likely to promote mothers' life satisfaction and a positive mother–child relationship which, in turn, may be reflected in children's life satisfaction. Job resources and mental detachment from work while not working are vital for work engagement and recovery from work, and should be promoted.

Keywords Spillover · Crossover · Work–family interface · Mother–child dyad · Work engagement · Recovery from work · Life satisfaction · Closeness with the child

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1 Introduction

1.1 Background and Aim

Earlier studies have shown that parents' work-related experiences are associated with their children's behavioral, well-being, and motivational outcomes. For example, parents' workload and job strain have been found to predict their children's impaired well-being (Crouter and Bumpus 2001; Goodman et al. 2011; Menaghan and Parcel 1990; Perry-Jenkins et al. 2000; Repetti and Wood 1997). These earlier studies, which have been conducted mostly from the stress perspective, have produced valuable understanding on how parents' negative work-related experiences affect their children. However, much less is known about whether and how parents' work may have *positive* effects on their children (Barnett and Hyde 2001; Baruch and Barnett 1986).

The present study aims to shed more light on positive work–family interface by examining whether, and specifically via which pathways, mothers' positive work-related experiences are linked to their children's (median age 12 years) life satisfaction. We focus on mothers as child care and upbringing continue to be more on their shoulders, yet in Finland mothers of school-aged children often work often full-time, forming the context of the present study (Statistics Finland 2011). As positive work-related experiences we concentrate on mothers' work engagement and recovery from work (to be defined in Sect. 1.3), which are relatively new work-related phenomena deserving research attention. Theoretically our study is based on the spillover and crossover models on work–family interface.

1.2 Theoretical Frameworks: The Spillover and Crossover Models

Positive effects of work are nowadays emphasized in many theories of work–family interface, including positive spillover and role expansion/enrichment/facilitation models (Barnett and Hyde 2001; Baruch and Barnett 1986; Greenhaus and Powell 2006; Greenhaus and ten Brummelhuis 2013; Lambert 1990; Kinnunen et al. 2014). These theories suggest that engaging with multiple roles, such as employee, parent, yields benefits and resources for an individual rather than stress and strain. Furthermore, it has been suggested that work–family research should focus on the qualitative aspects of work, that is, how employed parents *experience* their work (Baruch and Barnett 1986). Consequently, studies examining parents' positive work-related experiences as predictors for positive childhood outcomes have increased (Cooklin et al. 2014; Culbertson et al. 2012; Lawson et al. 2014; Perry-Jenkins et al. 2000; Sanz-Vergel et al. 2010). Very often this research has been approached via the spillover and crossover models (Bakker and Demerouti 2013; Bakker et al. 2009, 2013; Culbertson et al. 2012; Kinnunen et al. 2013, 2014; Lambert 1990; Westman 2001).

The *spillover* model suggests that an employee's experiences at work are transferred to his/her overall and family life, causing parallel experiences in these domains (Edwards and Rothbard 2000; Lambert 1990). Spillover may also occur from family to work, but here we focus on work-to-family spillover, and particularly on positive spillover effects. An example of spillover effects is seen when positive feelings related to work, such as work engagement or good recovery from work, give rise to positive feelings outside of work, such as family satisfaction, or more broadly, life satisfaction or happiness. In spillover this process occurs at an *intra-individual* level, that is, within the same person but in a different

life domain (Bakker et al. 2009, 2013; Culbertson et al. 2012). Positive spillover can also be framed in a broader theoretical context, namely, positive spillover has clear foundations in COR theory highlighting an accumulation of resources (Hobfoll 1989, 2002). Psychosocial resources and positive experiences, including our own well-being and positive emotions, accumulate, resulting in resource gain spirals. For instance, work engagement and recovery from work, which primarily are positive work-related experiences (recovery) or originate at work (engagement), may result in additional resource gains outside work e.g., in the form of life satisfaction or happiness.

Crossover captures the essence of such a spillover process at an *inter-individual* level, signifying that emotions, feelings and other experiences, both positive and negative, are transmitted between significant others, that is, between couples or between parents and children (Bakker and Demerouti 2013; Bakker et al. 2009, 2013; Kinnunen et al. 2013, 2014; Westman 2001; Westman et al. 2009). Crossover occurs basically because emotions are contagious in close relationships, causing the ripple effects, the idea of which is stressed in the emotion contagion theory (Hatfield et al. 1994). Even though emotional contagion may occur in all social interactions verbally and non-verbally, it is most likely in close relationships, particularly between family members (Aunola et al. 2015b; Larson and Almeida 1999). Consistent with this idea, two key mechanisms explaining why crossover takes place include empathy, behavioral interaction and communication (Liu and Cheung 2015; Westman 2001; Westman et al. 2009). Crossover is obvious within the family because family is a dynamic holistic system characterized by continuous dynamic interaction between family members as suggested in systemic-ecological theories (Bronfenbrenner and Morris 2006). It is noteworthy that, like spillover, crossover is likewise a bidirectional process occurring from work to family and family to work, but in the present study the former direction is of interest.

One important contribution of our study concerns our application of the crossover approach defined above. Namely, we utilize a two-informant design, that is, reports from mothers and children (a dyadic design). A two-informant design has rarely been used in examining the experiences of positive work–family interface (Bakker et al. 2013; Lawson et al. 2014; Park and Fritz 2015). Nevertheless, dyadic designs are valuable in examining all emotional phenomena, such as moods, affects or well-being, which are contagious, having effects beyond an individual (Hatfield et al. 1994).

1.3 Work-Related Positive Experiences: Work Engagement and Recovery from Work

In this study we concentrate on two relatively recently proposed positive work-related experiences, namely mothers' work engagement and recovery from work, the experiences of which we assume to show both spillover and crossover effects. Both work engagement and recovery from work include positive emotions, which, according to the COR theory (Hobfoll 1989, 2002), can be expected to initiate a resource gain spiral realized in the spillover and crossover effects described above.

Work engagement is a relatively new positive construct in psychology, referring to a positive, fulfilling, work-related state of mind characterized by three related dimensions: vigor (a desire to invest energy in one's work, including energy, effort, and persistence), dedication (feelings of pride, inspiration and enthusiasm regarding one's work) and absorption (a sense of being engrossed in one's work, whereby such immersion creates a feeling of time passing quickly) (e.g. Culbertson et al. 2012; Mauno et al. 2010; Schaufeli et al. 2006; Schaufeli and Salanova 2010). Work engagement has many positive outcomes

for employees and organizations (for reviews, see Halbesleben 2010; Mauno et al. 2010), and is one of the key constructs in contemporary occupational health psychology.

Recovery from work is an even more recent concept in occupational health psychology, referring to a process enabling an individual to replenish his/her physical and mental resources that have been depleted at work, constituting one key factor for occupational well-being and work performance (e.g. Fritz et al. 2010; Sonnentag 2001; Sonnentag and Fritz 2007). Moreover, we propose that recovery from work may be particularly important in working life today, which is characterized by work intensification and the demands of a 24/7 society (Rosa 2010), implying difficulties in separating work and non-work and simultaneously challenging recovery from work.

To the best of our knowledge, the present study is one of the first to concentrate on whether and how mothers' work engagement and recovery from work crossover to their children. Specifically, we aim to ascertain whether these two positive work-related experiences have beneficial effects beyond the employees and organizations and if they are passed on to their children. If this proves to be the case, organizations and policymakers need to consider factors conducive to work engagement and recovery from work, particularly among working mothers.

1.4 Mediators Studied: Mothers' Life Satisfaction and Closeness with Their Children

We consider two plausible mediating pathways, namely, whether mothers' work engagement and recovery from work are connected to their children's life satisfaction (a) through mothers' own life satisfaction and (b) through mothers' closeness with their children. Indeed, mediating pathways connecting work and family deserve more attention according to many scholars (Culbertson et al. 2012; Greenhaus and ten Brummelhuis 2013; Greenhaus and Powell 2006) and our study will shed light on this issue. Some earlier studies have documented the role of parents' well-being in their children's well-being (Aunola et al. 2015a; Huebner 1991; McCullough et al. 2000) and a transmission of emotions between parents and children (Aunola et al. 2015b; Larson and Almeida 1999). However, as far as we know, none of these earlier studies have examined whether and through which mechanisms mothers' positive work-related experiences, such as work engagement and recovery from work, are transmitted to their children.

The first expected mediator, mothers' *life satisfaction*, captures an individual's overall cognitive appraisal of her/his subjective well-being and quality of life (Diener 1984; Diener et al. 1999), also predicting many positive subsequent health and behavioral outcomes (Erdogan et al. 2012; Park 2004). Thus, life satisfaction can be conceived as a vital component in human happiness and a significant personal resource. Moreover, seen from the crossover perspective, parents' life satisfaction has been shown to relate very consistently to children's life satisfaction (Clair 2012) and more so than do other indicators of parental wellbeing (Hoy et al. 2013). The second expected mediator, *closeness with the child*, refers to the extent to which parents (here mothers) show affective warmth, support, responsiveness and positive involvement with their children (Aunola and Nurmi 2005; Driscoll and Pianta 2011; Galambos et al. 2003) and is essentially more social. The attachment theory (Bowlby 1982; Driscoll and Pianta 2011) suggests that the quality of the relational bond between parent and child provides children with security and emotional support and affects children's emotional and social development and psychological well-being. Indeed, a warm and close parent-child relationship has also been shown in numerous studies to promote children's academic performance, health and well-being (e.g.

Bradley and Galdwell 1995; Chao and Williams 2002; Clair 2012; Landry et al. 2006; Leung et al. 2004; Suldo and Huebner 2004).

In the present study, we explore whether closeness with the child, besides mothers' life satisfaction, also mediates linkages between mothers' positive work-related experiences, that is, work engagement and recovery from work, and children's life satisfaction. Noteworthy is that we perceive mothers' life satisfaction and closeness with the child as two qualitatively different mediators. Life satisfaction is one main component of subjective well-being and human happiness (Diener 1984; Diener et al. 1999), whereas closeness with the child is established and maintained in good parent-child interactions and is more social in origin (Aunola and Nurmi 2005; Driscoll and Pianta 2011; Galambos et al. 2003). Furthermore, life satisfaction is a context-free indicator of subjective well-being, whereas closeness with the child is a family-related construct, also reflecting parents' resources to show affective warmth, support, responsiveness and positive involvement with their children. As life satisfaction and closeness with the child reported by mothers are qualitatively different phenomena, we deemed it important to analyze whether the studied mediator effects differed with regard to these constructs.

1.5 Studied Outcome: Child's Life Satisfaction

As an outcome we decided to focus on child's life satisfaction, referring to child's cognitive appraisal of his/her subjective well-being (Diener 1984; Diener et al. 1999). Child's life satisfaction is a personal resource established in childhood, which also has notable positive long-term consequences across the life span (Park 2004; Proctor et al. 2009). Longitudinal empirical findings also support this reasoning by showing that childhood life satisfaction predicts many positive outcomes in midlife, among them subsequent life satisfaction, social activity and mental health (e.g. Lewis et al. 2011; Richards and Huppert 2011). More recent longitudinal studies have also revealed that children's life satisfaction predicts less maladaptive behavior over time (Lyons et al. 2014). The findings from Finland, constituting the context of our study, likewise underscore the crucial role of childhood life satisfaction for subsequent positive outcomes. For example, two Finnish longitudinal studies (Salmela-Aro and Tuominen-Soini 2010; Salmela-Aro and Tynkkynen 2010) showed that life satisfaction in school-aged children predicted higher probability of an academic education in later life. Thus, perceived from the life course perspective, it is crucial to explore and promote factors ensuring life satisfaction in childhood. Here we suggest that mothers' positive work-related experiences, mothers' work engagement and recovery from work, could be important predictors for childhood life satisfaction.

1.6 Evidence on Spillover and Crossover of Work Engagement and Recovery from Work

As noted at the outset, earlier studies on parents' work-related experiences and children's outcomes have mostly focused on negative work-related experiences, such as job stress or job strain, whereas positive work-related experiences have received attention only very recently. Most of these earlier studies have investigated how work-related experiences cross over between dual-earner couples (for a review, see Kinnunen et al. 2013). Given this lack of research on the crossover of parents' positive work-related experiences to their children, we next present some selected findings, gathered mostly in couple research, concerning work engagement and recovery from work. In this report we focus on crossover

effects, as they are methodologically more valuable, but some spillover effects are also described.

Concerning *work engagement*, Bakker et al. (2005) found that work-related vigor, a sub-dimension of work engagement, was transmitted between working couples; vigor reported by one partner was related to increased vigor in the other partner. Later Bakker et al. showed (2013) that work engagement was positively associated with an employee's work-family facilitation (a construct measuring explicitly positive work-family interface), which, in turn, was related to his/her own and partner's family satisfaction. In the same year Danner-Vlaardingelbroek et al. (2013) published a study reporting that positive workday feelings were transmitted between working couples: work-related positive mood and vigor in one partner influenced the other partner's marital role behavior via psychological availability, describing an individual's ability and motivation to direct psychological resources towards the partner. Rodriguez-Munoz et al. (2014) recently demonstrated among working couples that an employee's daily work engagement was associated with his/her partner's daily happiness via the employee's daily happiness. Furthermore, studies conducted at an intra-individual level (one-informant design, spillover approach) have also demonstrated that work engagement and happiness at home are linked. For example, Culbertson et al. (2012) showed that daily work engagement explained positive affects at home, such as being happy, cheerful and excited, relating to subsequent work-family facilitation. These earlier findings, gathered mostly among dual-earner couples, are promising, allowing us to expect that work engagement may also cross over from parents to children, a question of which we focus on by examining mother-child dyads.

We did not find any studies on crossover of *recovery from work* between parents and children. Thus, we do not yet know whether good recovery from work reported by mothers is associated with positive outcomes in their children, which is the question of interest here. However, we did find a study conducted among working couples. Park and Fritz (2015) recently showed that spousal recovery support, that is, supporting partner's psychological detachment from work, relaxation and mastery experiences during free time, by one partner predicted positively other partner's recovery experiences, and subsequently partner's life satisfaction. Studies conducted with an intra-individual design (one-informant approach; spillover approach) have also revealed that an employee's successful recovery from work is positively linked to his/her family experiences. For example, Sanz-Vergel et al. (2010) reported that good recovery after breaks at work was related to improved work-family facilitation as evaluated by an employee. It is moreover noteworthy that recovery from work and recovery activities, that is, free time, hobbies and spending time with children, take place outside work, and viewed from this angle, recovery from work and family sphere are closely linked (Demerouti et al. 2013). Hence it is also likely that parents' recovery from work crosses over to their children; among working parents recovery from work often occurs *with* the children, and during this off-job time parents transmit their emotions and moods to their children.

In addition, viewed more generally—not specifically from the perspective of work engagement or recovery from work discussed above—the crossover effects of positive work-related experiences from parents to children have gained some attention in work-family research. For example, earlier studies have found that positive job characteristics, such as job autonomy and job complexity reported by employed parents, are associated with positive outcomes in their children, such as fewer behavioral problems or better academic performance (for reviews, see Menaghan and Parcel 1990; Perry-Jenkins et al. 2000). Moreover, one recent diary study by Lawson et al. (2014) indicated that mothers

perceiving more positive work-related experiences showed less negative mood after work as assessed by their children. Specifically, when all measurements from eight consecutive days were counted, mothers' positive mood after work was related to more positive affect, better sleep quality and sleep duration as reported by their children. Altogether, this evidence suggests that other positive work-related experiences, work engagement and recovery from work, may also cross over from parents to children, although this proposition has not been tested until now.

1.7 Study Aim and Hypotheses

The aim of this study is to examine whether mothers' positive work-related experiences, that is, work engagement and recovery from work, are indirectly linked to their children's life satisfaction via mothers' perceived life satisfaction and closeness with their children. Two hypotheses are posed based on the spillover and crossover models of positive work–family interface. Concerning *spillover* (H1), we hypothesize that mother's work engagement and recovery from work, representing two different indicators of positive work-related experiences, spill over into her own life satisfaction and positive parenting experiences assessed via closeness with her child. Concerning *crossover* (H2), we hypothesize that mother's work engagement and recovery from work relate to her child's life satisfaction as reported by the child via mother's life satisfaction and closeness with the child as mediators.

Thus, we expect to find a positive crossover effect in a mother–child dyad, which we also assume to be indirect. Specifically, work engagement and recovery from work first relate to mother's life satisfaction and closeness with her child (testing the spillover hypothesis, H1) and these positive experiences of the mother then mediate the relationship between her work engagement and recovery from work and her child's life satisfaction (testing the crossover hypothesis, H2). Ultimately, we test the spillover–crossover model, which has foundations in spillover and crossover theories presented earlier. The model tested is presented in Fig. 1.

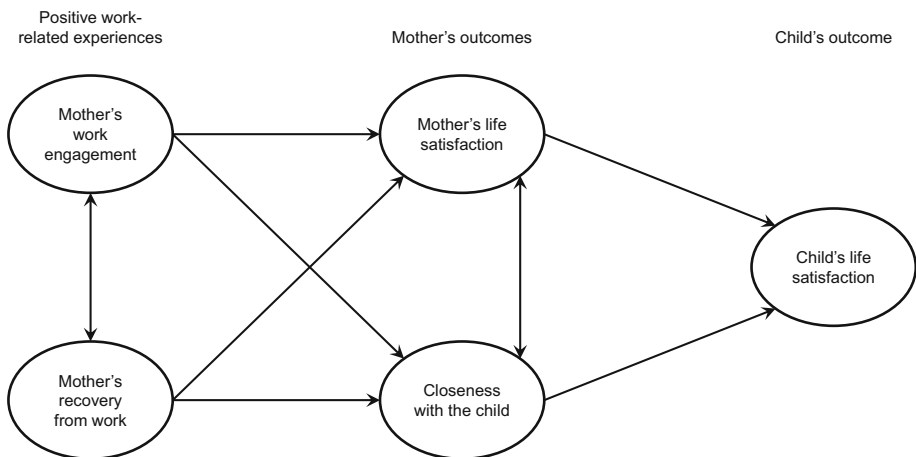


Fig. 1 Theoretical model of mother's life satisfaction and closeness with the child as mediators between mother's positive work-related experiences and child's life satisfaction

2 Method

2.1 Participants

A total of 855 primary school children (465 girls, 390 boys, aged 11–14 years, median age 12 years) participated in the study. The children were recruited from one large town ($n = 674$; about half of the age cohort) and one middle-sized town ($n = 181$; whole age cohort) in Central Finland. Both towns included semi-rural areas with smaller schools. Target schools ($n = 30$) were selected according to their location and size, with the aim of achieving a sufficient sample size and enabling extensive data collections throughout the whole research project. The aim of the larger study was to follow-up students through the transition from primary school to lower secondary school, thus primary schools were selected from areas where all children transfer to particular secondary schools instead of dispersing to different locations. The selection and recruitment of the schools was done in cooperation with the local school authorities. The children came from 56 school classes, ranging in size between seven and thirty pupils ($M = 21.1$, $SD = 4.66$). Five of the classes were combined classes including both fifth and sixth graders. Twenty-eight fifth graders from these classes were also included in the study.

The children's parents were also asked to participate in the study. The invitation to participate was addressed primarily to mothers, but fathers were also given an opportunity to participate. The response rate for the parents was 90.3%. Of the 855 children participating in the study, parents' responses were received much more frequently from mothers ($n = 671$ or 78.5%) than from fathers ($n = 94$ or 11.0%). Seven responses (0.8%) were received from step-parents or other adults living in the same household as the child. Parental questionnaires were not completed for the remaining 83 children. In the present study, only the data from the 671 mothers and their children (367 girls, 304 boys) was used as we wanted to focus on mothers due to their primary role in care-giving in families. Moreover, the sub-sample of fathers was too small to enable reliable comparison between mothers and fathers.

Demographic information for the participating mothers and children is presented in Table 1. The sample was fairly representative of the Finnish general population except that the mothers in the sample were somewhat more educated than 30–54 year old women on average in Finland (Official Statistics of Finland 2015a). Compared to Finnish families with under aged children (for more detail, see Official Statistics of Finland 2015b), married mothers were somewhat overrepresented in the study sample and single mothers underrepresented. Family type was recoded as a dichotomous variable with 1 representing nuclear families (married or co-habiting with children; 77.2% of the mothers) and 0 representing other types of families (blended families, single-parent households, and others; 22.7% of the mothers).

2.2 Procedure

All families were informed about the study and mothers were advised to discuss it with their child. Mothers provided written consent to their children's and their own participation and children's own willingness to participate was also taken into account. Of all families contacted, 73.9% consented to the child's participation. The teachers of the participating classes gave their written consent for the data collections to be done during lessons. The project was duly approved by the ethics committee of the local university.

Table 1 Demographic information on the participants ($n = 671$ mother–child dyads)

	<i>n</i>	%	Range	<i>M</i>	<i>SD</i>
Mother's age			29–56	41.95	5.49
Mother's education					
Comprehensive school	24	3.6			
Upper secondary school	196	29.3			
Bachelor's degree or vocational college	270	40.4			
Master's degree or higher	179	26.8			
Family type					
Nuclear family	518	77.2			
Single-parent household	82	12.2			
Blended family	64	9.5			
Other	7	1.0			
Child's age			10.8–13.8	12.29	0.40
Child's gender					
Girls	367	54.7			
Boys	304	45.3			

Children's data was collected in class on two normal schooldays. Session one lasted 90 min (with a 15-min break in the middle) and session two lasted 45 min. The data collection included an extensive set of measures, including tests of academic skills as well as questionnaires concerning, for example, children's motivation, social relationships and well-being. All tests and questionnaires were administered by two trained researchers. Children's data collection took place in the fall term 2014 (late September to early November). Mothers completed electronic or postal versions of a questionnaire during the same period.

2.3 Measures

2.3.1 Work Engagement

Mothers' work engagement was assessed with three items derived from the Utrecht Work Engagement Scale (Schaufeli et al. 2006), to ensure that the length of the questionnaire was not too demanding for the participants. The three items selected represented three sub-scales of the original UWES scale. The items were "How often do you feel strong and vigorous at work?" (vigor), "How often do you feel happy when you are working intensely?" (absorption), and "How often are you enthusiastic about your job?" (dedication). The items were answered on a seven-point Likert scale (0 = never; 6 = daily). The three dimensions of work engagement, i.e. vigor, absorption, and dedication, as well as single items (used in the present study) behind each sub-dimension have been found to be very highly correlated with each other in a large Finnish validation study of the work engagement scale (UWES-scale) (Seppälä et al. 2009). Therefore, it has been proposed that work engagement is best measured on a one-factor scale capturing all three dimensions (Seppälä et al. 2009). Consequently, the fact that we treated the items of work engagement (one factor containing one well-working item per each sub-scale) can be deemed justifiable. Furthermore, Cronbach's alpha reliability coefficient for the three items was .90,

indicating that the work engagement scale used in this study showed high internal consistency.

2.3.2 *Recovery from Work*

Mothers' recovery from work-related stress was assessed with a question ("How well have you lately recovered from work-related stress after a working day/a shift?"). Answers were given on a five-point Likert scale (1 = clearly worse than usual; 5 = clearly better than usual). Recovery from work has been assessed with a similar single item in earlier Finnish studies and the variable has been found to be predictive in relation to an individual's well-being/health (Kinnunen et al. 2011; Niks et al. 2016). Originally this single-item was derived from the Intershift Recovery subscale of the Occupational Fatigue Exhaustion Recovery scale (Winwood et al. 2005). This sub-scale includes three very similar items (in terms of their content) and for this reason we also considered single-item indicators feasible. Furthermore, we treated recovery from work in our measurement model as a latent factor, which the single-item measure loads on. Technically this was accomplished by giving the single-item a fixed error variance.

2.3.3 *Life Satisfaction*

Both mothers and children were asked to report their life satisfaction using a Finnish version of the Satisfaction with Life Scale (SWLS; Diener et al. 1985). The scale consisted of five items (e.g. "I am satisfied with my life"; "So far I have gotten the important things I want in life") each answered on a five-point Likert scale (1 = completely disagree; 5 = completely agree). Cronbach's alpha reliability coefficient for the five items was .86 for mothers and .85 for children.

2.3.4 *Closeness with the Child*

Mothers were asked to rate their closeness with their children using a five-item closeness with the child subscale of the short Finnish version of the Child Parent Relationship Scale (CPRS; Driscoll and Pianta 2011). This subscale was used as we focused on positively-toned constructs. The closeness with the child subscale assesses parents' perceptions of warmth, affection and open communication in their relationship with their child. The five items (e.g. "I have a close, warm relationship with my child") were answered on a five-point Likert scale (1 = not at all; 5 = completely true). Cronbach's alpha reliability coefficient for the five items was .77.

2.3.5 *Control Variables*

We also used mothers' age, education, family type and child's gender as control variables in our statistical analysis (for categorizing these variables, see above and Table 1). These control variables were chosen because in earlier studies they have been found to relate to various outcomes in children, such as children's well-being and academic performance (e.g. Campbell et al. 1991; Karatzias et al. 2002; McLeod 1998). Control variables were used as we wanted to examine whether the hypothesized relationships (in Fig. 1) are robust and remain significant after controlling for certain background variables. Results without the control variables are available from the authors upon request.

2.4 Analytical Strategy

To evaluate the hierarchical structure of the data as children were nested within school classes, we first calculated intra-class correlations and design effects for the study measures. The intra-class correlation coefficients at classroom level varied from .004 to .08. The design effects varied from 1.04 to 1.87, which was below the suggested cut-point of 2.0 (Hox and Maas 2002; Muthén and Satorra 1995). Hence, it was deemed unnecessary to take clustering of data into account and we proceeded with the analyses using the whole data.

We used structural equation modeling (SEM) to examine the relationships between mother's positive work-related experiences, mother's life satisfaction and closeness with the child, and child's life satisfaction as shown in Fig. 1. First, the factor structure of the latent constructs was examined by testing the hypothesized five-factor measurement model against several alternative measurement models using confirmatory factor analysis (CFA). The alternative models were compared with the five-factor model using the Satorra-Bentler scaled χ^2 difference test. Second, correlations between the latent factors were investigated. In addition, correlations between control variables and the latent factors were also explored. Third, a structural model was estimated to examine predictive associations between the latent constructs via SEM analysis. Control variables were added into the structural model as a final step. Mediation of mother's work-related experiences on child's life satisfaction via mother's life satisfaction and closeness with the child was analyzed using the Bootstrapping procedure to obtain indirect effects and their 95% confidence intervals (MacKinnon et al. 2004). Since distributions of estimates of indirect effects are rarely normal, bootstrapping, which allows calculation of asymmetric confidence intervals, is considered a robust method in testing the mediation effects (MacKinnon et al. 2004).

All models were estimated with maximum likelihood estimation with robust standard errors (MLR). To evaluate model fit we used Chi square values (χ^2), comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR). The cutoff values used in the evaluation of model fit were .95 for CFI and TLI, .06 for RMSEA and .08 for SRMR (Hu and Bentler 1999; Marsh et al. 2004). All analyses were performed using the Mplus7.31 statistical program (Muthén and Muthén 1998–2012).

3 Results

3.1 Preliminary Analyses: Measurement Model via CFA

In the measurement model, a model with five factors was expected to be confirmed: mother's work engagement (three items), mother's recovery from work (one item), mother's life satisfaction (five items), closeness with the child (five items), and child's life satisfaction (five items). The latent factor for recovery from work with only one measured item was created by fixing the residual variance of the item to 0.25. The fit of the five-factor measurement model was good: $\chi^2(143) = 277.44, p < .001$; CFI = .97; TLI = .97; RMSEA = .04; SRMR = .04. All standardized factor loadings were above .40 and were significant at the .001 level (detailed results on CFA are available from the authors upon request). No modifications were needed.

Several alternative factor models were also tested, including two- and three-factor models with mothers' measures loading on one general factor, or on one work-related and one well-being factor (including mother's life satisfaction and closeness with her child), but these models did not fit to the data as well as the five-factor measurement model: χ^2 for the alternative models ranged from 302.39 to 1797.81 ($p < .001$ for all models); CFI from .64 to .97; TLI from .60 to .96; RMSEA from .04 to .13; and SRMR from .05 to .11. The results of the Satorra-Bentler scaled χ^2 difference test showed that the expected five-factor model fitted the data better than: (1) a two-factor model, in which mothers' measures loaded on one factor ($\Delta\chi^2 = 947.19$, $\Delta df = 8$, $p < .001$); (2) a three-factor model, in which work engagement and recovery from work loaded on one factor and mother's life satisfaction and closeness with the child on another ($\Delta\chi^2 = 524.04$, $\Delta df = 6$, $p < .001$); or (3) a four-factor model, in which work engagement and recovery from work loaded on one factor and mother's life satisfaction and closeness with the child on two separate factors ($\Delta\chi^2 = 25.65$, $\Delta df = 3$, $p < .001$). Consequently, the five-factor model served as a basis for testing the hypotheses with subsequent SEM analysis as reported in Sect. 3.2.

Inter-correlations between the latent factors are presented in Table 2 and factor loadings in Fig. 2. In addition, Table 2 shows correlations between control variables and the latent factors. Mother's work engagement and recovery from work showed significant correlations with her life satisfaction and closeness with her child. Furthermore, mother's life satisfaction and closeness with her child were significantly related to child's life satisfaction. Mother's recovery from work also showed a small, but significant correlation with child's life satisfaction.

3.2 Testing the Hypothesized Model: SEM Analysis

A structural model was next estimated according to the hypothesized relationships between the latent constructs (see Fig. 1). The fit of the hypothesized model was good:

Table 2 Inter-correlations between the latent factors and control variables ($n = 671$ mother-child dyads)

	1	2	3	4	5	6	7	8
Mother's measures								
1. Work engagement	–							
2. Recovery from work	.44***	–						
3. Life satisfaction	.41***	.43***	–					
4. Closeness with child	.23***	.15*	.23***	–				
Child's measures								
5. Life satisfaction	.05	.11*	.23***	.17***	–			
Control variables								
6. Mother's age	.05	.08	–.04	.08	–.03	–		
7. Mother's education	.11*	.00	.17***	.13**	.09*	.17***	–	
8. Family type ^a	.08	.15**	.15***	.06	.09*	.09*	.11**	–
9. Child's gender ^b	–.04	–.09	.00	–.19***	–.01	.04	–.02	.10*

^a Family type: 1 = nuclear family, 0 = other type

^b Gender: 1 = boy, 0 = girl

* $p < .05$; ** $p < .01$; *** $p < .001$

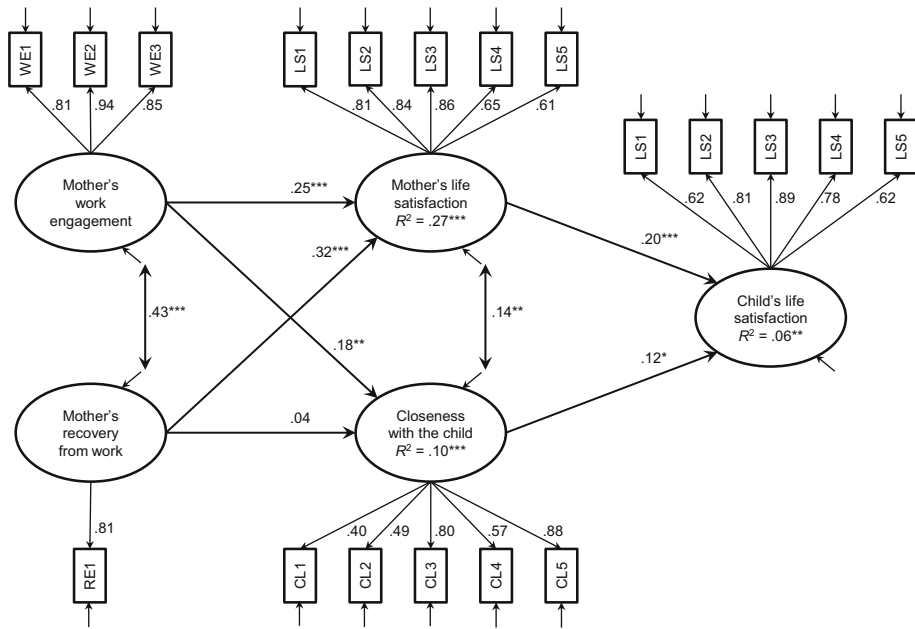


Fig. 2 Structural equation model of mother's life satisfaction and closeness with the child as mediators between mother's positive workrelated experiences and child's life satisfaction (standardized estimates). *N* = 667. *WE* work engagement, *LS* life satisfaction, *RE* recovery from work, *CL* closeness with the child. Covariates are included in the model but omitted from the figure. * *p* < .05; ** *p* < .01; *** *p* < .001

$\chi^2(145) = 279.97, p < .001$; CFI = .97; TLI = .97; RMSEA = .04; SRMR = .04. No modifications were needed. In the final step, the effects of mother's age and education, family type, and of child's gender were controlled for by adding them into the model as control variables. Relationships were estimated between mothers' control variables and mother-rated latent factors, likewise between child's gender and child-rated latent factors: Mother's age, education, and family type were allowed to relate to mother's work engagement, recovery from work, life satisfaction and closeness with the child. Child's gender was added as an explaining variable of mother's closeness with her child and of child's life satisfaction.

The results of the final SEM model, $\chi^2(207) = 412.68, p < .001$; CFI = .96; TLI = .95; RMSEA = .04; SRMR = .04, after adjusting for the effects of the control variables described above, are presented in Fig. 2. For the sake of simplicity, the control variables are not shown in the figure. It is noteworthy that adding the control variables did not change the hypothesized paths (Fig. 2), all of which remained significant (results without the control variables available from the authors upon request).

The results showed that mother's higher work engagement and recovery from work were significantly related to her life satisfaction. Mother's work engagement was also positively related to closeness with her child. However, recovery from work did not relate to closeness with the child. Overall, these findings suggest that mothers' positive work-related experiences, work engagement and recovery from work, had positive implications for non-work domains in terms of mothers' greater life satisfaction and closeness with her child (except for recovery from work).

Mother's life satisfaction and closeness with the child were moreover positively related to child's life satisfaction. Specifically, the role of mother's life satisfaction and closeness with the child as mediators in the relationship between mother's work-related experiences, that is, work engagement and recovery from work, and child's life satisfaction was supported by significant indirect effects obtained with the Bootstrapping procedure: Child's life satisfaction was indirectly explained by mother's work engagement (standardized indirect effect = .05, 95% confidence interval .02 to .08) and recovery from work (standardized indirect effect = .06, 95% confidence interval .02 to .10) via mother's life satisfaction. The indirect effect of work engagement on child's life satisfaction was also marginally significant via mother's closeness with her child (standardized indirect effect = .02, 95% confidence interval $-.001$ to .05), whereas the effect of recovery from work via mother's closeness with her child was not significant (standardized indirect effect = .004, 95% confidence interval $-.02$ to .02). Furthermore, we found that direct effects from mother's work engagement ($p = .120$) and recovery from work ($p = .580$) on child's life satisfaction were both non-significant, thereby lending additional support to the mediator model.

4 Discussion

4.1 Summarizing the Aim and Main Findings

The present study is among the first to examine whether mother's positive work-related experiences, such as work engagement and recovery from work, relate to her child's life satisfaction indirectly via mother's perceived life satisfaction and closeness with her child. Earlier studies in this field have investigated whether and how parents' negative work-related experiences, such as job stress and strain, relate to children's well-being and behavioral problems (e.g. Crouter and Bumpus 2001; Goodman et al. 2011; Perry-Jenkins et al. 2000; Repetti and Wood 1997), whereas the effects of parents' positive work-related experiences on children have been less often studied. The theoretical underpinnings for the study hypotheses were derived from the spillover and crossover theories on positive work–family interface (e.g. Bakker et al. 2009, 2013; Bakker and Demerouti 2013; Kinnunen et al. 2013; Westman 2001). To summarize, the results showed that mothers' work engagement and recovery from work were related to children's life satisfaction indirectly via the studied two mediators, that is, via mothers' life satisfaction and closeness with the child. However, there were also some scale-based differences in these relationships.

4.2 The Spillover Hypothesis was Partly Supported

Specifically, the *spillover hypothesis* (H1), which suggested that mother's work engagement and recovery from work are positively associated with mother's own life satisfaction and closeness with her child, was partially supported by the results of the SEM analysis after adjusting for the control variables (family type, mother's age, mother's education, and child's gender). We found that mothers' work engagement was related to their perceptions of closeness with their children and mothers' life satisfaction. However, mother's recovery from work was linked only to her life satisfaction, but not to closeness with her child. This latter finding was unexpected and indicates that mothers' recovery from work may be linked to their life satisfaction, but not to positive perceptions of parenting operationalized

here via closeness with the child. Thus, in the present study positive work-to-family spillover effects were partly different for work engagement and recovery from work. Both work engagement and recovery from work as well as mother's life satisfaction and closeness with her child are *qualitatively* different phenomena, which may partly explain this finding. It is also possible that closeness with the child mediates the linkages between positive work-related experiences and life satisfaction (a first mediator mother's life satisfaction, a second mediator mother's closeness with her child) in relation to child's life satisfaction, but we did not examine causal ordering between the mediators.

Overall, the above findings are consistent with the spillover model on work–family interface, indicating that parents' work-related experiences, also the positive ones studied here, are likely to spill over into non-work domains (Bakker and Demerouti 2013; Greenhaus and ten Brummelhuis 2013; Kinnunen et al. 2014; Lambert 1990), concerning parallel positive experiences in other life domains. This spillover occurs at a within-individual level, that is, within the same person. Consequently, we were able to show that mothers' positive work-related experiences may well benefit their other life domains as has been underlined in theories on positive work–family interface, such as in work–family enrichment theory (Greenhaus and ten Brummelhuis 2013; Greenhaus and Powell 2006). However, the idea that work may have positive rather than negative effects among working mothers is not totally new, and earlier studies have also documented that mothers' employment brings benefits for their children (for reviews, see Menaghan and Parcel 1990; Perry-Jenkins et al. 2000). Here we showed that this also concerns mothers' work engagement and recovery from work.

4.3 The Crossover Hypothesis was Partly Supported

The *crossover hypothesis* (H2) proposed that that mother's life satisfaction and closeness with her child mediate the relationship between mother's work engagement and recovery from work and child's life satisfaction (on crossover, see Bakker et al. 2009, 2013; Bakker and Demerouti 2013; Kinnunen et al. 2013; Westman 2001; Westman et al. 2009). Viewed theoretically, we combined the spillover and crossover models (Bakker et al. 2009, 2013; Bakker and Demerouti 2013) and the latter was studied in a mother–child dyad where mother's life satisfaction and closeness with her child were anticipated to function as mechanisms explaining the crossover relationships between mother's positive work-related experiences and child's life satisfaction. The crossover hypothesis was partly supported; mediation analysis confirmed the hypothesized spillover-crossover model after controlling for the role of background factors (family type, mother's age, mother's education and child's gender). Mothers' work engagement and recovery from work were thus indirectly and positively linked to their children's life satisfaction via mothers' life satisfaction and closeness with the child (for work engagement only) as mediators. It is likewise noteworthy that the direct relationships from mother's work engagement and recovery from work to her child's life satisfaction were non-significant. However, it needs to be pointed out that mother's recovery from work was linked to her child's life satisfaction only via mother's life satisfaction, not via closeness with her child. This implies that work engagement captures more variable crossover effects, compared to recovery from work, from mothers to children occurring both via mothers' overall well-being and relationship quality.

Altogether these findings lend support to the spillover-crossover model (Bakker et al. 2009, 2013; Bakker and Demerouti 2013), which has not so far been tested in a mother–child dyad regarding positive work-to-family crossover effects. However, crossover studies

in marital partners, such as studying work-to-family crossover in a marital dyad, have shown that positive work-related experiences, for example, work engagement, do indeed transmit between marital partners (Bakker et al. 2005, 2013; Danner-Vlaardingelbroek et al. 2013; Rodriguez-Munoz et al. 2014). Our findings reveal that such positive work-to-family crossover effects may also occur from mothers to their children.

Generally our findings are also explicable beyond specific theories on work–family interface. First, resource-driven theories on resource accumulation, for example, COR theory (Hobfoll 1989, 2002) emphasize that positive experiences/resources from different life domains (work, non-work) tend to accumulate, forming resource and gain spirals. This help to understand why positive spillover effects are possible, seen here as positive work-to-family spillover effects at an intra-individual level. Second, emotional contagion theory (Hatfield et al. 1994), in turn, explains the positive crossover effects found in this study. Accordingly, emotions and experiences, also the positive ones, are highly contagious in close relationships, e.g. between mothers and children, causing ripple effects (Aunola et al. 2015b; Clair 2012; Hoy et al. 2013; Larson and Almeida 1999) Thus, mothers' positive work-related experiences, like work engagement and recovery from work, do not only spill over into her own life satisfaction and parenting experiences (closeness with the child) but also to her child's life satisfaction via emotion contagion crossover. Mothers' life satisfaction and perceptions of parenting via perceived closeness with their children are strong resource-driven emotions in adulthood, which are very likely reflected in their children.

4.4 Limitations

The present study has a few noteworthy limitations. First, the design was cross-sectional and thus the directions between the relationships (in Fig. 1) were only theoretically formulated. It is therefore possible that child's life satisfaction affects mother's work-related experiences via mother's life satisfaction, and not vice versa, as we expected. A full panel design measuring all predictors, mediators and outcomes three or more times would enable a more reliable analysis of causality.

Second, we focused only on mothers as there were too few fathers in our data to allow gender-specific analysis in the SEM framework based on latent factors. However, the relationships could be different in a father–child dyad, and this issue deserves more attention in future. Overall fathers continue to be under-represented in work–family research.

Third, we sampled Finnish mothers and children, and it is uncertain whether the relationships found here would be similar in other cultures, where women's labor market participation differs, for example, where part-time work is more common among women. Therefore our findings need to be replicated in countries where mothers' position in working life differs from the situation in Finland.

Fourth, we do not know how the age of the children may have affected the associations studied. The age of the children may moderate the linkages found here, and this possibility merits more attention in future research. One related point is that very young children cannot be examined with questionnaires as was done here, and consequently other data collection methods, for example, observation could be utilized.

Fifth, mothers' recovery from work was measured with a single item, which is psychometrically not the optimal solution. However, this one-item question has been used before in recovery studies and it has been shown to be predictive (Kinnunen et al. 2011; Niks et al. 2016). However, subsequent studies should broaden the conceptualization of recovery, e.g. by unravelling what types of recovery experiences (e.g. mental detachment

from work, relaxation; see Fritz et al. 2010; Sonnentag and Fritz 2007) are most beneficial in a parent-to-child crossover relationship.

Finally, our data from mothers was very limited concerning their perceptions of job characteristics, which we did not measure as the focus of our research project was not on work. For this reason, we had no information on mothers' job resources (e.g. job control, social support at work), which are known to be crucial for occupational well-being (see e.g. Halbesleben 2010; Kinnunen et al. 2011; Mauno et al. 2010). Consequently, future spillover and crossover studies (in a work-to-family direction) should cover perceived job characteristics, that is, both job resources and job demands.

4.5 Implications

The present findings also have certain notable implications. As our starting point was to examine whether two positive work-related experiences of the mothers, work engagement and recovery from work, were related to child's life satisfaction, we focus on how to enhance these experiences among working mothers.

Research on the predictors of *work engagement* reveals that job resources, such as job control, that is, having freedom as to how and when work is done and having decision latitude in the organization, social support from managers/co-workers, challenging tasks and growth opportunities at work, are all good promoters of work engagement (Mauno et al. 2010; Schaufeli and Salanova 2010). These job resources should be increased in all workplaces to ensure flourishing and engaged employees, also among those with family responsibilities. Indeed, the crucial role of job autonomy and challenging job tasks and their positive crossover effects from working parents to their children have long been acknowledged (Perry-Jenkins et al. 2000). Furthermore, family-friendly organizational culture, including managers' emotional and instrumental work-family support, norms of acceptable working hours and not encouraging long hours, and sanction-free use of work-family benefits, such as parental leave or part-time work, benefit work engagement (Mauno et al. 2011; Shockley et al. 2013). These family-friendly arrangements may be particularly beneficial for working mothers as they are still chiefly responsible for children's welfare.

Psychological research on *recovery from work*, in turn, shows that certain specific recovery strategies, for example, detaching oneself mentally from work while not working, ensure good off-the-job recovery during free time and subsequently better employee well-being and health (Demerouti et al. 2013; Fritz et al. 2010; Sonnentag 2001; Sonnentag and Fritz 2007), which, in turn, may have positive reflections on other family members, as this study showed. Accordingly, for mothers, and possibly also for fathers, it is crucial to leave work behind while not working, as this may also have far-reaching positive effects on their children. It should be recalled that although parenting may constitute an extra stressor for working parents, it may also protect parents from work strain as recovery from work often occurs during family time (Demerouti et al. 2013). Thus, family activities and family time may prevent parents from working too hard, and naturally segmenting work and family life. Furthermore, for parents, it is vital also to recover from work during on-the-job time, for example during lunch breaks and other micro breaks, because such breaks may help to replenish resources for family time after work.

4.6 Conclusions

The results of this study, which was based on a Finnish sample of working mothers and their adolescent children ($n = 671$ mother-child dyads), showed that mothers' work

engagement and recovery from work were related to their children's life satisfaction indirectly via two mediators, namely mothers' life satisfaction and closeness with their children. However, there were also some scale-based variations in these relationships as work engagement and recovery from work showed different relationships with two mediators. Overall, the results supported the spillover and crossover models on positive work-to-family interface. Job resources, such as job control, social support at work, are vital for work engagement whereas mental detachment from work while not working is an essential resource for successful recovery from work. These resources should be promoted among working mothers.

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