The relationship between work-life balance, work engagement and participation in employee development activities: A moderated mediation model

Master Thesis

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Project period:	January – August 2016
Project theme:	Why is organizing HRD so problematic? HRD processes and antecedents.

Abstract

This study examines the mechanisms through which work-life balance leads to participation in employee development activities. On the basis of the literature it was expected that there would be a positive relationship between work-life balance and participation in employee development activities and that this relationship would be partially mediated by work engagement. Furthermore, it was proposed that the positive association between work-life balance and work engagement would be moderated by leader-member exchange, such that it would be stronger for higher than for lower levels of leader-member exchange. The hypotheses were tested in a cross-sectional study. A total of 116 participants in eight organizations in the Netherlands completed an online or hard-copy questionnaire. No support was found for either the mediating effect of work engagement or for the moderating effect of leader-member exchange. However, the relationship between work-life balance and work engagement was significant. Additional analyses showed that employees with a high level of work-life conflict were less engaged in their work and were more likely to participate in employee development activities. Further research needs to be done to gain more insight into alternative job-related or personal resources that might be relevant to the association of work-life balance and participation in employee development activities.

Keywords: work-life balance, participation in employee development activities, work engagement, leader-member exchange, work-life conflict.

Introduction

For the last few decades, employees have been struggling with a growing number of competing demands between their work and private lives. These demands are caused by globalization, technological advances, workplace changes, and demographic changes (Beauregard & Henry, 2009; Gregory & Milner, 2009; Kinnunen, Rantanen, Mauno, & Peeters, 2014). The European Working Conditions Survey of 1991 to 2010 showed that in Europe about 20% of the employees had difficulty balancing their paid work and private lives (Stichting Arbeidsmarkt Ziekenhuizen, 2014). This leads to high costs for individual employees as well as for organizations (Allen, Herst, Bruck, & Sutton, 2000). The Netherlands achieved a more positive score compared to Europe since the Netherlands was appointed as the third best country regarding work-life balance (Business Culture, 2014; OECD Better Life Index, n.d.).

Although work-life balance has received much attention from scholars and practitioners, there are still some gaps in the existing literature since the consequences of work-life balance and the related work-life balance policies and practices have not been fully identified (Beauregard & Henry, 2009). The current literature has focused mainly on individual outcomes such as satisfaction, physical and psychological health, and well-being (Baltes, Briggs, Huff, Wright, & Neuman, 1999; Reindl, Kaiser, & Stolz, 2011; Whittington, Maellaro, & Galpin, 2011), and on organizational outcomes such as organizational commitment, individual performance, and reduced turnover intentions (Bloom & van Reenen, 2006; Forsyth & Polzer-Debruyne, 2012; Friedman & Greenhaus, 2000). Consequently, little is known about whether and how work-life balance contributes to the individual development of employees, which is a primary focus of Human Resource Development (HRD). It is interesting to examine this relationship since the mechanisms through which employees' work-life balance affects their own behaviour and the performance of organizations are still unclear and have not yet been fully established (Allen, 2001; Beauregard & Henry, 2009).

In recent years, a great deal of attention has been paid to HRD in the human resource literature (Delahaye, 2015; Swart, Mann, Brown, & Price, 2012). HRD is an essential theme in organizations because new ideas and suggestions for innovation, quality, continuous improvements, and other necessary inputs that are needed to compete in a highly competitive economy come from people themselves (Swart et al., 2012). HRD can be defined as "a process for developing and unleashing human expertise through organization development and personnel training and development for the purpose of improving performance"

(Swanson, 1995, p. 208). HRD helps employers ensure that employees are provided with relevant up-to-date knowledge and skills (Torraco & Swanson, 1995). Whether employees gain this relevant expertise depends to a large extent on the employees themselves by which they are seen as key actors in organizing HRD (Poell & van der Krogt, under review). The focus of this thesis is employee participation in development activities. It is important that employees participate in development activities because their continuous learning and ongoing development is an essential part of an organization's ability to adapt to the rapidly changing economy and society (Hurtz & Williams, 2009; Maurer, Weiss, & Barbeite, 2003; Swanson & Holton, 2001).

The aim of the current study is to respond to this gap in the literature by examining the relationship between work-life balance and participation in employee development activities. Examining this relationship can be useful since employees' interpretations regarding structures such as organizational climate and the primary work process affect their individual development (Poell & van der Krogt, under review). It is also possible that employees' interpretations regarding work-life balance affect their development process.

Employees who perceive a balance between their work and private lives are likely to experience positive emotions and attitudes such as engagement (Beauregard & Henry, 2009; Reindl et al., 2011; Shankar & Bhatnagar, 2010). In turn, these positive emotions can broaden employees' minds and build their enduring personal and social resources (Fredrickson, 2003). According to Schaufeli, Bakker, and van Rhenen (2009), engagement can be a predictor of increased participation in learning opportunities. Therefore, work engagement is expected to act as a mediator in the relationship between work-life balance and participation in employee development activities. Furthermore, leader-member exchange (LMX) is included as a moderator since the exchanges between employees and their leaders can strengthen the positive relationship between work-life balance and work engagement. This expectation is based on previous research which has suggested that the relationship between work-life balance and employees' behaviours, employees' attitudes, and organizational performance is moderated by managerial support (Beauregard & Henry, 2009), which is related to LMX.

To clarify the direct relationship between work-life balance and participation in employee development activities, this study uses the social exchange theory (Blau, 1964) and the perceived organizational support theory (Eisenberger, Huntington, Hutchinson, & Sowa, 1986). This study also draws on the Job Demands-Resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), the social exchange theory, and the broaden-and-build theory of positive emotions (Fredrickson, 2001) to explain how work engagement

mediates the relationship between work-life balance and participation in employee development activities. Next, this study investigates whether LMX strengthens the positive relationship between work-life balance and work engagement. The LMX theory (Dansereau, Graen, & Haga, 1975) is used to clarify how LMX affects this process.

If there is evidence for both the mediating effect of work engagement and the moderating effect of LMX, organizations could develop and implement policies and practices in order to increase the level of work engagement and improve the quality of LMX. This might enhance employees' participation in employee development activities which in turn could lead to individual and organizational effectiveness, performance, and innovation (Jacobs & Washington, 2003; Swanson & Holton, 2001). Consequently, organizations could improve their competitive advantage.

In summary, this study examines a moderated mediation model, where the relationship between work-life balance and participation in employee development activities is mediated by work engagement, and the relationship between work-life balance and work engagement is moderated by LMX. This leads to the following research question:

To what extent does work engagement mediate the relationship between work-life balance and participation in employee development activities, and to what extent does leader-member exchange moderate the effect of work-life balance on work engagement?

Theoretical framework

Work-life balance

The definition of work-life balance can be described as the process in which employees seek to combine their paid jobs with caring responsibilities in order to create a "balance" (Crompton & Lyonette, 2006). When working to achieve this balance, employees must struggle with various pressures and tensions such as role expectations, job requirements, and group and organizational norms (Crompton & Lyonette, 2006; Voydanoff, 2005).

Previous research has shown that work-life balance entails employees' behaviours, attitudes, well-being, and organizational effectiveness (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005). An imbalance between work and private life can cause absenteeism, dissatisfaction, and low productivity (Edwards & Rothbard, 2000; Rice, Frone, & McFarlin, 1992; Whittington, et al., 2011). By contrast, employees who are able to achieve this balance can enhance their well-being since they are better capable to effectively allocate their energy and time to the demands they experience (Whittington et al., 2011). Furthermore, based on the spillover theory (Edwards & Rothbard, 2000; Lambert, 1990), researchers have suggested that

both the negative effects of work-life imbalance and the positive effects of work-life balance are carried over by employees from their work to their private lives and vice versa. In turn, these spillover effects cause a similarity of experiences in both of these life domains (Kinnunen et al., 2014; Michel & Clark, 2011). Therefore, organizations are forced to suppress the demands that individuals experience by implementing work-life policies and practices which support employees to fulfil their employment-related as well as personal-related responsibilities (Baral & Bhargava, 2010; Beauregard & Henry, 2009; Gregory & Milner, 2009). As organizations seek to reduce employees' work-life conflicts, they endeavour to be an attractive employer for new staff members in order to improve their organizational performance (Beauregard & Henry, 2009). Moreover, employees are also responsible for their own work-life balance. In order to decrease conflict and enhance balance, employees can use coping strategies (Byron, 2005), which can be defined as an "individual's cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141). Previous studies have shown that active problem-focused coping, whereby employees aim to reduce stressful situations (e.g. time-management), and resource-increasing coping, whereby employees try to learn from difficult situations, find benefits and use proactive/future-oriented coping (e.g. proactive negotiations with one's supervisor or spouse and planning one's work week), are beneficial in reducing work-life conflicts and increasing work-life balance (Byron, 2005; Mauno, Kinnunen, Rantanen, Feldt, & Rantanen, 2012; Neal & Hammer, 2007).

When employees are able to balance their work and private lives, it can have various consequences for both employees and employers. Research has suggested that when employees experience work-life balance, it results in improved job and overall satisfaction (Baltes et al., 1999; Reindl et al., 2011), higher levels of commitment to the organization (Friedman & Greenhaus, 2000; Goldberg, Greenberger, Koch-Jones, O'Neil, & Hamill, 1989; Roehling, Roehling, & Moen, 2001), and reduced turnover intentions (Forsyth & Polzer-Debruyne, 2012). Beyond these results, employers who support employees' work-life balance can also benefit in terms of recruitment advantages and employer branding (Harrington & Ladge, 2009). All in all, work-life balance can influence employees' behaviour and attitudes, which in turn positively affect organizations.

Participation in employee development activities

As organizations are confronted with globalization, technological innovations and other rapid changes, understanding employees' decision-making regarding their own learning and development process becomes increasingly important (Maurer, Pierce, & Shore, 2002). Moreover, employees' active participation is an important condition for achieving meaningful learning (Noe & Wilk, 1993). There are various individual and organizational antecedents for participation in development activities. Examples of antecedents on the individual level are employees' attitudes and beliefs regarding development activities, employees' motivation to learn, job satisfaction, and support by managers (Kyndt & Baert, 2013; Noe & Wilk, 1993; Noe, Wilk, Mullen, & Wanek, 2014). On the other hand, organizational antecedents include strategy, climate, and pay system (Noe et al., 2014).

Previous research has generally conceptualized traditional employee development activities as ongoing education through courses, seminars, workshops, training programs, and other formal development activities (London, 1989; Noe & Wilk, 1993). Throughout this thesis, the four-dimension taxonomy of development activities of Noe, Wilk, Mullen, and Wanek (1997) is adopted. According to Noe et al. (1997), participation in employee development activities consists of employee assessment, on-the-job experiences, formal courses and programs, and professional relationships. The first component, employee assessment, includes the assessment of individual employees and techniques for performance appraisal which both contribute to improved insights into work-related strengths and weaknesses of employees and their state of personal or professional development. On-the-job experience is the second component and comprises techniques such as job enlargement, job rotations, and promotions. These techniques contribute to the enlargement of employees' knowledge and skills. The third component, formal courses and programs, includes educational programs and short courses that are designed to expand employees' knowledge and skills in specific areas. The last component, professional relationships, covers work relationships, such as coaching and mentoring, in which an experienced employee provides guidance and professional development to a less experienced employee (Hurtz & Williams, 2009). The four types of development activities of Noe et al. (1997) do not solely focus on formal activities but also on other aspects, such as informal activities, career development and activities for improvement of employees' current jobs, and long-term personal effectiveness. This approach can be characterized as a wider perception of contemporary HRD.

When employees have an active attitude that allows them to learn and apply new knowledge and skills, it can be valuable for organizational job performance (Bakker,

Demerouti, & ten Brummelhuis, 2012). Previous research has revealed that employee development leads to increased productivity (Harrold, 2000; Jacobs & Washington, 2003), overall customer satisfaction (Tafleur & Hyten, 1995), and employability (van der Heijden, Boon, van der Klink, & Meijs, 2009). In conclusion, employee development plays an important role in achieving and maintaining employee effectiveness in organizations (Tansky & Cohen, 2001).

Work-life balance and participation in employee development activities

Although the relationship between work-life balance and outcomes such as organizational citizenship behaviour, improved job-related attitudes, and improved productivity has been examined (Beauregard & Henry, 2009), the relationship between work-life balance and employees' participation in employee development activities has not been extensively investigated. This means that there is little evidence that employees who experience work-life balance are more likely to participate in employee development activities. However, previous studies have examined the relationship between work-life balance practices and employee behaviours and attitudes (Lambert, 2000). The social exchange theory (Blau, 1964) and the perceived organizational support theory (Eisenberger et al., 1986) can serve as a theoretical foundation for the relationship between work-life balance practices and participation in employee development activities. These theories assume that when organizations provide work-life balance practices and tools, employees feel supported, which might lead to the enhancement of positive attitudes towards the organization. In addition, it can also promote employees' participation and initiative since they would feel an obligation to make more effort in return for extra benefits (Lambert, 2000). A serious weakness with this argument, however, is that it suggests that participation in employee development activities is an obligation of the employee to the organization. The fact that employees participate in development activities if they see the benefits and utility of these activities is also an important condition for employees to engage in them (Poell & van der Krogt, under review). In addition, employees' attitudes towards learning and development can also affect the way they respond to offered learning opportunities. Employees with positive attitudes towards development are more likely to participate in learning opportunities such as training (Hodkinson et al., 2004; Kyndt, Michielsen, Nooten, Nijs, & Baert, 2011).

Another explanation for the relationship between work-life balance and participation in employee development activities is based on the research of Sonnentag (2003). This research has revealed that employees' day-level recovery predicts their day-level pursuit of

learning, which includes both an active search for and engagement in learning opportunities. Based on these previous studies, which share a common focus on the relationship between work-life balance and participation in employee development activities, the following hypothesis is stated:

Hypothesis 1: Work-life balance is positively related to participation in employee development activities.

Work engagement

Commitment, involvement, energy, dedication, passion, and enthusiasm are concepts that are frequently used when practitioners and scholars talk about engagement (Bakker et al., 2012; Schaufeli, 2013). Despite the fact that researchers have a clear understanding of the concept of engagement, there is a lack of consensus on the precise definition of engagement (Schaufeli, 2013). Throughout this thesis, work engagement is defined as "a positive, fulfilling, work related state of mind that is characterized by vigour, dedication, and absorption" (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 74). The first element of work engagement, vigour, can be described as high energy and mental resilience at work. Employees with vigour are willing to invest effort in their work. When they face difficulties they are able to persevere. The concept of dedication refers to strong work involvement. Dedicated employees experience pride, enthusiasm, inspiration, challenge, and a sense of significance (Schaufeli, Bakker, & Salanova, 2006). The last element, absorption, involves full concentration and immersion in work. These employees experience a flow in which they can lose track of time and are not easily distracted (Schaufeli, 2013).

Management can affect employees' work engagement since employees' reactions to organizational structures, policies, and practices influence the extent to which they experience engagement. When employees enjoy their jobs, they convert this enjoyment into more effective action. Engaged employees are able to invest in problem solving, seek connections with people, and try to develop innovative services (Bakker & Leiter, 2010). Because it can affect the way employees organize their work and fulfil their tasks, work engagement can be beneficial for both individuals and organizations (Demerouti & Cropanzano, 2010).

Work-life balance and work engagement

Research on work engagement as an outcome of work-life balance is minimal and there is little evidence that employees with a high level of work-life balance experience a high

level of work engagement. However, there has been some research on the relationship between work-life balance and employees' well-being and quality of life (Greenhaus, Collins, & Shaw, 2003). Previous studies have assumed that employees who perceive a balance between work and their private lives experience low levels of stress in both roles they fulfil (Marks & MacDermid, 1996). One explanation of this could be that these employees fulfil roles that are salient to them. In addition, these employees are better able to allocate their energy and time to the demands they experience, which in turn leads to increased well-being (Whittington et al., 2011). Furthermore, as previously mentioned, work-life balance can also lead to job satisfaction and organizational commitment (Reindl et al., 2011).

Previous studies have also examined the relationship between work-life balance practices, which are related to work-life balance, and engagement. The relationship between work-life balance practices and work engagement can be explained using the social exchange theory (Blau, 1964). This theory states that when employers provide care and opportunities for their employees, these employees will show certain attitudes and behaviours. More specifically, when employees receive favourable treatment they reciprocate, which in turn leads to beneficial outcomes for both employers and employees (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002). Applying the social exchange theory to work-life balance, when employees feel that organizations help them balance their work and family demands, they probably feel cared for and supported by their organization. Following the norm of reciprocity, it can be said that employees feel obligated to reciprocate by showing more favourable attitudes and behaviours at work. These employees respond with increased positive feelings regarding their job and the organization (Aryee, Srinivas, & Tan, 2005). Similarly, when employees are provided with particular resources by their employer, they respond with a certain degree of engagement (Saks, 2006). The results of a study by Richman, Civian, Shannon, Hill, and Brennan (2008) has revealed that supportive work-life policies and perceived flexibility are positively related to employee engagement. In addition, a study by Sonnentag (2003) has suggested that recovery, which can be seen as a part of work-life balance, can contribute to employees' work engagement. Recovered employees are more willing and able to invest effort and show more resilience than employees who have not been recovered. This means that recovery might have a positive effect on employees' vigour. Recovery can also influence dedication since recovered employees possess enough resources to become strongly involved in their work. Finally, recovery can also have a positive effect on the last element of work engagement, absorption. Recovered employees are able to fully concentrate on their tasks and to ignore irrelevant signals (Sonnentag, 2003).

Based on these studies that focus on the relationship between work-life balance and work engagement, the following hypothesis is stated:

Hypothesis 2: Work-life balance is positively related to work engagement.

Work engagement and participation in employee development activities

Theoretically, the relationship between work engagement and participation in employee development activities can be illustrated by the broaden-and-build theory of positive emotions (Fredrickson, 2001). Work engagement is often associated with employees' positive emotions (Bindle & Parker, 2010). According to the broaden-and-build theory, experiencing positive emotions "broaden[s] people's momentary thought-action repertoires, which in turn serves to build their enduring personal resources, ranging from physical and intellectual resources to social and psychological resources" (Fredrickson, 2001, p. 218). For example, joy can expand personal resources by motivating employees to be creative, while interest encourages employees' willingness to gain new information, to explore new situations and, to grow (Fredrickson, 2003; Fredrickson & Losada, 2005). In other words, employees' positive emotions temporarily broaden exploratory behaviours, such as creativity and flexibility, which results in learning opportunities (Fredrickson, 2003). In support of the broaden-and-build theory, Xanthopoulou, Bakker, Demerouti, and Schaufeli (2009) have shown that job resources lead to positive emotions. In turn, these positive emotions have a positive influence on the personal resources of employees.

Existing research has suggested that work engagement is positively related to performance and active learning (Bakker et al., 2012). The focus and energy that are closely linked to work engagement ensure that employees bring their full potential to their jobs. In addition, work engagement also stimulates employees' extra role behaviours since these engaged people develop new knowledge, respond to new opportunities, and invest more effort in the organization's community through volunteering, mentoring, and attentiveness to their colleagues (Leiter & Bakker, 2010).

Based on the previous reasoning, this study suggests the following hypothesis:

Hypothesis 3: Work engagement is positively related to participation in employee development activities.

Work engagement as a mediator between work-life balance and participation in employee development activities

The current study assumes that work-life balance is positively related to work engagement and in turn that work engagement is positively related to participation in employee development activities. This implies that work engagement mediates the relationship between work-life balance and participation in employee development activities. A theoretical explanation for the mediating role of work engagement can be provided by the Job-Demands Resources (JD-R) model (Demerouti et al., 2001). The JD-R model assumes that job characteristics affect employees' work attitudes (Bakker & Demerouti, 2007). These job characteristics can be classified as either job demands or job resources. Job resources comprise organizational, social, psychological, and physical components of the job that contribute to the achievement of job requirements and encourage development, learning, and personal growth (Bakker & Demerouti, 2007; de Jonge, Demerouti, & Dormann, 2014). The motivational process underlies the JD-R model; it assumes that job resources have motivational potential, which in turn result in high work engagement and improved organizational performance (de Jonge et al., 2014). This means that resources such as social support contribute to work engagement. Investments in work-life balance policies and practices can be seen as a form of social support from organizations. Previous research has revealed that the investment of work-life balance policies and practices leads to improved engagement (Richman et al., 2008).

Furthermore, engaged employees are more willing to gain new information and are more productive and more motivated to show extra effort (Bakker, 2011). Therefore, work engagement can be beneficial for both individual employees and organizations since it affects how employees fulfil their tasks and do their work (Demerouti & Cropanzano, 2010). In addition to influencing employees' performance, work engagement may also influence other performance indicators such as active learning behaviour (Bakker et al., 2011).

Given that a direct link is expected between work-life balance and participation in employee development activities (hypothesis 1), work-life balance is positively related to work engagement (hypothesis 2), and work engagement is positively related to participation in employee development activities (hypothesis 3), the following hypothesis can be stated:

Hypothesis 4: Work engagement partially and positively mediates the relationship between work-life balance and participation in learning activities.

LMX as a moderator between work-life balance and work engagement

Exchanges between leaders and their subordinates are generally considered most important for employees in the workplace (Harris, Harris, & Brouer, 2009). The quality of these relationships is generally examined by the aid of the LMX theory (Agarwal, Datta, Blake-Beard, & Bhargava, 2012). This theory describes how a leader can influence individual follower effectiveness through dyadic relationships with subordinates (Dansereau et al., 1975; Ilies, Nahrgang, & Morgeson, 2007). Employees who receive support from their leader have a higher readiness to give something back. In turn, leaders lead when they receive support from their followers (Agarwal et al., 2012).

Leaders can develop different exchange relationships with different subordinates; a leader can have a poor interpersonal relationship with one of his or her subordinates yet have a trusting and open relationship with other employees (Lunenburg, 2010). Generally, a distinction can be made between two types of relationships based on formal or informal interactions (Dansereau et al., 1975). The first relationship, which is based on formal interactions, is called the "low-quality exchange relationship" or "out-group". When subordinates have low-quality LMX relationships, they experience fewer benefits from their supervisor (Harris et al., 2009). These subordinates receive lower levels of trust, emotional support, and few benefits besides what is required by the formal employment contract (Dienesch & Liden, 1986). By contrast, the second relationship, which is called "high-quality exchange relationship" or "in-group", is based on additional negotiated role responsibilities which contain respect, trust, and shared influence (Wilhelm, Herd, & Steiner, 1993). High-quality relations between leaders and their subordinates are characterized by increased interactions and access, formal and informal rewards, and high levels of trust (Dienesch & Liden, 1986; Liden, Sparrowe, & Wayne, 1997). These relationships also include physical and mental effort, material and non-material resources, and emotional support that are exchanged between the leader and the subordinates (Ilies et al., 2007; Liden et al., 1997). In turn, the quality of these developed relationships determines the leaders' as well as the followers' behaviours and attitudes (Gerstner & Day, 1997; Liden et al., 1997).

In support of the LMX theory, previous research has shown that job satisfaction (Dansereau et al., 1975; Harris, et al. 2009), positive climate (Kozlowski & Doherty, 1989), organizational commitment (Joo, 2010), performance (Sue-Chan, Chen, & Lam, 2011), and organizational citizenship behaviour (Anderson & Williams, 1996; Ilies et al., 2007) are outcomes of LMX. Furthermore, the study of Beauregard and Henry (2009) has suggested that managerial support, which is related to LMX, can moderate between work-life balance

and the attitudes and behaviours of employees, which in turn lead to organizational performance.

Based on previous research, it can be expected that employees who receive more support and information from their supervisors have more positive job attitudes and that these employees engage more in positive behaviours than do employees whose LMX relationships are limited to the formal employment contract (Liden et al., 1997). Therefore, it can be stated that LMX moderates the relationship between work-life balance and work engagement. This means that the relationship between work-life balance and work engagement will be stronger for employees with high levels of LMX. In turn, it can be expected that these engaged employees are more likely to participate in employee development activities.

Hypothesis 5: The positive association between work-life balance and work engagement is moderated by LMX, such that it is stronger for higher than for lower levels of LMX.

Figure 1 displays a summary of the conceptual model and the corresponding formed hypotheses.

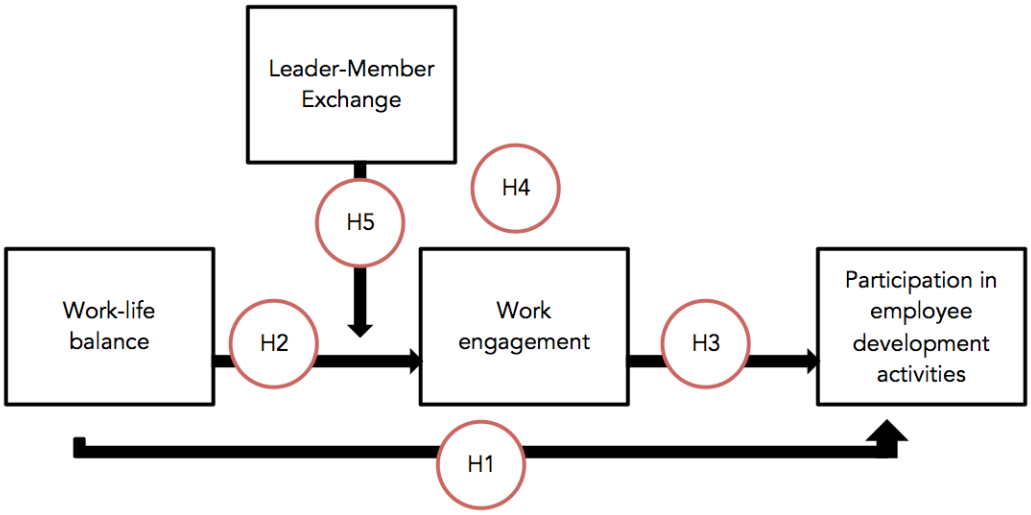

Figure 1: Conceptual model

Method section

Research set-up

This study investigated the relationship between work-life balance and participation in employee development activities through work engagement, moderated by LMX. This research had an exploratory character due to the use of a new conceptual model. At the same time, this research had an explanatory character because it sought explanations of the nature

of certain relationships. Hypothesis testing specified the nature and the direction of the relationships among the four variables that were addressed during the study. Quantitative data was collected through a questionnaire. The data was collected at one moment in time and therefore this research is cross-sectional (Bryman, 2012).

Procedure and sample

The data that was used to test the hypotheses of this study was obtained through survey research in which Dutch respondents received either an online questionnaire (via Qualtrics) or a hard-copy questionnaire. The type of questionnaire depended on the type of organization. If not every employee had access to a computer or laptop at work, hard-copy questionnaires were distributed. The data that was used in this study was collected in May 2016 by one student of Tilburg University. The focus of this study was on employees' perceptions of the four variables that were addressed in this study. The participating organizations were primarily chosen based on accessibility, which resulted in a convenience sampling method. There were no restrictions on the type of organization as long as the organizations were located in the Netherlands. Furthermore, employees could participate only if they were employed at the organization for at least six months. Participants employed through an employment agency were dropped from the analyses because the identity of their supervisor was not clear. These exclusion criteria were used in the attempt to provide reliable data regarding LMX.

The line managers or the HR managers distributed the questionnaires to their colleagues and/or subordinates. The researcher asked whether the line and HR managers were willing and able to send the questionnaire to different types of employees. In this way, an attempt was made to obtain a representative sample of the population. In three of the organizations, the researcher had the authority to distribute the questionnaires herself. The questionnaires were spread across different types of employees from various departments.

Each questionnaire was accompanied by a cover letter, which is shown in Appendix A. The aim of the study was explained in the cover letter and confidentiality was guaranteed. In addition, general instructions were given on how to complete the questionnaire. The questionnaire was provided in Dutch since this study only focused on organizations which were located in the Netherlands. It took about 10 minutes to complete the questionnaire and the respondents had about three weeks to return it. The questionnaire can be found in Appendix B.

The ultimate goal was to obtain 150 to 200 completed questionnaires. In total, eight organizations were involved in this study: one health care institution, one manufacturing company, one interior retailer, one telecommunication company, one restaurant, one real estate organization, one notary office, and one accountancy firm. Overall, 242 employees were asked to participate. In total, 120 employees completed the survey which resulted in a response rate of 49.59%. Four participants were removed because they had not been employed at their current employer for at least six months or they were working for an employment agency. Therefore, the final sample contained 116 participants.

Table 1 displays the demographic characteristics of the participants. This table shows that 56.00% of the participants were female and 44.10% were male. The age ranged from 18 to 63 years, with an average age of 41.88 years (*SD* = 12.68). Most participants worked in the health care sector (31.00%), followed by industry (22.40%) and the retail sector (13.80%). The level of education ranged from "primary school" to "academic education". Most participants completed "secondary vocational education" (46.60%) and "higher professional education" (35.30%). Most employees worked in a "large" organization (53.40%), followed by "middle" (32.80%). Additionally, most employees had an open-ended contract (81.90%), followed by a fixed-term contract (12.90%). The organizational tenure ranged from .5 to 38 years (*M* = 12.92, *SD* = 10.00). The contract hours ranged from 0 to 40 hours per week (*M* = 29.23, *SD* = 10.78).

Table 1

Demographic characteristics

		N	**Percentages**	***M***	***SD***	**Range**
Total group		116				
Gender						
	Male	48	41.10%			
	Female	65	56.00%		.50	
	Missing	3	2.60%			
Age (years)						
		105		41.88	12.68	18-63
	Missing	11				

Educational background				
	Primary school	1	.90%	
	Lower secondary education	8	6.90%	
	Lower vocational education	4	3.40%	
	Secondary vocational education	54	46.60%	.97
	Higher professional education	41	35.30%	
	Academic education	5	4.3%	
	Different	1	.90%	
	Missing	2	1.7%	
Branch				
	Health care	36	31.00%	
	Retail sector	16	13.80%	
	Industry	26	22.40%	
	Logistic/ transport sector	4	3.40%	
	ICT sector/ telecom sector	7	6.00%	3.64
	Financial/corporate services	11	9.50%	
	Hospitality industry	6	5.20%	
	Other	9	7.80%	
	Missing	1	.90%	
Firm size				
	Small (<50 employees)	13	11.20%	
	Medium (50-250 employees)	38	32.80%	.69

	Large (>250 employees)	62	53.40%			
	Missing	3	2.60%			
Organizational tenure						
		113		12.92	10.33	.50-38
	Missing	3				
Contract hours (a week)						
		112		29.23	10.78	0-40
	Missing	4				
Contract type						
	Open-ended contract	95	81.90%			
	Fixed-contract	15	12.90%		.63	
	Different	4	3.40%			
	Missing	2	1.70%			

Note: *N* = number of participants; *M* = mean; *SD* = standard deviation

Instruments

Factor analyses were conducted to test the underlying structure of the four variables. The aim of the factor analyses was to test whether each variable consisted of one component or more subcomponents. Several requirements needed to be fulfilled in order to perform these factor analyses. First, the Bartlett's Test of Sphericity had to be significant ($p < .05$). Secondly, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy needed to be above 0.6 (Pallant, 2013). Kaiser's criterion was used to identify the number of components that were obtained from the factor analyses. Factors with an eigenvalue greater than 1 were considered as one variable (Field, 2009). In addition, Cattell's scree test was executed to examine the number of components.

After the factor analyses were completed, reliability analyses were conducted. Cronbach's alpha (α) coefficient was used to test the reliability of the scales. In this study, a Cronbach's α above .7 was considered as "acceptable", one above .8 as "good", and one above .9 as "excellent" (George & Mallery, 2003). The corrected item-total correlation had to be above .3 and there was also checked whether Alpha if item deleted was smaller than α.

For the purpose of this study, the four variables were measured with different items (shown in Appendix C). The results of the factor analyses and reliability analyses of the four scales are described below (see Appendix D for final results PCA).

Work-life balance. Work-life balance was measured with the short version of the SWING-scale (Geurts et al., 2005) which is a scale that is frequently used in the literature regarding work-life balance (Bakker, Demerouti, & Burke, 2009; Dikkers et al., 2007; Peeters, Montgomery, Bakker, & Schaufeli, 2005). The short version of the SWING-scale, which is translated into Dutch, was also used in the study of Mulder (2009). The scale includes 12 items divided into four components: negative work-home interaction, negative home-work interaction, positive work-home interaction, and positive home-work interaction. To measure the concept of work-life balance, a 5-point Likert scale was used ranging from 1 ("never") to 5 ("always"). Items 1 to 3 and 7 to 9 were mirrored (1 "always" to 5 "never"). A example question of the scale was: "How often does it happen that you do not fully enjoy the company of your spouse/family/friends because you worry about your work?".

First, factor analyses for the four subcomponents were conducted separately. Factor analysis of the first subcomponent negative work-home interaction showed a KMO-index of .516. This means that it was not possible to run a meaningful factor analysis. Factor analysis of the second component, positive work-home interaction, showed a KMO-index of .650 and Bartlett's Test of Sphericity was significant ($p < .01$). Based on the Kaiser's criterion of eigenvalue, the presence of one component was stated. This component had an eigenvalue above 1 (1.813) and explained 60.43% of the variance. Factor analysis of the subcomponent negative home-work interaction showed a KMO-index of .715 and Bartlett's Test of Sphericity was significant ($p < .01$). Kaiser's criterion as well as Cattell's scree test showed that there was one component (2.269). This component explained 75.62% of the variance. Factor analysis of the last component, positive home-work interaction, showed a KMO-index of .670. The Bartlett's Test of Sphericity was significant ($p < .01$). Kaiser's criterion as well as Cattell's scree test found one component (2.113). This component explained 70.44% of the variance. Based on Cronbach's α, the reliability of the first subscale was .717 (acceptable), the second subscale was .648 (not acceptable), the third subscale was .833 (good), and the fourth subscale was .765 (acceptable). Because not all the requirements were met (KMO > .6) and previous research also used the four subscales in one scale, a second factor analysis was performed. All items were included in the factor analysis. Factor analysis showed a KMO-index of .720 and the Bartlett's Test of Sphericity was significant ($p < .01$). Based on the Kaiser's criterion of eigenvalue, the presence of three components was stated. These three

components showed an eigenvalue above 1 (3.439, 2.951 and 1.313). Cattell's scree test confirmed this. These three components explained 28.66%, 24.60% and 10.94% of the variance. Based on Cronbach's α, the reliability of the scale was acceptable (.753). Alpha if item deleted showed that when one item was deleted, the reliability improved. However, based on the theoretical framework, it was expected that work-life balance consisted of four components or one total component. Therefore, a third factor analysis was performed to force the items into one component. Again, two items were deleted because they loaded insufficiently. However, when a fourth factor analysis was performed the other three negatively formulated items loaded insufficiently. Both factor analyses and reliability analyses showed that work-life balance can be divided into a positive and negative side of work-life balance, which explains why it was not possible to force the items to one component. For the purpose of this study, only the positive items regarding work-life balance were used. The KMO-index was .823 and the Bartlett's Test of Sphericity was significant ($p <$ .01). Based on the Kaiser's criterion of eigenvalue, the PCA showed one component with an eigenvalue above 1 (3.308). This component explained 55.13% of the variance. Cattell's scree test also confirmed this. The reliability of the scale was then measured with Cronbach's α. The reliability of the scale was good (.826).

Participation in employee development activities. Participation in employee development activities was measured with Hurtz and Williams' (2009) scale. The scale was translated into Dutch by Everts (2015) and checked by a professor at Tilburg University. For the purpose of this study, a number of small adjustments have been carried out in order to improve the translation of the scale. This new version of the scale was again checked by a professor at Tilburg University. The revised scale included 16 items divided into four components, namely employee assessment, on-the-job experiences, formal courses and programs, and professional relationships. Each component covered four questions which indicated how often the participants had been engaged in the activities, ranging from 0 ("never") to 7 ("once per day") or 0 ("never") to 8 ("seven times or more"). An example item from the questionnaire was: "How many on-site and off-site training courses or workshops did you participate in, in order to improve or learn new knowledge or skills for your job?".

First, factor analyses for the four subcomponents were conducted separately. The KMO-index of the subcomponent employee assessment was .736 and the Bartlett's Test of Sphericity was significant ($p <$ .01). Based on Caiser's criterion one component can be stated with an eigenvalue above 1 (2.356). This component explained 58.91% of the variance.

Cattell's scree test confirmed this. The KMO-index of on the job experiences was .736 and the Bartlett's Test of Sphericity was significant ($p < .01$). Based on Kaiser's criterion of eigenvalue, the PCA indicated one component with an eigenvalue above 1 (2.318). This component explained 57.92% of the variance. Cattell's scree test confirmed this. The KMO-index of formal courses and programs was .678 and the Bartlett's Test of Sphericity was significant ($p < .01$). Both Kaiser's criterion and Cattell's scree test showed that there was one component with an eigenvalue above 1 (1.867). This component explained 46.67% of the variance. The KMO-index of the last subcomponent, professional relationships, was .662. Bartlett's Test of Sphericity was significant ($p < .01$). Kaiser's criterion and Cattell's scree test showed one eigenvalue above 1 (2.213). This component explained 55.33% of the variance. Based on Cronbach's α, the reliability of the first subscale was .762 (acceptable), the second subscale was .738 (acceptable), the third subscale was .576 (not acceptable), and the fourth subscale was .717 (acceptable). However, for the purpose of this study the four subcomponents were used as one overall component, which is in line with previous research. The KMO-index of all items was .783 and the Bartlett's Test of Sphericity was significant ($p < .01$). Based on Kaiser's criterion, five components can be stated, which is not in line with previous studies. These five components had an eigenvalue above 1 (4.919, 1.736, 1.477, 1.200 and 1.039) and explained 30.74%, 10.85%, 9.23%, 7.50% and 6.49% of the variance. Cattell's scree test confirmed that there were five components. A third factor analysis showed that when the number of components was forced into one the items loaded differently than expected based on the literature. Not all items loaded sufficiently on one component. A fourth factor analysis was performed to force the items into one component. The Component Matrix showed that one item loaded insufficiently on the component. Reliability analysis showed that Cronbach's α (.835) increased to .840 when this item was deleted. Subsequently, a fifth factor analysis was performed without this item. The KMO-index decreased to .799 while the Bartlett's Test of Sphericity remained significant ($p < .01$). However, the Component Matrix showed that there was another component that loaded insufficiently. A sixth factor analysis was carried out and this one item was deleted. The KMO-index increased to .807 and the Bartlett's Test of Sphericity was significant ($p < .01$). The Component Matrix showed that all the items loaded sufficiently. Finally, the reliability of the scale was measured with Cronbach's α. The reliability of the scale was good (.841).

Work engagement. Work engagement was measured with Schaufeli and Bakker's (2003) frequently used Utrecht Work Engagement Scale (UWES). The UWES questionnaire

consisted of nine items which covered the three components of work engagement, namely vigour (e.g. "At my work, I feel bursting with energy"), dedication (e.g. "I am enthusiastic about my job"), and absorption (e.g. "I am happy when I am working intensely"). A 5-point Likert scale was used to measure work engagement, ranging from 1 ("never") to 5 ("always").

Factor analysis showed a KMO-index of .893. The Bartlett's Test of Sphericity appeared to be significant ($p < .01$). Based on the Kaiser's criterion of eigenvalue, the PCA showed one component with an eigenvalue above 1 (4.666). Cattell's scree test also confirmed this. This component explained 51.85% of the variance. In addition, the reliability of the scale was tested with Cronbach's α. The reliability of this scale was good (.882).

Leader-Member exchange. For the measurement of LMX, the 7-item LMX scale was used (Graen & Uhl-Bien, 1995). This scale was also translated into Dutch by Everts (2015). A 5-point Likert scale was used to measure LMX. An example item was: "How would you characterize your working relationship with your leader?".

Factor analysis showed a KMO-index of .842. In addition, the Bartlett's Test of Sphericity appeared to be significant ($p < .01$). Based on the Kaiser's criterion of eigenvalue the presence of two components was found. These two components showed an eigenvalue above 1 (3.837 and 1.037). Cattell's scree test confirmed this. The two components explained 54.82% and 14.82% of the variance. However, based on the theoretical framework, it was expected that LMX consisted of one component. Therefore, a second factor analysis was conducted. The seven items were forced into one component. Additionally, the reliability of the scale was tested with Cronbach's α. The reliability of the scale was good (.851). However, Cronbach's α if item deleted showed that the reliability of the scale increased when item 1 was deleted. A third factor analysis was then conducted without this item. Factor analysis showed a KMO-index of .839 and the Bartlett's Test of Sphericity was significant ($p < .01$). Based on the Kaiser's criterion of eigenvalue, the presence of one component was stated which was expected based on previous research. This component had one value above 1 (3.645) and explained 60.74% of the variance. The reliability of this scale was measured with Cronbach's α. The reliability of this scale was good (.864).

Control variables. Control variables were included in this research in order to investigate whether the results were influenced by relationships with other variables. The following control variables were included in all analyses: age (in years), gender (1, male; 2, female), contract type (1, open-ended contact; 2, fixed-term contract; 3, employment agency/employee

posting; 4, different), job tenure (in years), and firm size (1, small; 2, medium; 3, large). For the analyses, gender (0, male; 1, female), contract type (0, not open-ended; 1, open-ended), and firm size (0, not large; 1, large) were changed into dummy variables. The variable age was included since previous research has shown that older employees are slightly more engaged in their work (Schaufeli et al., 2006). Furthermore, employees with different ages might have different perceptions of work-life balance. For example, younger employees attach more value to work-life balance than do older employees (Lewis, Smithson, & Kugelberg, 2002). In addition, age can also be related to employees' involvement in learning and development activities and it might also affect the degree of learning preparedness and investment in skill development (Maurer et al., 2003). The variable gender was included since there might be differences in how men and women experience certain work situations, which might influence their perception of work-life balance (Emslie & Hunt, 2009). Research of Schaufeli et al., (2006) has shown that the relationship between work engagement and gender is equivocal. In some countries, males feel slightly more engaged than do females while in other countries no differences are observed. To gain more insight in this relationship, gender was included as a control variable. Finally, contract type, job tenure, and firm size were included as control variables because these variables might influence the opportunity of HRD activities that are offered to employees by their employers, and since organizations arrange their HRD differently depending on the kind of employee (Kotey & Folker, 2007).

Statistical analysis

This study investigated the relationship between work-life balance and participation in employee development activities through work engagement, moderated by LMX. A moderated mediation model was used to achieve this. The purpose of the moderated mediation model is to clarify how and when a certain effect occurs (Frone, 1999). This model is used when the strength of the indirect effect depends on the level of a certain moderator (Preacher, Rucker, & Hayes, 2007).

The statistical program SPSS was used to analyse the data. First, the data was screened for missing values, errors, and outliers. Errors and outliers that were unable to be fixed were turned into missing values and items were mirrored as needed. Factor analyses and reliability analyses were then conducted to test the internal consistency and reliability of the scales. Subsequently, descriptive statistics were carried out in order to gain insight in the main structures among the four variables. Thereafter, Hayes (2013) was used to carry out the mediation and moderation analyses. PROCESS was used in SPSS to test the moderated

mediation model. To test hypotheses 1 to 4, Hayes' simple mediation model was used (Appendix E Figure 2). Finally, to test hypothesis 5, moderation analysis was carried out (Appendix E Figure 3). Bootstrapping was used instead of the Sobel test to test the significance of the indirect effect because Hayes overcomes the limitations of the method of Baron and Kenny (1986). Bootstrapping was performed because the shape of the sampling distribution was unknown. Unlike the Sobel test, bootstrapping bypasses this problem by taking small samples (bootstrap samples) from the total sample. Statistics such as the mean and the beta coefficient were calculated from each sample. Because many samples were taken, the sampling distribution could be estimated.

Results

In this section, the descriptive statistics and the correlations are explained. The means, standard deviations, and correlations of each variable are presented. Then, the main results of the hypothesis tests are described.

Descriptive statistics and correlations

The relationships among work-life balance, participation in employee development activities, work engagement, and LMX were examined by using Pearson product-moment correlation coefficient. Preliminary analyses were carried out in order to gain insight into the normality and linearity of the data.

Table 6 shows the means, standard deviations, and Pearson product-moment correlation coefficients of the variables. Work-life balance was positively correlated with participation in employee development activities. However this correlation was not significant (r = .02, p = .82). Work-life balance was significant and positively correlated with work engagement (r = .50, p < .01) and LMX (r = .21, p < .05). Furthermore, work engagement was positively correlated to participation in employee development activities but the correlation was not significant (r = .10, p = .31). LMX was positively correlated to participation in employee development activities (r = .16, p = .10) and significant and positively correlated to work engagement (r = .20, p < .05).

The control variables age, organizational tenure, contract type, and firm size were included in the analyses because they had a clear correlation with one or more of the four variables. Age was significant and positively correlated to work-life balance (r = .27, p < .01) and work engagement (r = 0.24, p < .05). Furthermore, age was significant and negatively correlated to participation in employee development activities (r = -.41, p < .01). The

correlation between age and LMX was too low for interpretation. In addition, organizational tenure was significant and negatively correlated to participation in employee development activities (r = -.35, p < .01). The correlations between organizational tenure and work-life balance, work engagement and LMX were too low for interpretation. Furthermore, the dummy variable large firm size was significant and positively correlated to participation in employee development activities (r = .25, p = < .01) and work engagement (r = .22, p = < .05). Finally, the dummy variable open-ended contract was significant and negatively correlated to participation in employee development activities (r = -.38, p = < .01).

Table 6

Summary of descriptive statistics of work-life balance, participation in employee development activities, work engagement, and LMX

	M	*SD*	1	2	3	4	5	6	7	8
1. Work-life balance	3.33	.67								
2. Participation in employee development activities	3.12	.94	.02							
3. Work engagement	3.94	.46	.50**	.10						
4. LMX	3.57	.63	.21*	.16	.20*					
5. Age (based on year of birth)	41.88	12.68	.27**	-.41**	.24*	-.01				
6. Gender (female)	1.58	.50	.06	.09	.13	-.11	-.01			
7. Organizational tenure	12.92	10.34	.02	-.35**	-.07	.03	.71**	-.21*		
8. Firm size (large versus other)	.55	.50	.01	.25**	.22*	-.04	.09	.18	-.06	
9. Contract type (open-ended contract versus other)	.83	.37	.00	-.38**	-.08	-.02	.41**	-.24**	.48**	-.06

Note: *M* = mean; *SD* = standard deviation

*Correlation is significant at the .05 level (2-tailed)

**Correlation is significant at the .01 level (2-tailed)

Mediation

Simple mediation analysis (Hayes, 2013) was used to test for mediation. Model 4 (Appendix E) displays the model that was used in SPSS with PROCESS. In addition, the SPSS macro output of the analyses can be found in Appendix F.

Hypothesis 1 proposed a positive relationship between work-life balance and participation in employee development activities. Table 7 shows that there was a positive relationship between work-life balance and participation in employee development activities. However, this relationship was not significant (β = .13, p = .36, LLCI = -.15, ULCI = .40). Therefore, hypothesis 1 was rejected. Furthermore, a significant negative relationship of the control variable age was found (β = -.03, p < .01, LLCI = -.05, ULCI = -.01). This means that younger employees had a higher the participation in employee development activities. Additionally, there was a significant positive relationship between firm size (large) and participation in employee development activities (β = .47, p < .01, LLCI = .15, ULCI = .80) and a significant negative relationship between open-ended contract and participation in employee development activities (β = -.59, p < .05, LLCI = -1.07, ULCI = -.11). This means that employees who worked in a large organization participated more in employee development activities and employees with an open-ended participated less in employee development activities.

Hypothesis 2 proposed a positive relationship between work-life balance and work engagement. Table 7 reveals a significant positive relationship between work-life balance and work engagement (β = .26, p < .01, LLCI = .15, ULCI = .38). Therefore, hypothesis 2 was confirmed which means that employees with a higher level of work-life balance showed a higher level of work engagement. In total, model 1 explained 28% of the variance (F = 7.28, p < .01).

Hypothesis 3 proposed a positive relationship between work engagement and participation in employee development activities. Table 7 shows a positive relationship between work engagement and participation in employee development activities. However, this relationship was not significant (β = .12, p = .59, LLCI = -.31, ULCI = .55). Therefore, hypothesis 3 was rejected. Furthermore, model 2 explained 30% of the variance (F = 6.51, p = < .01).

Hypothesis 4 proposed that work engagement partially and positively mediates the relationship between work-life balance and participation in employee development activities. The bootstrap confidence interval for the indirect relationship between work-life balance and participation in employee development activities through work engagement was used. Table 7

shows that work engagement was a positive mediator (*ab* = .03). Because the bootstrap confidence interval showed that, based on 1000 bootstrap samples, this effect was not significant (LLCI = -.11, ULCI = .17), hypothesis 4 was rejected. This means that there was no support for the idea that work engagement mediated the relationship between work-life balance and participation in employee development activities.

The total effect (direct and indirect) of work-life balance on participation in employee development activities was also examined. The results showed that the total effect of work-life balance on participation in employee development activities was not significant (β = .16, p = .21, LLCI = -.09, ULCI = .40). The results of hypotheses 1 to 4 are displayed in Figure 4.

Table 7

Direct and indirect relation of work-life balance and participation in employee development activities, mediated by work engagement

Predictor variable	**Coefficients**	***SE***	**R2**
Model 1: F (5, 94) = 7.28**			.28**
Main effect on the mediator work engagement			
Work-life balance	.26**	.06	
Age	.01	.00	
Organizational tenure	-.01	.01	
Firm size (large)	.14	.08	
Contract type (open-ended)	-.11	.11	

Predictor variable	**Coefficients**	***SE***	**R2**
Model 2: F (6, 93) = 6.51**			.30**
Main effect on the dependent variable participation in employee development activities			
Work engagement	.12	.22	
Work-life balance	.13	.14	
Age	-.03**	.01	
Organizational tenure	.01	.01	
Firm size (large)	.47**	.16	
Contract type (open-ended)	-.59*	.24	

Simple mediation model				
Results bootstrap for the direct and indirect effects of work-life balance on participation in employee development activities				
	Effect	Boot SE	LLCI	ULCI
Direct effect	.13	.14	-.15	.40
Indirect effect	.03	.07	-.11	.17
Total effect	.16	.12	-.09	.40

Notes. N = 100; *p < .05; **p < .01

Bootstrap sample size: 1000; LL = lower limit; UL = upper limit.

Confidence interval: 95%

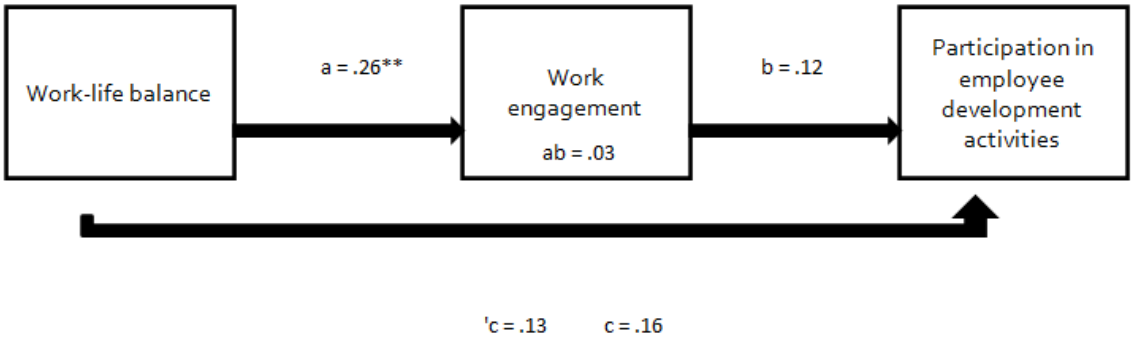

Figure 4: Conceptual mediation model with results

Notes. **p < .01, indirect effect: .26 * .12 = .03

Moderated mediation

After the mediation analysis was performed, moderation analysis was executed to examine whether LMX moderates the relationship between work-life balance and work engagement and the indirect relationship of work engagement between work-life balance and participation in employee development activities. A moderated mediation model (Hayes, 2013) was used in SPSS to test hypothesis 5. The SPSS macro output of the analyses can be found in Appendix F.

Hypothesis 5 proposed that the positive association between work-life balance and work engagement was moderated by LMX, such that it was stronger for higher than for lower levels of LMX. Table 8 displays a positive relationship between work-life balance and work engagement. However, this relationship was not significant (β = .47, p = .18, LLCI = -.21, ULCI = 1.15). In addition, Table 8 shows that there was an insignificant negative interaction

of LMX (β = -.07, p = .48, LLCI = -.26, ULCI = .12). This result means that LMX weakened the relationship between work-life balance and work engagement but this effect was by chance. Therefore, there cannot be stated that LMX weakened the relationship between work-life balance and work engagement. A significant positive relationship of the control variable age (β =.01, p <.05, LLCI = .00, ULCI = .02) and a significant positive relationship of the control variable firm size (large organization) (β = .15, p < .05, LLCI = .00, ULCI = .30) were found. These results mean that older employees and employees who worked in a large organization were slightly more engaged in their work.

The interaction of LMX and work engagement on participation in employee development activities was not significant (β = -.01, LLCI = -.12, ULCI = .04). The bootstrap confidence interval for the indirect relationship through work engagement moderated by LMX (ab = .03) was not significant (LLCI = -.10, ULCI = .15). These results indicated that LMX did not moderate the relationship between work-life balance and participation in employee development activities through work engagement. Therefore, hypothesis 5 was not supported. Furthermore, a significant negative relationship between the control variable age and participation in employee development activities was found (β = -.03, p < .01, LLCI = -.05, ULCI = -.01). This means that younger the participants had a higher the participation in employee development activities. Additionally, a positive relationship between the control variable firm size (large organization) and participation in employee development activities was found (β = .47, p < .01, LLCI = .15, ULCI = .80). This means that employees who worked in a large organization had a higher participation in employee development activities. Furthermore, a significant negative relationship between the control variable open-ended contract and participation in employee development activities was found (β = -.59, p < .05, LLCI = -1.07, ULCI = -.11), indicating that employees with an open-ended contract participated less in employee development activities. The results of hypothesis 5 are displayed in Figure 5. The results of the analyses were also checked using regression analyses. The regression analyses showed roughly the same results.

Table 8

Conditional direct and indirect relation of work-life balance and participation in employee development activities through work engagement moderated by LMX

Predictor variable	**Coefficients**	***SE***	**R2**
Model 1: *F* (7, 92) = 6.41**			.33**
Main effect on the mediator work engagement			
Work-life balance	.47	.34	
LMX	.40	.34	
Work-life balance * LMX	-.07	.09	
Age	.01*	.00	
Organizational tenure	-.01	.01	
Firm size (large)	.15*	.07	
Contract type (open-ended)	-.10	.11	

Predictor variable	**Coefficients**	***SE***	**R2**
Model 2: *F* (6, 93)= 6.51**			.30**
Main effect on the dependent variable participation in employee development activities			
Work engagement	.12	.22	
Work-life balance	.13	.14	
Age	-.03**	.01	
Organizational tenure	.01	.01	
Firm size (large)	.47**	.16	
Contract type (open-ended)	-.59*	.24	

Moderated mediation model				
Conditional direct and indirect effects of work-life balance on participation in employee development activities by LMX				
	Effect	Boot SE	LLCI	ULCI
Direct effect	.13	.14	-.15	.40
Indirect effect				
LMX 2.98 (-1 *SD*)	.03	.07	-.11	.20

LMX 3.58 (*M*)	.03	.06	-.10	.15
LMX 4.18 (+1 *SD*)	.02	.06	-.08	.16
	Index	Boot SE	LLCI	ULCI
Index of moderated mediation	-.01	.03	-.12	.04

Notes. $N = 100$; $*p < .05$; $**p < .01$

Bootstrap sample size: 1000; LL = lower limit; UL = upper limit.

Confidence interval: 95%

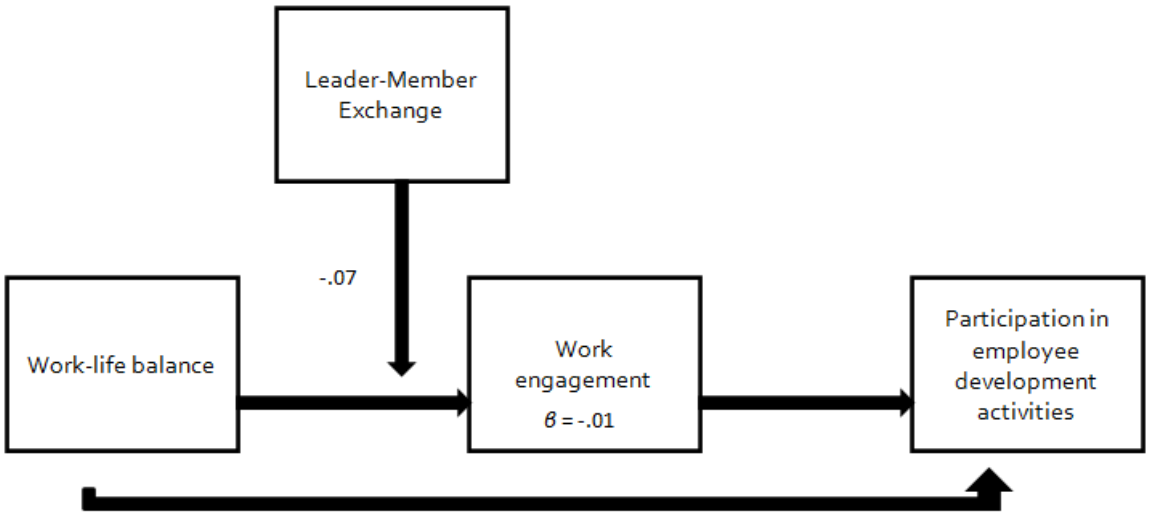

Figure 5: Conceptual moderated mediation model with results

Notes. $**p < .01$

Additional analyses

The results of the simple mediation analysis showed that there was a significant relationship between work-life balance and work engagement. The other expected relationships were not significant. Furthermore, the results of the moderated mediation model showed no significant effects. Factor analyses revealed that work-life balance consisted of two subcomponents, namely positive work-life balance and negative work-life balance. The last subcomponent can be seen as work-life conflict, which was not part of the conceptual model. A separate analysis examined whether the results were different when work-life conflict was included instead of work-life balance. To measure this, simple mediation analysis

and moderated mediation analysis were carried out. The SPSS macro output of the analyses can be found in Appendix G.

Based on the simple mediation analysis it can be stated that there was a significant positive relationship between work-life conflict and participation in employee development activities (β = .34, p < .05, LLCI = .06, ULCI = 0.62). This means that employees with a high level of conflict between their work and private lives participated more in employee development activities. Furthermore, there was a significant negative relationship between work-life conflict and work engagement (β = -.16, p < .05, LLCI = -.30, ULCI = -.01). Based on this result, it can be stated that participants with a high work-life conflict showed a lower level of work engagement. Additionally, an insignificant positive relationship between work engagement and participation in employee development activities was found (β = .31, p = .11, LLCI = -.07, ULCI = .70). This means that there cannot be stated that employees with a high level of work engagement had a higher participation in employee development activities. Another result was that the mediating effect of work engagement was not significant as well (LLCI = -.20, ULCI = .01).

Thereafter, a moderated mediation analysis was performed to examine whether LMX strengthened or weakened the relationship between work-life conflict and work engagement and the indirect effect of work engagement and participation in employee development activities. There was a positive relationship between work-life conflict and work engagement. However, this relationship was not significant (β = .66, p = .14, LLCI = -.21, ULCI = 1.53). A positive significant relationship was found between LMX and work engagement (β = .64, p < .05, LLCI = .15, ULCI = .1.13). However, the negative interaction effect of LMX was not significant (β = -.22, p = .07, LLCI = -.45, ULCI = .02). Therefore, it cannot be stated that LMX weakened the relationship between work-life conflict and work engagement. The negative effect was by chance. In addition, the interaction of LMX and work engagement on participation in employee development activities was not significant (β = -.07, LLCI = -.30, ULCI = .03). These results indicated that LMX did not moderate the relationship between work-life conflict and participation in employee development activities through work engagement. The results of both analyses are displayed in Table 9 and Table 10. Finally, the results of the analyses were checked using regression analyses. The regression analyses showed roughly the same results.

Table 9

Direct and indirect relation of work-life conflict and participation in employee development activities, mediated by work engagement

Predictor variable	**Coefficients**	***SE***	**R2**
Model 1: *F* (5, 95) = 3.65**			.16**
Main effect on the mediator work engagement			
Work-life conflict	-.16*	.07	
Age	.01**	.00	
Organizational tenure	-.01	.01	
Firm size (large)	.11	.08	
Contract type (open-ended)	-.15	.12	

Predictor variable	**Coefficients**	***SE***	**R2**
Model 2: *F* (6, 94) = 7.75**			.33**
Main effect on the dependent variable participation in employee development activities			
Work engagement	.31	.20	
Work-life conflict	.34*	.14	
Age	-.03**	.01	
Organizational tenure	.01	.01	
Firm size (large)	.43*	.16	
Contract type (open-ended)	.57*	.24	

Simple mediation model

Results bootstrap for the direct and indirect effects of work-life conflict on participation in employee development activities

	Effect	Boot SE	LLCI	ULCI
Direct effect	.34*	.14	.06	.62
Indirect effect	-.05	.05	-.20	.01
Total effect	.29**	.14	.01	.57

Notes. $N = 101$; *$p < .05$; **$p < .01$

Bootstrap sample size: 1000; LL = lower limit; UL = upper limit.

Confidence interval: 95%

Table 10

Conditional direct and indirect relation of work-life conflict and participation in employee development activities through work engagement moderated by LMX

Predictor variable	**Coefficients**	***SE***	**R2**
Model 1: *F* (7, 93) = 4.85**			.27**
Main effect on the mediator work engagement			
Work-life conflict	.66	.44	
LMX	.64*	.25	
Work-life conflict * LMX	-.22	.12	
Age	.02**	.00	
Organizational tenure	-.01*	.01	
Firm size (large)	.12	.08	
Contract type (open-ended)	-.15	.12	

Predictor variable	**Coefficients**	***SE***	**R2**
Model 2: *F* (6, 94) = 7.75**			.33**
Main effect on the dependent variable participation in employee development activities			
Work engagement	.31	.19	
Work-life conflict	.34*	.14	
Age	-.03**	.01	
Organizational tenure	.01	.01	
Firm size (large)	.43*	.16	
Contract type (open-ended)	-.57*	.24	

Moderated mediation model				
Conditional direct and indirect effects of work-life conflict on participation in employee development activities by LMX				
	Effect	Boot SE	LLCI	ULCI
Direct effect	.34*	.14	.06	.62
Indirect effect				
LMX 2.98 (-1 *SD*)	.00	.05	-.08	.12

LMX 3.58 (*M*)	-.04	.04	-.16	.01
LMX 4.18 (+1 *SD*)	-.08	.07	-.28	.03
	Index	Boot SE	LLCI	ULCI
Index of moderated mediation	-.07	.08	-.30	.03

Notes. $N = 101$; $^{*}p < .05$; $^{**}p < .01$

Bootstrap sample size: 1000; LL = lower limit; UL = upper limit.

Confidence interval: 95%

Conclusion and discussion

This study took a close look at the mechanisms through which work-life balance leads to participation in employee development activities. The aim of this study was to examine the relationship between work-life balance and participation in employee development activities through work engagement moderated by LMX. Based on the guiding theories, the social exchange theory (Blau, 1964), the perceived organizational support theory (Eisenberger et al., 1986), the JD-R model (Demerouti et al., 2001), the broaden-and-build theory of positive emotions (Fredrickson, 2001), and the LMX theory (Dansereau et al., 1975), it was expected that there would be a positive relationship between work-life balance and participation in employee development activities and that this relationship would be partially mediated by work engagement. Furthermore, it was proposed that the positive association between work-life balance and work engagement would be moderated by leader-member exchange, such that it would be stronger for higher than for lower levels of leader-member exchange. In order to test the hypotheses, a cross-sectional survey study was conducted with 116 participants. Results showed that while there was no significant direct relationship between work-life balance and participation in employee development activities, support was found for the expected positive relationship between work-life balance and work engagement. There was no significant relationship between work engagement and participation in employee development activities. Therefore, there was no indirect relationship between work-life balance and participation in employee development activities. Results also indicated that LMX did not strengthen the relationship between work-life balance and work engagement. These findings are explained and discussed in the next section.

In contrast with expectations, no significant direct relationship was found between work-life balance and participation in employee development activities (hypothesis 1). The positive relationship between work-life balance and participation in employee development activities was by chance. Therefore, it cannot be stated that a high level of work-life balance leads to high participation in employee development activities. The results of this study were not in line with what was expected based on the social exchange theory (Blau, 1964) and the perceived organizational support theory (Eisenberger et al., 1986), which might anticipate that when employees feel supported by their employer, they participate more in employee development activities since they want to make more effort in return for more benefits.

A possible explanation for the rejection of hypothesis 1 is that employees' attitudes towards learning and development affect the way they respond to offered learning opportunities, which the present study did not take into consideration. Hodkinson et al. (2004) and Kyndt et al. (2011) have stated that employees with positive attitudes towards development are more likely to participate in learning opportunities.

There was a significant positive relationship between work-life balance and work engagement (hypothesis 2). The results indicated that when employees experience a high level of work-life balance, they feel more engaged with their work. These findings support the assumption of the social exchange theory (Blau, 1964), which suggests that when employees experience that organizations are helping them balance their work and private demands, they feel cared for and supported by their organization. In turn, these employees feel obligated to reciprocate by showing more favourable attitudes and behaviours such as engagement (Aryee et al., 2005; Richman et al., 2008; Saks, 2006). The present study made a considerable contribution to the existing literature by investigating relationship between work-life balance and work engagement.

The results also showed that there was no significant relationship between work engagement and participation in employee development activities (hypothesis 3). The positive relationship between work engagement and participation in employee development activities was by chance. This means that it cannot be stated that the higher the employees' work engagement, the higher the participation in employee development activities. These results did not correspond with the expectations based on the broaden-and-build theory of positive emotions (Fredrickson, 2001). This theory assumes that when employees experience positive emotions, they broaden their minds. As a result, they are more able and willing to gain new information, to grow, and to explore new situations, all of which are related to participation in employee development activities. One possible explanation for the rejection of the hypothesis

is that employees' participation in employee development activities also depends on their motivation through expectation (Noe et al., 1997). Previous research has stated that employees' motivation towards training can affect participation (Noe & Ford, 1992; Noe et al., 1997). If employees expect that the effort made by participating in HRD activities will lead to improvements in knowledge and skills, they are more likely to participate in these development activities (Dubin, 1990). A study by Tharenou (2001) confirms that employees' training motivation, based on their expectations and desire to learn, contributes to their participation in training and development activities.

Since the relationship between work engagement and participation in employee development activities was not significant, work engagement cannot be seen as a mediator between work-life balance and participation in employee development activities (hypothesis 4). Possible explanations for this result are discussed above.

An insignificant negative moderating relationship of LMX between work-life balance and work engagement was found (hypothesis 5). This means that it cannot be stated that the relationship between work-life balance and work engagement is stronger for employees with high levels of LMX; LMX weakened the relationship but this effect was by chance. In addition, the moderating role of LMX on the indirect relationship of work engagement between work-life balance and participation in employee development activities was not significant. Therefore, it can be stated that there was no moderated mediation mechanism. This finding means that the relationship between work-life balance and participation in employee development activities via work engagement is not stronger for employees with high LMX. Since there was no significant mediation and moderation, it was not possible to find a moderated mediation mechanism. Another possible explanation for the insignificant moderating relationship could be that employees had to fill in questions about their relationship with their supervisor. Therefore, there was a risk that employees filled in the questionnaire with socially desirable answers. Furthermore, a failure to find a moderation effect of LMX can be due to the small sample size (N = 116). This sample size might be too small to get adequate statistical power to detect the moderation effect of LMX (Anguinis & Stone-Romero, 1997).

By executing additional analyses which were not part of the original hypotheses, this study found a positive relationship between work-life conflict and participation in employee development activities. This means that employees who experience a high level of work-life conflict participate more in employee development activities than do employees with a low level of work-life conflict. Previous studies have focused mainly on job performance as an

outcome of work-life conflict rather than on participation in employee development activities (Allen et al., 2000; Karatepe & Kilic, 2007). Although researchers have examined the relationship between other types of conflicts, learning, and performance (e.g. van Woerkom & van Engen, 2009), the results of these studies are not consistent. While van Woerkom and van Engen (2009) found no significant relationship between task conflict and team learning, a study by Kasl, Marsick, and Dechant (1997) found a positive relationship between task conflict and team learning. Therefore, the current study provides a new insight into an area which had not been explored in detail: the relationship between work-life conflict and employees' participation in employee development activities.

Additionally, the current study revealed that there was a significant negative relationship between work-life conflict and work engagement. Based on this result it can be stated that employees with a high level of work-life conflict are less engaged in their work. Previous studies have shown that work-life conflict is associated with other job-related outcomes, such as job dissatisfaction (Amstad, Meier, Fasel, Elfering, & Semmer, 2011; Anderson, Coffey, & Byerly, 2002; Ersnt Kossek & Ozeki, 1998) which is related to work engagement. This study made a considerable contribution to the existing literature by examining the relationship between work-life conflict and work engagement, which has not been well researched.

Additional analyses revealed an insignificant positive relationship between work engagement and participation in employee development activities. These results did not confirm previous studies that have found that engaged employees convert their enjoyment into more effective action such as problem solving and development of innovative ideas (Bakker & Leiter, 2010). These actions could be linked to participation in employee development activities. One possible explanation for this insignificant relationship could be that a reasonable number of control variables were added in the analyses. While the relationship between work engagement and participation in employee development activities controlled for age and organizational tenure was significant, the relationship controlled for age, organizational tenure, firm size (large), and contract type (open-ended) was not.

Limitations

Limitations of this study relate mainly to the questionnaire. These limitations restricted its generalizability. First, the data was collected in one moment in time, making this study cross sectional. As a result, the conclusions that were drawn concerning the causal direction of the relationships were limited (Bryman, 2012). Additionally, respondents answers

may have been affected by temporary factors such as the mood of respondents or problems at work. Therefore, a longitudinal or experimental study would be more powerful.

Secondly, the data collection method could be a limitation. When a questionnaire is used to collect data, respondents have less freedom in answering the questions. In the questionnaire for this study, the respondents could choose only one answer and did not have the opportunity to clarify on the question. On the other hand, when interviews were used, respondents had the opportunity to explain or comment on the question. Another disadvantage was that it was not clear whether the right person answered the questionnaire (Bryman, 2012). The questionnaire was sent to a particular line manager or HR manager. It is possible that the manager delegated the task to someone else. This delegated person could have sent the questionnaires to the wrong people. In addition, there is the issue of missing data. Because of a lack of supervision or prompting, partially completed questionnaires were more likely. It could also be that the questionnaire was not appropriate for certain respondents. When the literacy of respondents is limited, they are not able to answer the complete questionnaire properly. In a related matter, some respondents did not fully understand the question regarding the branch in which they were working. As a result, they answered that they were working in a branch which was not part of the current study. Therefore, the control variable branch could not be included in the analyses. Also, the possibility of socially desirable answers needs to be taken into consideration. Although confidentiality was guaranteed, the questionnaire was not completely anonymous because participants had the option to include their email addresses for a chance to win a prize as a reward for their participation. Furthermore, all the questionnaires were not all distributed in the same way. This study would have been more reliable if the questionnaires had been handed out by either the line manager or the HR manager and either hard-copy or online. In the present study, it is not clear whether there were differences in the answers due to which version was distributed (hard-copy or online), and if there were differences, what contributed to them.

Third, since the focus of this study was on employee perceptions, it is possible that a valid measurement would be through use of self-report measures, since employees themselves are best placed to report their own level of work-life balance, work engagement, participation in employee development activities, and LMX. One disadvantage is that the study did not measure the perceptions of the supervisors.

Fourth, another possible limitation of this study is that the analyses were simplified. The results of the factor analyses showed that work-life balance consisted of two subcomponents and participation in employee development activities consisted of five (or as

described in the literature, four) components. In this study, only the positive items of work-life balance were used and the components of participation in employee development activities were forced into one. If the original numbers of components were used for the analyses, the results might have been slightly different. Further research could use the program AMOS for more complicated analyses by dividing these variables into multiple components.

Finally, the results of this study are difficult to generalize because of the convenience sample and the relatively small sample size (N = 116). A number of different industries were included in the sample, and the results would be more reliable if the study had a more focused sample. A higher number of participants would also improve generalizability.

Recommendations for further research

The results, discussion, and limitations of this study prompt suggestions for further research.

For future research, an experimental or longitudinal approach is recommended to allow better insights into how variables are related over time. If multiple measurements are used over time, it is possible to discover changes or developments in the relations between variables within the population. It is also suggested that the variable "intention to participate in employee development activities" be included, since the results of the primary study show that there is no direct relationship between work engagement and participation in employee development activities. It could be interesting for future researchers to examine whether the variable intentions to participate in employee development activities mediates the relationship between work engagement and participation in employee development activities. It is also important consider the availability of the development activities. In addition, further research should also take into account the impact of other variables such as employees' characteristics on participation in employee development activities.

Further research should conduct interviews after questionnaires are distributed and analysed. Such interviews could enlighten the underlying arguments of the participants' answers. In addition, further studies could hold a larger pilot to overcome the possible confusion on specific questions of the questionnaire. Additional suggestions for future research include using only one method to distribute the questionnaire, creating a more focused sample, and including supervisors' perceptions of LMX. It could also be interesting to compare the perceptions of the employees with the perceptions of the supervisors.

Finally, future research could focus on leadership styles and how they might affect employees' participation in development activities. Previous research of de Jong and den Hartog (2007) has revealed that leaders can affect employees' behaviour to encourage innovation consisting of idea generation and application. It might be possible that leadership also affects participation in employee development activities. In future research, then, leadership styles could be used as an independent variable, mediator, or moderator.

Practical implications

In practical terms, this study revealed that the way employees experience their work-life balance can affect their work engagement. In particular, the result of the negative relationship between work-life conflict and work engagement is something that employers want to prevent. If organizations find that employees perceive a conflict between their work and private lives, they can develop and implement tools and practices that help improve work-life balance. This could result in higher work engagement, job satisfaction, and improved productivity (Baltes et al., 1999; Beauregard & Henry, 2009). Employers could offer employees assistance with caregiving, a compressed work week, a certain degree of control over where their work will be done, or the opportunity for employees to schedule their time (Beauregard & Henry, 2009; Bambra, Whitehead, Sowden, Akers, & Petticrew, 2008; Hill, Hawkins, Ferris, & Weitzman, 2001).

To enhance work engagement, organizations could develop tools and practices, such as performance feedback, task variety, job autonomy, and social support (Bakker & Leiter, 2010). Social climate at work is also an important predictor of work engagement and should also be taken into consideration. Engaged employees are motivated and are usually good performers, which can have a positive effect on organizational performance (Bakker & Bal, 2010; Schaufeli & Salanova, 2007).

To address the issue of work-life conflict, organizations could offer employees tools, practices, and learning opportunities that both decrease work-life conflict and improve performance. Furthermore, supervisors could provide support by developing and implementing HR practices such as performance management, employee voice, effective communication, and the just described tools to reduce work-life conflicts. Supervisors should also ensure that the perception of trust, support, consistency, and fairness is maintained among workers (Renee Baptiste, 2008). In addition, organizations should convince employees that they are also responsible for their own work-life balance, work engagement, and participation in employee development activities.

A decrease in employees' work-life conflict could have a positive effect on their well-being. In turn, having employees with higher levels of well-being can lead to improved financial performance for the organization (Bakke, 2005; Renee Baptiste, 2008). Also, participation in employee development activities can contribute to increased productivity (Harrold, 2000; Jacobs & Washington, 2003).

Conclusion

In conclusion, work-life balance is an important factor that many employees are now facing. This is partly due to globalization, technological advances, workplace changes, and demographic changes. This study contributed to the literature by shedding light on the mechanisms through which work-life balance leads to employees' participation in employee development activities. Further research needs to be done gain more insight into alternative job- or personal-related resources that might be related to the mechanisms through which work-life balance leads to participation in employee development activities.

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Appendix A

Cover letter

Beste medewerker,

In het kader van de Master Human Resource Studies aan de Universiteit van Tilburg doe ik een afstudeeronderzoek naar de balans tussen werk en privé en de deelname aan activiteiten die bijdragen aan de ontwikkeling van medewerkers. Om dit onderzoek zo goed mogelijk uit te voeren streef ik er naar een zo groot mogelijk aantal respondenten te bereiken, zodat ik uiteindelijk tot een representatief onderzoek kan komen. Door middel van deze e-mail/brief vraag ik hierbij om uw medewerking.

Het onderzoek

De vragenlijst bestaat uit een aantal verschillende werkgerelateerde onderwerpen, namelijk de balans tussen werk en privé, de deelname aan activiteiten die bijdragen aan de ontwikkeling van medewerkers, de betrokkenheid van medewerkers en de kwaliteit van de relatie tussen medewerkers en hun leidinggevenden. Het invullen van deze vragenlijst neemt ongeveer 10 tot 15 minuten van uw tijd in beslag. De vragenlijst wordt verzameld voor wetenschappelijk onderzoek. Dit betekent dat alle data vertrouwelijk behandeld zal worden. Uw collega's en direct leidinggevende(n) zullen uw antwoorden niet te zien krijgen.

Omdat ik uw bijdrage zeer waardeer zal ik na afloop van het onderzoek drie tegoedbonnen van bol.com ter waarde van € 10,- verloten onder alle deelnemers die deelgenomen hebben aan deze vragenlijst. Indien u kans wilt maken op deze tegoedbon kunt u aan het einde van deze vragenlijst uw e-mailadres invullen.

Instructie

Het is van belang dat u de vragen zorgvuldig doorleest en het antwoord invult dat als eerste in u opkomt. Bij alle vragen kunt u maximaal één antwoordcategorie kiezen. Er zijn geen goede of foute antwoorden. Om de vragenlijst in te vullen kunt u de onderstaande link gebruiken:
https://tilburgss.co1.qualtrics.com/SE/?SID=SV_8e8hodT1pndAsqF

U heeft de mogelijkheid om deze vragenlijst in te vullen tot en met woensdag 25 mei a.s.

Mocht u vragen of opmerkingen hebben of interesse hebben in de uitkomsten van dit onderzoek, dan kunt u contact opnemen met Marjolein de Kort.

Alvast hartelijk bedankt voor uw medewerking.

Marjolein de Kort
Master Human Resource Studies

Appendix B

Questionnaire

Deel A: Persoonsgegevens

Q1 Wat is uw geslacht?

- ❍ Man
- ❍ Vrouw

Q2 Wat is uw geboortejaar?

_____

Q3 Wat is uw hoogst genoten opleiding?

- ❍ Basisonderwijs
- ❍ Middelbaar onderwijs
- ❍ Lager beroepsonderwijs
- ❍ Middelbaar beroepsonderwijs (MBO)
- ❍ Hoger beroepsonderwijs (HBO)
- ❍ Wetenschappelijk onderwijs (WO)
- ❍ Anders, namelijk: _____

Q4 In welke branche bent u werkzaam?

- ❍ Gezondheidszorg
- ❍ Retail/woonbranche
- ❍ Onderwijs/educatie
- ❍ Industrie
- ❍ Bouwsector
- ❍ Logistiek/transportsector
- ❍ ICT-sector/telecomsector
- ❍ Juridische sector
- ❍ Zakelijke/financiële dienstverlening
- ❍ Horeca
- ❍ Overheid
- ❍ Anders, namelijk: _____

Q4 Hoe groot is de organisatie waar u werkzaam bent?

- ❍ Klein (< 50 medewerkers)
- ❍ Middelgroot (50 - 250 medewerkers)
- ❍ Groot (> 250 medewerkers)

Q5 Aantal dienstjaren bij uw huidige organisatie:

_____

Q6 Omvang dienstverband (aantal uren per week volgens contract):

_____

Q7 Wat voor soort contract heeft u?

- ❍ Een vast contract (onbepaalde tijd)
- ❍ Een tijdelijk contract
- ❍ Een contract via een uitzendbureau
- ❍ Anders, namelijk: _____

Q8 Deel B: Werkbeleving

Ik verzoek u vriendelijk om de onderstaande stellingen zorgvuldig door te lezen en het antwoord te kiezen dat het beste bij u past. Voor de volgende stellingen zijn er vijf antwoordmogelijkheden, variërend van "Nooit" tot "Altijd". Let op, u kunt per stelling maximaal één antwoordcategorie kiezen.

	Nooit	Zelden	Soms	Vaak	Altijd
Op mijn werk bruis ik van de energie.	❍	❍	❍	❍	❍
Als ik werk voel ik me fit en sterk.	❍	❍	❍	❍	❍
Ik ben enthousiast over mijn baan.	❍	❍	❍	❍	❍
Mijn werk inspireert mij.	❍	❍	❍	❍	❍
Als ik 's ochtends opsta heb ik zin om naar mijn werk te gaan.	❍	❍	❍	❍	❍
Wanneer ik heel intensief aan het werk ben voel ik mij gelukkig.	❍	❍	❍	❍	❍
Ik ben trots op het werk dat ik doe.	❍	❍	❍	❍	❍
Ik ga helemaal op in mijn werk.	❍	❍	❍	❍	❍
Mijn werk maakt mij heel enthousiast.	❍	❍	❍	❍	❍

Q9 Deel C: Balans werk en privé

Ik verzoek u vriendelijk om de onderstaande stellingen zorgvuldig door te lezen en het antwoord te kiezen dat het beste bij u past. Voor de volgende stellingen zijn er vijf antwoordmogelijkheden, variërend van "Nooit" tot "Altijd". Let op, u kunt per stelling maximaal één antwoordcategorie kiezen.

Hoe vaak komt het voor dat:

	Nooit	Zelden	Soms	Vaak	Altijd
u moeilijk aan uw verplichtingen thuis kunt voldoen omdat u in gedachten steeds met uw werk bezig bent?	❍	❍	❍	❍	❍
u weinig geniet van uw partner/ familie/ vrienden omdat u over het werk piekert?	❍	❍	❍	❍	❍
uw werktijden het moeilijk maken om aan uw verplichtingen thuis te voldoen?	❍	❍	❍	❍	❍
u door een succesvolle dag op uw werk goedgehumeurd thuis komt waardoor de sfeer thuis positief beïnvloed wordt?	❍	❍	❍	❍	❍
u na een prettige werkdag/week meer zin heeft om met uw partner/ familie/ vrienden activiteiten te ondernemen?	❍	❍	❍	❍	❍
u zich thuis beter aan de afspraken houdt, omdat dat op het werk ook van u gevraagd wordt?	❍	❍	❍	❍	❍
u weinig plezier heeft in uw werk omdat u over uw thuissituatie piekert?	❍	❍	❍	❍	❍
dat u zich moeilijk kunt concentreren op uw werk omdat u zich druk maakt over zaken in uw thuissituatie?	❍	❍	❍	❍	❍
dat uw verplichtingen thuis het moeilijk maken om uw werk goed uit te voeren?	❍	❍	❍	❍	❍
dat u na een gezellig weekend thuis met meer zin uw werk uitvoert?	❍	❍	❍	❍	❍
dat u na vrije tijd met uw partner/ familie/ vrienden goedgehumeurd op uw werk komt, waardoor de sfeer positief wordt beïnvloed?	❍	❍	❍	❍	❍
u op uw werk beter uw verantwoordelijkheden nakomt, omdat u dat thuis ook moet doen?	❍	❍	❍	❍	❍

Q10 Deel D: Relatie medewerkers en leidinggevende

Voor de volgende stellingen zijn er vijf antwoordmogelijkheden. Het is van belang om de stellingen zorgvuldig door te lezen, omdat de antwoordmogelijkheden variëren per stelling. Let op, u kunt per stelling maximaal één antwoordcategorie kiezen.

Weet u normaal gesproken hoe tevreden uw leidinggevende is met wat u doet?	❍ Nooit	❍ Zelden	❍ Soms	❍ Vaak	❍ Altijd
Hoe goed begrijpt uw leidinggevende uw werkgerelateerde problemen en behoeften?	❍ Helemaal niet	❍ Een beetje	❍ Redelijk goed	❍ Goed	❍ Zeer goed
Hoe goed herkent uw leidinggevende uw potentieel?	❍ Helemaal niet	❍ Een beetje	❍ Redelijk goed	❍ Goed	❍ Zeer goed
Ongeacht zijn/haar formele macht, hoe groot is de kans dat uw leidinggevende zijn/haar invloed gebruikt om u te helpen bij het oplossen van problemen in uw werk?	❍ Afwezig	❍ Kleine kans	❍ Gemiddeld	❍ Grote kans	❍ Zeer grote kans
Nogmaals, ongeacht zijn/haar formele macht, hoe groot is de kans dat hij/zij u "uit de brand zal helpen", koste wat kost?	❍ Afwezig	❍ Kleine kans	❍ Gemiddeld	❍ Grote kans	❍ Zeer grote kans
Ik heb genoeg vertrouwen in mijn leidinggevende om zijn/haar beslissingen te verdedigen en te verantwoorden als hij/zij niet aanwezig is om dit zelf te doen.	❍ Zeer mee oneens	❍ Mee oneens	❍ Neutraal	❍ Mee eens	❍ Zeer mee eens
Hoe zou u uw werkrelatie met uw leidinggevende karakteriseren?	❍ Extreem in-effectief	❍ Slechter dan ge-middeld	❍ Gemiddeld	❍ Beter dan ge-middeld	❍ Extreem effectief

Q11 Deel E: Deelname aan activiteiten die bijdragen aan de ontwikkeling van medewerkers

Ik verzoek u vriendelijk om de onderstaande stellingen zorgvuldig door te lezen en het antwoord te kiezen dat het beste bij u past. Voor de volgende stellingen zijn er zeven antwoordmogelijkheden, variërend van "Nooit" tot "Een keer per dag". Let op, u kunt per stelling maximaal één antwoordcategorie kiezen.

Houd alleen het afgelopen jaar in gedachten voor het beantwoorden van de onderstaande stellingen.

Hoe vaak heeft u ongeveer deelgenomen aan deze activiteit of ervaring in het afgelopen jaar?

	Nooit	Een keer per jaar	Een keer per half jaar	Een keer per kwartaal	Een keer per maand	Een keer per week	Een keer per dag
Feedback gevraagd aan uw **leidinggevende** over uw werkgerelateerde gedrag, functioneren of vaardigheden?	❍	❍	❍	❍	❍	❍	❍
Feedback gevraagd aan een **collega of ondergeschikte** over uw werkgerelateerde gedrag, functioneren of vaardigheden?	❍	❍	❍	❍	❍	❍	❍
Feedback gevraagd aan uw **cliënten of andere afnemers** over uw werkgerelateerde gedrag, functioneren of vaardigheden?	❍	❍	❍	❍	❍	❍	❍
Tijd besteed aan het serieus overwegen van uw eigen sterke en zwakke punten als werknemer in uw functie?	❍	❍	❍	❍	❍	❍	❍

Q12 Voor de volgende stellingen zijn er verschillende soorten antwoordmogelijkheden. Het is daarom van belang de stellingen zorgvuldig door te lezen. Let op, u kunt per stelling maximaal één antwoordcategorie kiezen. Houd alleen het afgelopen jaar in gedachten voor het beantwoorden van de onderstaande stellingen.

Hoe vaak heeft u ongeveer deelgenomen aan deze activiteit of ervaring in het afgelopen jaar?

	Nooit	Een keer per jaar	Een keer per half jaar	Een keer per kwartaal	Een keer per maand	Een keer per week	Een keer per dag
Projecten, opdrachten of taken op u genomen, waarbij het nodig was om nieuwe kennis of vaardigheden te leren?	❍	❍	❍	❍	❍	❍	❍
Opdrachten geruild met andere medewerkers, zodat u meer veelzijdig en meer ervaren bent geworden in het uitvoeren van taken?	❍	❍	❍	❍	❍	❍	❍
Uw functie/werktaken uitgebreid door het opnemen van nieuwe verantwoordelijkheden, die niet eerder van u vereist werden?	❍	❍	❍	❍	❍	❍	❍

Hoe vaak heeft u deelgenomen aan deze activiteit of ervaring in het afgelopen jaar?

	Nooit	Een keer	Twee keer	Drie keer	Vier keer	Vijf keer	Zes keer	Zeven keer of meer
Een verandering in functie (bijvoorbeeld door promotie of overplaatsing), waardoor het nodig was om nieuwe kennis/vaardigheden te leren, of uw huidige kennis/vaardigheden op een nieuwe manier toe te passen?	❍	❍	❍	❍	❍	❍	❍	❍

Q13 Voor de volgende stellingen zijn er verschillende soorten antwoordmogelijkheden. Het is daarom van belang de stellingen zorgvuldig door te lezen. Let op, u kunt per stelling maximaal één antwoordcategorie kiezen. Houd alleen het afgelopen jaar in gedachten voor het beantwoorden van de onderstaande stellingen.

Aan hoeveel van de onderstaande activiteiten of ervaringen heeft u deelgenomen in het afgelopen jaar?

	Geen	Een	Twee	Drie	Vier	Vijf	Zes	Zeven of meer
Aan hoeveel cursussen of workshops op of buiten uw werkplek heeft u deelgenomen, om nieuwe kennis of vaardigheden voor uw werk op te doen of te verbeteren?	❍	❍	❍	❍	❍	❍	❍	❍
Voor hoeveel officieel erkende opleidingen heeft u zich ingeschreven die relevant waren voor uw werk- of loopbaandoeleinden?	❍	❍	❍	❍	❍	❍	❍	❍
Hoeveel vakgerelateerde congressen, studiebijeenkomsten of seminars heeft u bijgewoond die relevant waren voor uw werk- of loopbaandoeleinden?	❍	❍	❍	❍	❍	❍	❍	❍

Hoe vaak heeft u ongeveer deelgenomen aan deze activiteit of ervaring in het afgelopen jaar?

	Nooit	Een keer per jaar	Een keer per half jaar	Een keer per kwartaal	Een keer per maand	Een keer per week	Een keer per dag
Hoe vaak heeft u buiten werktijd om, tijd doorgebracht met het lezen van boeken of tijdschriften, surfen op het internet, of het uitvoeren van soortgelijke activiteiten om op de hoogte te blijven of uzelf te ontwikkelen binnen uw vakgebied?	❍	❍	❍	❍	❍	❍	❍

Q14 Ik verzoek u vriendelijk om de onderstaande stellingen zorgvuldig door te lezen en het antwoord te kiezen dat het beste bij u past. Voor de volgende stellingen zijn er zeven antwoordmogelijkheden, variërend van "Nooit" tot "Een keer per dag". Let op, u kunt per stelling maximaal één antwoordcategorie kiezen.

Houd alleen het afgelopen jaar in gedachten voor het beantwoorden van de onderstaande stellingen.

Hoe vaak heeft u ongeveer deelgenomen aan deze activiteit of ervaring in het afgelopen jaar?

	Nooit	Een keer per jaar	Een keer per half jaar	Een keer per kwartaal	Een keer per maand	Een keer per week	Een keer per dag
Gewerkt met een formele mentor of coach die u de fijne kneepjes van het vak leerde en hielp uw werkgerelateerde kennis en vaardigheden te ontwikkelen?	❍	❍	❍	❍	❍	❍	❍
Een meer ervaren werknemer gevraagd om kennis of procedures met u te delen, die zouden kunnen helpen om beter in uw werk te presteren?	❍	❍	❍	❍	❍	❍	❍
Bij een leidinggevende of collega meegekeken om nieuwe kennis en vaardigheden gerelateerd aan uw werk op te doen?	❍	❍	❍	❍	❍	❍	❍
Inspanningen gedaan (bijvoorbeeld via uw netwerk) om mensen in de organisatie te ontmoeten die u kunnen helpen om uw werk- en loopbaan gerelateerde doelen te bereiken?	❍	❍	❍	❍	❍	❍	❍

Einde enquête.

Hartelijk dank voor uw medewerking!

Mocht u interesse hebben om kans te maken op één van de drie tegoedbonnen van Bol.com ter waarde van € 10,- dan kunt u in de onderstaande kolom uw e-mailadres invullen.

Appendix C

Scales

Scale work-life balance (SWING-scale, Geurts et al., 2005)

How often does it happen that:	Never	Rarely	Sometimes	Often	Always
You find it difficult to fulfill your domestic obligations because you are constantly thinking about your work?	❍	❍	❍	❍	❍
You do not fully enjoy the company of your spouse/family/friends because you worry about your work?	❍	❍	❍	❍	❍
Your work schedule makes it difficult for you to fulfill your domestic obligations?	❍	❍	❍	❍	❍
You come home cheerfully after a successful day at work, positively affecting the atmosphere at home?	❍	❍	❍	❍	❍
After a pleasant working day/working week, you feel more in the mood to engage in activities with your spouse/family/friends?	❍	❍	❍	❍	❍
You fulfill your domestic obligations better because of the things you have learned on your job?	❍	❍	❍	❍	❍
You do not fully enjoy your work because you worry about your home situation?	❍	❍	❍	❍	❍
You have difficulty concentrating on your work because you are preoccupied with domestic matters?	❍	❍	❍	❍	❍
Your domestic obligations make it difficult for you to perform your work?	❍	❍	❍	❍	❍
After spending a pleasant weekend with your spouse/family/friends, you have more fun in your job?	❍	❍	❍	❍	❍
After spending time with your spouse/family/friends, you go to work in a good mood, positively affecting the atmosphere at work?	❍	❍	❍	❍	❍
You are better able to keep appointments at work because you are required to do the same at home?	❍	❍	❍	❍	❍

Participation in employee development activities (Based on Hurtz & Williams, 2009)

Skill assessments

How often have you approximately engaged in this activity or experience during the past year?

	Never	Once a year	Once in a half year	Once in a quarter of a year	Once a month	Once a week	Once a day
Asked your supervisor or boss for feedback on your job-related behaviors, performance, or skills?	❍	❍	❍	❍	❍	❍	❍
Asked a co-worker for feedback on your job-related behaviors, performance, or skills?	❍	❍	❍	❍	❍	❍	❍
Asked your clients or other recipients of your work for feedback on your job-related behaviors, performance, or skills?	❍	❍	❍	❍	❍	❍	❍
Spent time giving serious consideration to your own strengths and weaknesses as an employee in your job?	❍	❍	❍	❍	❍	❍	❍

Job experiences

How often have you approximately engaged in this activity or experience during the past year?

	Never	Once a year	Once in a half year	Once in a quarter of a year	Once a month	Once a week	Once a day
Took on work projects, assignments, or tasks that required you to learn new knowledge or skills?	❍	❍	❍	❍	❍	❍	❍
Swapped or rotated assignments with other employees so that you would be more well-rounded in the types of tasks you have experience carrying out?	❍	❍	❍	❍	❍	❍	❍
Expanded the breadth of your work role by taking on new responsibilities that were not previously required of you?	❍	❍	❍	❍	❍	❍	❍

How often have you engaged in this activity or experience during the past year?

	Never	Once	Twice	Three times	Four times	Five times	Six times	Seven times or more
Took a transfer, promotion, or other job change to a position where you needed to learn new knowledge or skills or apply your current skills and abilities in a new way?	❍	❍	❍	❍	❍	❍	❍	❍

Formal courses and programs

How often have you engaged in this activity or experience during the past year?

	Never	Once	Twice	Three times	Four times	Five times	Six times	Seven times or more
How many on-site and off-site training courses or workshops did you participate in, in order to improve or learn new knowledge or skills for your job?	❍	❍	❍	❍	❍	❍	❍	❍
How many college courses did you enroll in that were relevant to your job or career goals?	❍	❍	❍	❍	❍	❍	❍	❍
How many professional conversations, meetings, or seminars did you attend that were relevant to your job or career goals?	❍	❍	❍	❍	❍	❍	❍	❍

How often have you approximately engaged in this activity or experience during the past year?

	Never	Once a year	Once in half a year	Once in a quarter of a year	Once a month	Once a week	Once a day
How often have you spent your own time outside of work reading books or periodicals, browsing the internet, or engaging in other similar activities to help stay current or get ahead in your line of work?	❍	❍	❍	❍	❍	❍	❍

Professional relationships

How often have you approximately engaged in this activity or experience during the past year?

	Never	Once a year	Once in half a year	Once in a quarter of a year	Once a month	Once a week	Once a day
Worked with a formal mentor or coach to help "show you the ropes" and develop your job-related knowledge and skills?	❍	❍	❍	❍	❍	❍	❍
Asked a more experienced employee to share knowledge or procedures that might help you to perform your job better?	❍	❍	❍	❍	❍	❍	❍
Worked alongside a supervisor or co-worker in order to gain new knowledge or skills related to your job?	❍	❍	❍	❍	❍	❍	❍
"Networked" and made efforts to meet people in the organization who could help you to active your job-related and career-related goals?	❍	❍	❍	❍	❍	❍	❍

Scale work engagement (UWES-9, Schaufeli & Bakker, 2003)

	Never	Rarely	Sometimes	Often	Always
At my work, I feel bursting with energy.	❍	❍	❍	❍	❍
At my job, I feel strong and vigorous.	❍	❍	❍	❍	❍
I am enthusiastic about my job.	❍	❍	❍	❍	❍
My job inspires me.	❍	❍	❍	❍	❍
When I get up in the morning, I feel like going to work.	❍	❍	❍	❍	❍
I feel happy when I am working intensely.	❍	❍	❍	❍	❍
I am proud of the work that I do.	❍	❍	❍	❍	❍
I am immersed in my job.	❍	❍	❍	❍	❍
I get carried away when I am working.	❍	❍	❍	❍	❍

Leader-member exchange (LMX-7, Graen & Uhl-Bien, 1995)

Do you usually know how satisfied your leader is with what you do?	❍ Never	❍ Rarely	❍ Sometimes	❍ Often	❍ Always
How well does your leader understand your job problems and needs?	❍ Not a bit	❍ A little	❍ A fair amount	❍ Quite a bit	❍ A great deal
How well does your leader recognize your potential?	❍ Not a bit	❍ A little	❍ A fair amount	❍ Quite a bit	❍ A great deal
Regardless of how much formal authority he/she has built into his/her position, what are the chances that your leader would use his/her power to help you solve problems in your work?	❍ None	❍ Small	❍ Moderate	❍ High	❍ Very high
Again, regardless of the amount of formal authority your leader has, what are the chances that he/she would "bail you out", at his/her expense?	❍ None	❍ Small	❍ Moderate	❍ High	❍ Very high
I have enough confidence in my leader that I would defend and justify his/her decision if he/she were not present to do so?	❍ Strongly disagree	❍ Dis-agree	❍ Neutral	❍ Agree	❍ Strong-ly agree
How would you characterize your working relationship with your leader?	❍ Extreme-ly in-effective	❍ Worse than average	❍ Average	❍ Better than average	❍ Extreme -ly effect-tive

Appendix D

Final results PCA

Table 2: PCA of work-life balance

Items	Component
	1
After spending a pleasant weekend with your spouse/family/friends, you have more fun in your job?	.826
After time with your spouse/family/friends, you go to work in a good mood, positively affecting the atmosphere at work?	.800
You fulfill your domestic obligations better because of the things you have learned on your job/	.777
You are better able to keep appointments at work because you are required to do the same at home?	.721
After a pleasant working day/working week, you feel more in the mood to engage in activities with your spouse/family/friends?	.712
You come home cheerfully after a successful day at work, positively affecting the atmosphere at home?	.595

Extraction Method: Principal Component Analysis.

a. 1 components extracted

Table 3: PCA of participation in employee development activities

Items	Component
	1
Took on projects, assignments or tasks that required you to learn new knowledge or skills?	.691
Asked a co-worker or subordinate for feedback on your job-related behaviors, performance or skills?	.682
Worked with a mentor or coach to help "show you the ropes" and develop your job-related knowledge and skills?	.677
Expanded the breath of your work role by taking on new responsibilities that were not previously required of you?	.659
Worked alongside a supervisor or co-worker in order to gain new knowledge or skills related to your job?	.655
Spend time giving serious consideration to your own strengths and weaknesses as an employee in your job?	.638
Asked a more experienced employee to share knowledge or procedures that might help you to perform your job better?	.611
Swapped or rotated assignments with other employees so that you would be more well-rounded in the types of tasks you have experience carrying about?	.598
Asked your supervisor or boss for feedback on your job-related behaviors, performance, or skills?	.571
"Networked" and made efforts to meet people in the organization who could help you to achieve your job- and career- related goals?	.564
Asked your clients or other recipients of your work for feedback on your job-related behaviors, performance, or skills?	.518
Took a transfer, promotion or other job change to a position where you needed to learn new knowledge or skills or apply your current skills and abilities in a new way?	.488
How often have you spent your time outside of work reading books or periodicals, browsing the internet, or engaging in other similar activities to help you stay current or get ahead in your line of work?	.365

How many college courses did you enrol in that were relevant to your job or career goals?	.330

Extraction Method: Principal Component Analysis.

a. 1 components extracted

Table 4: PCA of work engagement

Items	Component
	1
I am immersed in my job	.813
When I get up in the morning, I feel like going to work	.763
My job inspires me	.755
I am proud of the work that I do	.729
I feel happy when I am working intensely	.709
I get carried away when I am working	.687
I am enthusiastic about my job	.685
At my job, I feel strong and vigorous	.668
At my work, I feel bursting with energy	.665

Extraction Method: Principal Component Analysis.

a. 1 components extracted

Table 5: PCA of LMX

Items	Component
	1
How would you characterize your working job with your leader?	.815
Regardless of how much authority he/she has built into his/her position, what are the chances that your leader would use his/her power to help you solve your problems?	.815
Again, regardless of the amount of authority your leader has, what are the chances that he/she would "bail you out", at his/her expense?	.796
How well does your leader recognize your potential?	.794
How well does your leader understand your job problems and needs?	.731
I have enough confidence in my leader that I would defend and justify his/her decision if he/she were not present to do so?	.719

Extraction Method: Principal Component Analysis.

a. 1 components extracted

Appendix E

Templates Hayes

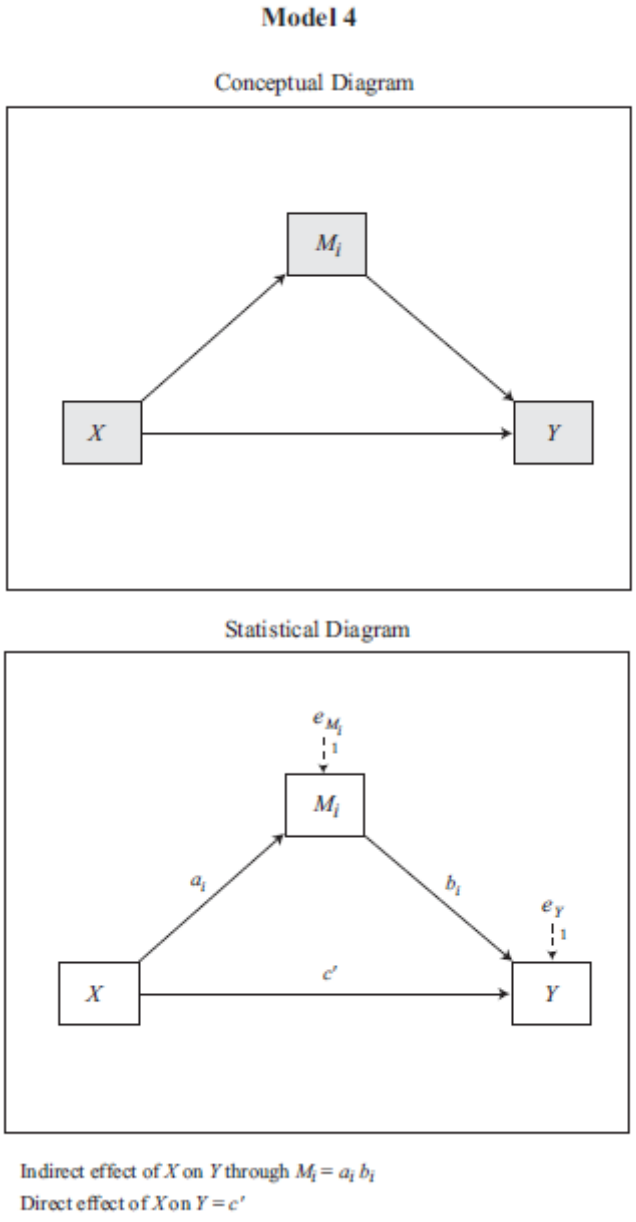

Figure 2. Template Hayes: mediation

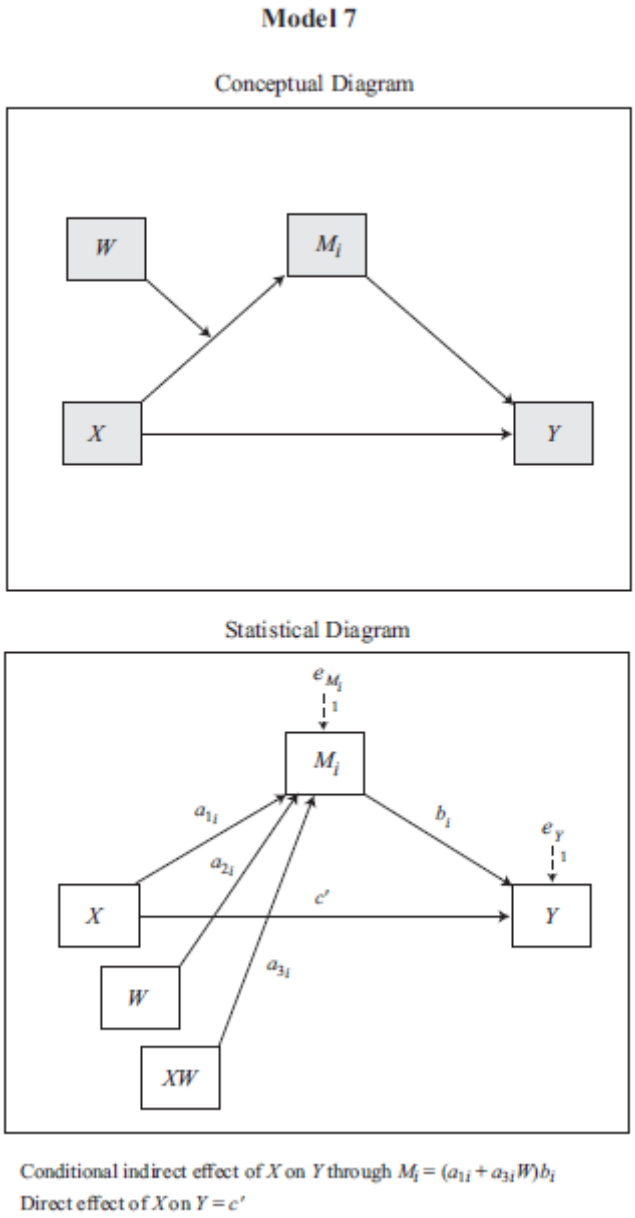

Figure 3. Template Hayes: moderated mediation

Appendix F

SPSS macro output

Model 4

```
Run MATRIX procedure:

************* PROCESS Procedure for SPSS Release 2.16.1 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2013). www.guilford.com/p/hayes3

**************************************************************************
Model = 4
    Y = Particip
    X = WorkLife
    M = WorkEnga

Statistical Controls:
CONTROL= Age@meas Q7       Large_fi Open_end

Sample size
        100

**************************************************************************
Outcome: WorkEnga

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,5285      ,2793      ,1373     7,2845     5,0000    94,0000
,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2,8564      ,2218    12,8786      ,0000     2,4160     3,2967
WorkLife      ,2627      ,0589     4,4585      ,0000      ,1457      ,3797
Age@meas      ,0076      ,0044     1,7262      ,0876     -,0011      ,0163
Q7           -,0056      ,0053    -1,0584      ,2926     -,0162      ,0049
Large_fi      ,1397      ,0758     1,8432      ,0685     -,0108      ,2901
Open_end     -,1102      ,1148     -,9598      ,3396     -,3380      ,1177

**************************************************************************
Outcome: Particip

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,5439      ,2958      ,6142     6,5115     6,0000    93,0000
,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,6879      ,7800     4,7279      ,0000     2,1389     5,2370
WorkEnga      ,1188      ,2182      ,5446      ,5873     -,3144      ,5521
WorkLife      ,1269      ,1372      ,9251      ,3573     -,1455      ,3993
Age@meas     -,0327      ,0095    -3,4539      ,0008     -,0514     -,0139
Q7            ,0102      ,0113      ,9040      ,3683     -,0122      ,0327
Large_fi      ,4742      ,1632     2,9063      ,0046      ,1502      ,7982
```

```
Open_end     -,5901      ,2440    -2,4185      ,0175    -1,0745     -,1056

************************* TOTAL EFFECT MODEL ****************************
Outcome: Particip

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,5418      ,2936      ,6096     7,8129     5,0000    94,0000
,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     4,0274      ,4674     8,6166      ,0000     3,0993     4,9554
WorkLife      ,1581      ,1242     1,2735      ,2060     -,0884      ,4047
Age@meas     -,0318      ,0093    -3,4241      ,0009     -,0502     -,0133
Q7            ,0096      ,0112      ,8532      ,3957     -,0127      ,0318
Large_fi      ,4908      ,1597     3,0734      ,0028      ,1737      ,8078
Open_end     -,6031      ,2419    -2,4936      ,0144    -1,0834     -,1229

***************** TOTAL, DIRECT, AND INDIRECT EFFECTS ********************

Total effect of X on Y
     Effect         SE          t          p       LLCI       ULCI
      ,1581      ,1242     1,2735      ,2060     -,0884      ,4047

Direct effect of X on Y
     Effect         SE          t          p       LLCI       ULCI
      ,1269      ,1372      ,9251      ,3573     -,1455      ,3993

Indirect effect of X on Y
             Effect    Boot SE   BootLLCI   BootULCI
WorkEnga      ,0312      ,0727     -,1110      ,1724

Partially standardized indirect effect of X on Y
             Effect    Boot SE   BootLLCI   BootULCI
WorkEnga      ,0398      ,0956     -,1455      ,2300

Completely standardized indirect effect of X on Y
             Effect    Boot SE   BootLLCI   BootULCI
WorkEnga      ,0257      ,0599     -,0869      ,1467

Ratio of indirect to total effect of X on Y
             Effect    Boot SE   BootLLCI   BootULCI
WorkEnga      ,1974    10,6694    -1,7655     3,5935

Ratio of indirect to direct effect of X on Y
             Effect    Boot SE   BootLLCI   BootULCI
WorkEnga      ,2460   368,0410    -1,2219    30,9155

Normal theory tests for indirect effect
     Effect         se          Z          p
      ,0312      ,0592      ,5277      ,5977

******************** ANALYSIS NOTES AND WARNINGS ************************

Number of bootstrap samples for bias corrected bootstrap confidence
intervals:
     5000

Level of confidence for all confidence intervals in output:
```

```
    95,00

NOTE: Some cases were deleted due to missing data.  The number of such
cases was:
  16

------ END MATRIX -----
```

Model 7

```
Run MATRIX procedure:

************* PROCESS Procedure for SPSS Release 2.16.1 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2013). www.guilford.com/p/hayes3

**************************************************************************
Model = 7
    Y = Particip
    X = WorkLife
    M = WorkEnga
    W = LMX

Statistical Controls:
CONTROL= Age@meas Q7       Large_fi Open_end

Sample size
        100

**************************************************************************
Outcome: WorkEnga

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,5725      ,3277      ,1308     6,4067     7,0000    92,0000
,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1,5507     1,2004     1,2918      ,1997     -,8334     3,9348
WorkLife      ,4665      ,3423     1,3626      ,1763     -,2134     1,1463
LMX           ,3920      ,3366     1,1647      ,2471     -,2765     1,0605
int_1        -,0680      ,0949     -,7172      ,4751     -,2564      ,1204
Age@meas      ,0088      ,0043     2,0385      ,0444      ,0002      ,0175
Q7           -,0073      ,0052    -1,3979      ,1655     -,0177      ,0031
Large_fi      ,1494      ,0746     2,0033      ,0481      ,0013      ,2975
Open_end     -,1038      ,1121     -,9261      ,3568     -,3265      ,1189

Product terms key:

 int_1    WorkLife    X     LMX

**************************************************************************
Outcome: Particip

Model Summary
```

```
          R       R-sq        MSE          F        df1        df2
p
      ,5439      ,2958      ,6142     6,5115     6,0000    93,0000
,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,6879      ,7800     4,7279      ,0000     2,1389     5,2370
WorkEnga      ,1188      ,2182      ,5446      ,5873     -,3144      ,5521
WorkLife      ,1269      ,1372      ,9251      ,3573     -,1455      ,3993
Age@meas     -,0327      ,0095    -3,4539      ,0008     -,0514     -,0139
Q7            ,0102      ,0113      ,9040      ,3683     -,0122      ,0327
Large_fi      ,4742      ,1632     2,9063      ,0046      ,1502      ,7982
Open_end     -,5901      ,2440    -2,4185      ,0175    -1,0745     -,1056

****************** DIRECT AND INDIRECT EFFECTS *************************

Direct effect of X on Y
     Effect         SE          t          p       LLCI       ULCI
      ,1269      ,1372      ,9251      ,3573     -,1455      ,3993

Conditional indirect effect(s) of X on Y at values of the moderator(s):

Mediator
               LMX     Effect    Boot SE   BootLLCI   BootULCI
WorkEnga     2,9768      ,0314      ,0733     -,1055      ,1956
WorkEnga     3,5800      ,0265      ,0622     -,1021      ,1493
WorkEnga     4,1832      ,0216      ,0568     -,0805      ,1591

Values for quantitative moderators are the mean and plus/minus one SD from
mean.
Values for dichotomous moderators are the two values of the moderator.

****************** INDEX OF MODERATED MEDIATION ************************

Mediator
              Index   SE(Boot)   BootLLCI   BootULCI
WorkEnga     -,0081      ,0343     -,1212      ,0356

****************** ANALYSIS NOTES AND WARNINGS *************************

Number of bootstrap samples for bias corrected bootstrap confidence
intervals:
     5000

Level of confidence for all confidence intervals in output:
    95,00

NOTE: Some cases were deleted due to missing data.  The number of such
cases was:
  16

------ END MATRIX -----
```

Appendix G

SPSS macro output additional analyses

Model 4

```
Run MATRIX procedure:

************* PROCESS Procedure for SPSS Release 2.16.1 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2013). www.guilford.com/p/hayes3

**************************************************************************
Model = 4
    Y = Particip
    X = Worklife
    M = WorkEnga

Statistical Controls:
CONTROL= Age@meas Q7       Large_fi Open_end

Sample size
        101

**************************************************************************
Outcome: WorkEnga

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,4014      ,1611      ,1629     3,6486     5,0000    95,0000
,0046

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,8900      ,2269    17,1409      ,0000     3,4395     4,3406
Worklife     -,1588      ,0736    -2,1563      ,0336     -,3049     -,0126
Age@meas      ,0140      ,0046     3,0655      ,0028      ,0049      ,0230
Q7           -,0105      ,0057    -1,8305      ,0703     -,0218      ,0009
Large_fi      ,1064      ,0821     1,2967      ,1979     -,0565      ,2693
Open_end     -,1534      ,1247    -1,2300      ,2217     -,4011      ,0942

**************************************************************************
Outcome: Particip

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,5753      ,3310      ,5780     7,7509     6,0000    94,0000
,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2,6333      ,8649     3,0448      ,0030      ,9161     4,3505
WorkEnga      ,3139      ,1933     1,6244      ,1076     -,0698      ,6977
Worklife      ,3422      ,1420     2,4093      ,0179      ,0602      ,6243
Age@meas     -,0325      ,0090    -3,6185      ,0005     -,0504     -,0147
Q7            ,0118      ,0110     1,0784      ,2836     -,0100      ,0336
Large_fi      ,4344      ,1559     2,7858      ,0065      ,1248      ,7440
```

```
Open_end     -,5691      ,2369    -2,4028      ,0182    -1,0394     -,0988

************************* TOTAL EFFECT MODEL ****************************
Outcome: Particip

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,5588      ,3122      ,5880     8,6246     5,0000    95,0000
,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant     3,8546      ,4312     8,9396      ,0000     2,9986     4,7106
Worklife      ,2924      ,1399     2,0902      ,0393      ,0147      ,5701
Age@meas     -,0282      ,0087    -3,2544      ,0016     -,0453     -,0110
Q7            ,0085      ,0109      ,7854      ,4342     -,0130      ,0301
Large_fi      ,4678      ,1559     3,0006      ,0034      ,1583      ,7773
Open_end     -,6173      ,2370    -2,6045      ,0107    -1,0878     -,1468

***************** TOTAL, DIRECT, AND INDIRECT EFFECTS ********************

Total effect of X on Y
     Effect         SE          t          p       LLCI       ULCI
      ,2924      ,1399     2,0902      ,0393      ,0147      ,5701

Direct effect of X on Y
     Effect         SE          t          p       LLCI       ULCI
      ,3422      ,1420     2,4093      ,0179      ,0602      ,6243

Indirect effect of X on Y
             Effect    Boot SE   BootLLCI   BootULCI
WorkEnga     -,0498      ,0504     -,2006      ,0140

Partially standardized indirect effect of X on Y
             Effect    Boot SE   BootLLCI   BootULCI
WorkEnga     -,0639      ,0669     -,2605      ,0215

Completely standardized indirect effect of X on Y
             Effect    Boot SE   BootLLCI   BootULCI
WorkEnga     -,0357      ,0357     -,1404      ,0103

Ratio of indirect to total effect of X on Y
             Effect    Boot SE   BootLLCI   BootULCI
WorkEnga     -,1705     8,2443    -3,0580      ,0674

Ratio of indirect to direct effect of X on Y
             Effect    Boot SE   BootLLCI   BootULCI
WorkEnga     -,1456     1,2849     -,8987      ,0638

Normal theory tests for indirect effect
     Effect         se          Z          p
     -,0498      ,0410    -1,2167      ,2237

******************** ANALYSIS NOTES AND WARNINGS ************************

Number of bootstrap samples for bias corrected bootstrap confidence
intervals:
     5000

Level of confidence for all confidence intervals in output:
```

```
    95,00

NOTE: Some cases were deleted due to missing data.  The number of such
cases was:
  15

------ END MATRIX -----
```

Model 7

```
Run MATRIX procedure:

************* PROCESS Procedure for SPSS Release 2.16.1 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2013). www.guilford.com/p/hayes3

**************************************************************************
Model = 7
    Y = Particip
    X = Worklife
    M = WorkEnga
    W = LMX

Statistical Controls:
CONTROL= Age@meas Q7       Open_end Large_fi

Sample size
        101

**************************************************************************
Outcome: WorkEnga

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,5170      ,2673      ,1453     4,8460     7,0000    93,0000
,0001

Model
              coeff         se          t          p       LLCI       ULCI
constant     1,4607      ,9474     1,5418      ,1265     -,4206     3,3420
Worklife      ,6601      ,4397     1,5011      ,1367     -,2131     1,5333
LMX           ,6395      ,2474     2,5844      ,0113      ,1481     1,1308
int_1        -,2173      ,1195    -1,8186      ,0722     -,4546      ,0200
Age@meas      ,0155      ,0043     3,5791      ,0006      ,0069      ,0241
Q7           -,0124      ,0054    -2,2777      ,0250     -,0232     -,0016
Open_end     -,1492      ,1180    -1,2648      ,2091     -,3834      ,0851
Large_fi      ,1151      ,0775     1,4841      ,1412     -,0389      ,2691

Product terms key:

 int_1    Worklife    X     LMX

**************************************************************************
Outcome: Particip
```

```
Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,5753      ,3310      ,5780     7,7509     6,0000    94,0000
,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2,6333      ,8649     3,0448      ,0030      ,9161     4,3505
WorkEnga      ,3139      ,1933     1,6244      ,1076     -,0698      ,6977
Worklife      ,3422      ,1420     2,4093      ,0179      ,0602      ,6243
Age@meas     -,0325      ,0090    -3,6185      ,0005     -,0504     -,0147
Q7            ,0118      ,0110     1,0784      ,2836     -,0100      ,0336
Open_end     -,5691      ,2369    -2,4028      ,0182    -1,0394     -,0988
Large_fi      ,4344      ,1559     2,7858      ,0065      ,1248      ,7440

****************** DIRECT AND INDIRECT EFFECTS ************************

Direct effect of X on Y
     Effect         SE          t          p       LLCI       ULCI
      ,3422      ,1420     2,4093      ,0179      ,0602      ,6243

Conditional indirect effect(s) of X on Y at values of the moderator(s):

Mediator
               LMX     Effect    Boot SE   BootLLCI   BootULCI
WorkEnga     2,9768      ,0042      ,0471     -,0815      ,1189
WorkEnga     3,5776     -,0368      ,0413     -,1591      ,0134
WorkEnga     4,1783     -,0778      ,0742     -,2755      ,0318

Values for quantitative moderators are the mean and plus/minus one SD from
mean.
Values for dichotomous moderators are the two values of the moderator.

****************** INDEX OF MODERATED MEDIATION ************************

Mediator
              Index   SE(Boot)   BootLLCI   BootULCI
WorkEnga     -,0682      ,0774     -,2951      ,0305

****************** ANALYSIS NOTES AND WARNINGS ************************

Number of bootstrap samples for bias corrected bootstrap confidence
intervals:
     5000

Level of confidence for all confidence intervals in output:
    95,00

NOTE: Some cases were deleted due to missing data.  The number of such
cases was:
  15

------ END MATRIX -----
```