

Are there positive changes in well-being due to E-coaching and are these changes moderated by the quality of the coaching relationship and the extent to which the expectations of coachees are met?

Student: Jana K. Verschoor

ANR: 439014

Supervisor

Prof. Dr. R.F. Poell

Second reader

Prof. Dr. M.J.P.M. van Veldhoven

Project period

September 2013 – June 2014

Project theme

The effectiveness of E-coaching for leadership development

Institute

Tilburg University

Faculty of Social and Behavioral Sciences

Master Human Resource Studies

Are there positive changes in well-being due to E-coaching and are these changes moderated by the quality of the coaching relationship and the extent to which the expectations of coachees are met?

Jana K. Verschoor

The aim of the present study was to find out whether positive changes in the well-being of managers (in terms of negative affect, positive affect, and life satisfaction) occurred due to a web-based coaching (WBC) intervention for leadership development. Furthermore, this study attempted to understand the changes in well-being considering differences in the quality of the coaching relationship and in the extent to which the expectations of managers are met. In total, 125 managers from five different organizations were coached online for three months. Their well-being was assessed one day prior to the WBC intervention, at three months (straight after the WBC intervention), and at six months (three-month follow-up). Overall, the WBC intervention was not able to show robust changes in well-being, compared to controls. Compared to face-to-face coaching, WBC is likely to have different qualities and should therefore be used for different purposes. WBC seems to be more effective when used for an action-oriented purpose based on specific demands rather than for personal development that is based on helping relationships. It is recommended for future research to examine the effectiveness of WBC with an action-oriented purpose and its long-term effect on well-being.

Keywords: *well-being, executive coaching, electronic coaching, leadership development, coaching relationship, expectancy*

Introduction

Due to economic recessions and new information technologies, the working environment is changing fast over the past decades (Dekker & Schaufeli, 1995; Hellgren, Sverke, & Isaksson, 1999). In order to save costs and improve organizational effectiveness, organizations have engaged in large-scale reorganizations and workforce reductions. Along with these changes, organizational members experience increased work stressors and uncertainty about the continuation of their job, which have negative consequences for their well-being (Dekker & Schaufeli, 1995; Hellgren et al., 1999).

In the present study, well-being will refer to the health status of the manager (Edwards, 1992). Specifically the managerial job is suffering from the constant changes in the workplace, as this job is already a demanding one (Sparks, Faragher, & Cooper, 2001). For example, new leadership skills are required to keep up with the current fast changing working environment (Ahrend, Diamond, & Webber, 2010; Mumford, Zaccaro, Harding, Jacobs, & Fleishman, 2000). Managers now have to be flexible, effective, and possess social skills (Evers, Brouwers, & Tomic, 2006). Overall, there is a high need for leadership development, which engages in building needed management skills and capability across organizations (Day, 2001; Sadler-Smith, 2006).

A popular method for leadership development is executive coaching (Day, 2001; McGovern et al., 2001; Sadler-Smith, 2006). Executive coaching can be described as an interactive process between a coach and executive (manager) to improve performance (Kombarakaran, Yang, Baker, & Fernandes, 2008). According to Sherman and Freas (2004), annual spending on executive coaching in the United States is estimated at \$1 billion and worldwide at \$2 billion. To add, most managers like coaching because they receive one-on-one assistance from a coach they respect, it often fits their timeframes, and if they are involved they can experience fast results (Sadler-Smith, 2006; Thach & Heinselman, 1999). Due to the major technological developments, leadership development is no longer limited to executives in a face-to-face manner. Technology opens the door to the use of innovative solutions, like electronic coaching (E-coaching), and offers a new way to help executives meet the current performance standards (Ahrend et al., 2010).

Multiple studies argue that social support can act as a buffer on the relationship between work stressors and well-being (Cohen & Wills, 1985; Frese, 1999; Thach & Heinselman, 1999; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). Since executive coaching can be seen as a type of workplace social support (Harris, Winskowski, & Engdahl, 2007; Kombarakaran et al., 2008), the buffering hypothesis suggests that a coaching intervention for leadership development may have a beneficial effect on well-being. If no effort is made by organizations to prevent a decrease in well-being for example by providing personal coaching, a lower well-being and concomitant changes in work attitudes and behaviors will lead to a decrease in organizational performance and increases in absenteeism and turnover (Danna & Griffin, 1999; Grawitch, Gottschalk, & Munz, 2006; Hellgren et al., 1999). The importance of well-being can be further outlined by the happy-productive worker thesis (Taris & Schreurs, 2009), which suggests that high individual well-being leads to high individual-level performance, which in turn can be translated into high organizational

performance. All in all, the present study aims to find out whether an E-coaching intervention for leadership development can lead to positive changes in well-being.

Then, according to the equity theory (Adams, 1965), individuals evaluate their relationships with others in terms of investments and outcomes. In interpersonal relationships people have a tendency to pursue reciprocity, which exists when the investments a person makes in the relationship are equal to his or her own outcomes and to the investments and outcomes of the other (Bakker, Schaufeli, Sixma, Bosveld, & van Dierendonck, 2000; Buunk & Schaufeli, 1999). The equity theory also states that "... the greater the inequity or lack of reciprocity that exists, the more distress individuals will experience" (Bakker et al., 2000, p. 426). When applying the equity theory to the interpersonal relationship between the coach and the manager in executive coaching, managers will evaluate the relationship with their coach depending on the experienced level of reciprocity. In executive coaching the coach is supposed to provide a service whereas the manager is supposed to receive (van Dierendonck, Schaufeli, & Sixma, 1994). Although both enter into a relationship with different perspectives, the manager can still feel inequity between his or her own investments in the relationship and the received outcomes, leading to more distress. Overall, how the quality of the relationship is evaluated by the manager is expected to influence well-being.

Furthermore, the expectancy violation theory (Burgoon, 1993) argues that in interpersonal relationships more positive outcomes will occur when the enacted behavior is more positive than expected and negative outcomes, like negative emotions and disappointment (Olson, Roese, & Zanna, 1996; Zeelenberg, van Dijk, Manstead, & van der Pligt, 2000), will emerge when the expectations are violated. Therefore, the extent to which the expectations of the manager, about the coach and the coaching process, are met is also likely to influence well-being. The coaching process is concerned with the facilitation of acquiring new skills, knowledge and perspectives to the manager, through support and feedback of the coach (Kombarakaran et al., 2008).

Overall, this study attempts to understand the changes in well-being due to E-coaching, considering differences in how the quality of the coaching relationship is evaluated by the manager and in the extent to which the expectations of the manager are met. When indeed changes in well-being occur, these two aspects of executive coaching will show more details on what is important in executive coaching for enhancing well-being. In summary, the following research question can be presented:

Are there positive changes in well-being due to an E-coaching intervention for leadership development, and are these changes moderated by the quality of the coaching relationship and the extent to which the expectations of managers are met?

This research contributes to the existing literature in several ways. To begin with, few studies have investigated the possible impact of coaching on well-being, even though there is an emphasis on maintaining well-being in organizations (Grant, Curtayne, & Burton, 2009; Palmer, Tubbs, & Whybrow, 2003). Moreover, a coaching intervention that takes place via electronic means is new and innovative, and therefore it might show new interesting perspectives on how and when it can be useful. At last, multiple studies support the common-factor perspective on executive coaching, which suggests that general factors common to coaching (like the quality of the coaching relationship and the extent to which the expectations of the manager are met) predict face-to-face (f2f) coaching outcomes, rather than specific techniques or models of coaching (de Haan, Duckworth, Birch, & Jones, 2013; McKenna & Davis, 2009; Wampold, 2001). The present study will show whether these two aspects in E-coaching are just as important for success as in f2f coaching.

Furthermore, the present study will show to what extent an E-coaching intervention can lead to positive changes in the well-being of managers, and subsequently, how important the roles of the quality of the coaching relationship and the extent to which the expectations of managers are met are for the changes in well-being. Therewith, this research provides information about the applicability of E-coaching within organizations for maintaining a healthy workforce during the constant changes at the workplace.

Theoretical framework

Executive coaching

Coaching compared to other disciplines. To clarify the role of coaching as a method that can be used in organizations for multiple purposes, coaching will be compared to other disciplines like counselling and mentoring as already done in many articles (Ellinger, 2003; Evers et al., 2006). These terms are often used interchangeably, but some scholars state the differences between them (Ellinger, 2003). On one hand, counselling often deals with short-term interventions to overcome the performance problems of the client. Mentoring, on the other hand, addresses a developmental perspective and therefore adopts a more long-term intervention that is career-focused. Coaching, as compared to counselling and mentoring, can be described as a process to help the client recognize his or her own problems and opportunities at first and on the basis of this improve their performance (Ellinger, 2003).

Furthermore, coaching is often confused with therapy (Cummings & Worley, 2008; Gray, 2006; Hart, Blattner, & Leipsic, 2001). Both disciplines focus on personal development, however, in coaching it is assumed that the coachee (manager) is healthy rather than suffering from ailments like in therapy. Bluckert (2005) also emphasized the absence of health problems in coaching. In addition, coaching is focused primarily on the future and is action-oriented, while therapy is focused on the past (Cummings & Worley, 2008).

According to Kombarakaran et al. (2008), a major strength of coaching is that it can provide both positive and negative feedback on the impact of the coachees' behaviors and at the same time respects the style and authority of the coachee. They state that other disciplines may suggest ideas for personal development but that coaching puts these ideas into action.

Definition and explanation. There are several definitions of executive coaching (Palmer et al., 2003). Next to the brief definition in the introduction, a more extended definition is given by Kilburg (1996), who defined executive coaching as:

a helping relationship formed between a client who has managerial authority and responsibility in an organization and a consultant who uses a wide variety of behavioral techniques and methods to help the client achieve a mutually identified set of goals to improve his or her professional performance and personal satisfaction and, consequently, to improve the effectiveness of the client's organization within a formally defined coaching agreement. (p. 142)

This definition of executive coaching will be used in the current research because it broadly explains the purpose of executive coaching, it indicates the coaching relationship and outlines the role of the client (coachee) and the consultant (coach).

Kilburg (1996) outlined five major components of a coaching intervention. In executive coaching, the coaching intervention provides the setting for both the coach and the coachee to collaborate towards achieving results. Step one deals with the development of a coaching agreement, also known as written contract. In a written contract, the coach, the coachee, and the organization define the terms of performance and avoid misunderstandings (Natale & Diamante, 2005). The importance of building a coaching relationship, and creating and managing the expectations of coaching success are the following steps. Step four concerns providing experiences of mastery and cognitive control. This step includes the identification and managing of coachees' problems and issues, and the use of feedback and other techniques by the coach to maximize the effect of the coaching intervention. The last step is the evaluation of coaching successes and failures (Kilburg, 1996).

With respect to the influence of gender on coaching successes, men and women may react differently during the coaching intervention (Wright, 2007). Women react more emotionally and passively compared to men who seem to react more rationally (Padavic & Reskin, 2002). So, there may be a difference in coaching outcomes for men and women. Moreover, according to Evers et al. (2006) and Oshagbemi (2004), younger managers may be more willing to take risks and are therefore more open to new experiences, like E-coaching, than older managers. For this reason, the coaching intervention may be more effective for younger managers than for older managers.

The focus on line managers. Thompson, Purdy, and Summers (2008) point out the importance of using coaching especially with line (or team) managers, as is done in the present study, instead of with senior managers. Purcell and Hutchinson (2007) defined line managers as those who are responsible for at least one employee directly reporting to them. Findings of Bowles, Cunningham, De La Rosa, and Picano (2007) and Kombarakaran et al. (2008) indicated that coaching can have stronger positive outcomes when used by line managers, because they have more direct contact with their subordinates and therefore are likely to have more influence on their subordinates. Since line managers play an important role in defining the environment of subordinates, a particular behavior from the manager can be seen as either stressful or positive for subordinates and therefore influence subordinates' well-being (Skakon, Nielsen, Borg, & Guzman, 2010; van Dierendonck, Haynes, Borrill, & Stride, 2004). The influence line managers can have on subordinates' well-being stresses the importance of positive behavior change and therewith maintaining or improving the well-being of the line manager in specific.

Web-based coaching

Definition and explanation. In executive coaching, several types can be distinguished. Face-to-face (f2f) coaching, telephone coaching, video coaching, and e-mail coaching are examples (Ribbers & Waringa, 2012). Except for f2f coaching the other examples are subject to E-coaching, which is defined by Ribbers and Waringa (2012) as “a non-hierarchical developmental partnership in which the learning and reflection process occurs both analogously and digitally, and in which a physical distance exists in communications” (p. 22). In the remainder of the present study, the term web-based coaching (WBC) will be used as an E-coaching intervention that takes place using e-mail coaching in an online environment. WBC has several unique advantages, which will be outlined further

below after the key aspects are discussed.

According to Ribbers and Waringa (2012), WBC has several key aspects. Before elaborating these key aspects, it should be mentioned that the book of Ribbers and Waringa is not based on scientific evidence. However, until now, they are the only ones who specifically address WBC and its features. First of all, the coach and coachee cannot see each other and are at a certain distance from each other. This creates social anonymity of both actors because there is no visible contact during the coaching intervention. In addition, the coach and coachee express themselves by writing (instead of verbal communication) and their conversation is asynchronous. When focusing on the synchronism of time, large differences can be seen between f2f coaching and WBC. During f2f coaching the contact between the coach and the coachee is completely synchronous and time-specific, while during WBC the contact is asynchronous and non-time-specific (Ribbers & Waringa, 2012).

Advantages and disadvantages. The three process elements of WBC (social anonymity, writing, and asynchronous communication) entail both advantages and disadvantages (Ribbers & Waringa, 2012).

Disadvantages may be the invisibility of the other, confusions, and misinterpretations. Coping with the invisibility of the other can be a big challenge because of the absence of body language, eye contact, and other forms of non-verbal communication. However, social anonymity can also contribute to achieving the core of the problem faster, when the coachee feels less inhibited. Confusions can arise when waiting for an e-mail from the other person. For example, a mix up of several coach conversations can lead to less focus on the content, or distractions in the environment may give the impression that the other is less concentrated. Also, the language skills of both actors can be a disadvantage. The coach is expected to write with less or no errors to prevent misunderstandings, which asks for a high accuracy and concentration. Furthermore, the coachee must feel at ease in order to express themselves in writing (Ribbers & Waringa, 2012).

When discussing the advantages of WBC, there are both time and cost savings, as one does not have to travel anymore (Ahrend et al., 2010; Ribbers & Waringa, 2012). Moreover, the contact can be scheduled according to one's own preferences (e.g., between appointments), leading to flexibility (Ribbers & Waringa, 2012). Another unique advantage of WBC over the other examples of coaching concerns writing. Managers will reflect on themselves while writing, since they have more time to think over their own actions and behavior. Furthermore, progress can be made in terms of the transfer of coaching, since the

knowledge gained can immediately be applied in the workplace (Belling, James, & Ladkin, 2004; Olivero, Bane, & Kopelman, 1997; Ribbers & Waringa, 2012; Stewart & Palmer, 2009).

The well-being of the manager

Definition and explanation. Well-being can be conceptualized in multiple ways (Hofmann, Luhmann, Fisher, Vohs, & Baumeister, 2013). One way to define well-being is the idea of happiness and sadness as emotional states (Hofmann et al., 2013). Hereby, well-being is explained as feeling good and not feeling bad. This subjective well-being (SWB), which refers to people's evaluations of their lives, is assumed to differ across moments and situations (Hofmann et al., 2013; Kim-Prieto, E. Diener, Tamir, Scollon, & M. Diener, 2013). There are a number of separable components of SWB: life satisfaction (global judgments over one's life), satisfaction with important domains (work satisfaction), positive affect (experiencing many pleasant emotions and moods, like enthusiasm and excitement), and low levels of negative affect (experiencing few unpleasant emotions and moods, like guilt and feeling distressed) (Diener, 2000; Kim-Prieto et al., 2013).

Since considerable research indicates that the notion of well-being is dominated by a focus on negative affect and positive affect (Watson & Pennebaker, 1989), the present study will focus on these two dimensions. In addition, the present study will investigate global life satisfaction as a component of SWB, since it is also important to "ask the person for their overall evaluation of their life, rather than summing across their satisfaction with specific domains, to obtain a measure of overall life satisfaction" (Diener, Emmons, Larsen, & Griffin (1985, p. 71). Therewith, this research focuses on the affective component as well as on the cognitive component of SWB.

Changes in well-being. Before turning to the explanation of possible changes in well-being due to an E-coaching intervention, it is important to mention that, in general, people are happy most of the time (Diener & Diener, 1996). In addition, people's level of well-being is reasonably stable over time (Diener, Lucas, & Scollon, 2006; Eid & Diener, 2004). It is therefore likely to have doubts about the effectiveness of E-coaching as an event for changing well-being. Fortunately, Diener et al. (2006) showed that interventions to increase happiness indeed can be effective. According to them, a lasting impact of life events on well-being (in terms of negative affect, positive affect, and life satisfaction) was found across nations, suggesting that well-being can indeed change after an event. Also, Lyubomirsky, Dickerhoof,

Boehm, and Sheldon (2011) argued that interventions or happiness-increasing activities (like committing to important goals) can increase well-being, at least in the short term and possibly in the longer term.

To study the process of change in well-being, the present study uses a longitudinal design (Pallant, 2007). Because not all managers were able to start with the WBC intervention at the same time (due to the number of coaches available) and the research had to be conducted within four years, managers were coached online for only three months and a short-term follow up was used. It was feasible to assess the well-being one day prior to the WBC intervention, at three months (straight after the WBC intervention had ended), and at six months (three-month follow-up). Therefore, the present study will show the changes in well-being due to the WBC intervention in a short period of time.

Fortunately, Grant et al. (2009) showed that short-term coaching can be effective and that it can help managers deal with uncertainty and the stresses inherent in organizational change. Managers in a public health agency were coached by professional coaches external to the organization and received four individual coaching sessions over 10 weeks. They found that, compared to controls, well-being increased significantly following f2f coaching. Like in the current research, they focused primarily on goal attainment and leadership development rather than on enhancing the well-being directly (like in therapy).

In contrast to the results according to Grant et al. (2009), coaching may affect the well-being of managers negatively. Gyllensten and Palmer (2006) explained this process using the notion of stress, which can be viewed as an aspect of the environment that damages well-being (Edwards, 1992). Coaching can in fact cause stress among coachees if they perceive it as a 'waste of time'. For example, when the skills of the coach are viewed as insufficient, or when there is an over emphasis on discussion and coaching does not lead to any action. The practical results from coaching appear to be important for coachees (Gyllensten & Palmer, 2006). Although the stress factor is not investigated in this research, the outcomes of Gyllensten and Palmer (2006) usefully show possible differences in how coaching can be perceived by managers and in its additional effect on their well-being.

How managers perceive coaching and the additional extent of behavioral change possible is influenced by managers' readiness to be coached, including their own attitudes, motivation levels, and commitment towards the coaching program (Ely et al., 2010; Kombarakaran et al., 2008). Kilburg (1996) described several factors that may contribute to a negative coaching outcome, like a lack of motivation of the manager (this list of factors was derived from the field of psychotherapy [Mohr, 1995], and adapted with permission). "The

executives who will benefit most from the coaching experience are those who are ready to be coached and do what is needed to accomplish the goals” (Kombarakaran et al., 2008, p. 78). Since managers’ commitment to behavioral change is necessary for a successful coaching intervention, it can be useful to figure out whether a manager is likely to benefit from coaching and hence whether it is worth making an investment in that person (Sadler-Smith, 2006).

Assuming that the manager is ready to be coached, positive changes in well-being are likely to occur concomitant with positive behavioral changes. The positive changes in well-being may be caused by several mechanisms that are associated with coaching as clearly explained by Grant et al. (2009). First, well-being can be enhanced when goals are personally valued. In coaching, a manager can set up self-concordant and personally valued goals. Among managers, this process associated with coaching leads to a higher intrinsic motivation and a better progress towards goal attainment, which in turn can enhance managerial well-being (Burke & Linley, 2007; Sheldon & Houser-Marko, 2001).

Second, the coaching process can decrease the impact of stressors on well-being. Thach and Heinselman (1999) highlighted that coaching leads to lower stress levels, since the coachee has an objective third party to talk to about their problems. Several other articles also suggest that coaching can enhance managers’ well-being by helping reduce their stress levels (Gyllensten & Palmer, 2006; Kampa-Kokesch & Anderson, 2001; Passmore, 2010), for example when coaches help them to manage work-related issues that caused them stress.

Third, self-acceptance and confidence can increase through coaching, which in turn has been found to be related to well-being (Grant et al., 2009; Gyllensten & Palmer, 2006). To add, the well-being of managers often increases when managers recognize the investment their company makes in them (Thach & Heinselman, 1999), in this case by providing personal coaching. All in all, it is expected that positive changes in well-being will occur due to the WBC intervention. This leads to the first hypothesis:

H1: The WBC intervention will lead to positive changes in well-being scores (in terms of negative affect, positive affect, and life satisfaction) over three time periods

The quality of the coaching relationship

The coaching relationship compared to the working alliance in psychotherapy. According to Baron and Morin (2009), many scholars have marked similarities between coaching and psychotherapy. Bordin (1979) reported three features that psychotherapy and

coaching have in common with respect to the alliance between therapist (coach) and client (coachee): tasks and agreements, bonding, and goals. Tasks and agreements refer to having a consensus between therapist and client on what needs to be done and how to achieve the end results. Bonding has to do with liking and trusting each other. Goals explain the consensus on the expectations in short- and long-term outcomes (Bordin, 1979).

Various studies have argued for adapting the working alliance in psychotherapy to the process of executive coaching, mainly since extensive research exists on psychotherapy and the relationships between therapist and client (Baron & Morin, 2012; Joo, 2005; Latham & Heslin, 2003). The rigorous outcomes in psychotherapy are very convincing (de Haan et al., 2013) and the quality of the working alliance is a robust factor predicting the success of therapy (Baron & Morin, 2009). Although in psychotherapy clients suffer from ailments, which is different from the needs and issues addressed in executive coaching, both psychotherapy and coaching focus on personal development that is based on helping relationships (Boyce, Jackson, & Neal, 2010; de Haan et al., 2013; Kilburg, 1996).

Definition and explanation. Boyce et al. (2010) defined a coaching relationship as “a one-on-one helping relationship between a client and a coach which is entered into with mutual agreement to improve the client’s professional performance and personal satisfaction” (p. 917). This definition of the coaching relationship is consistent with the earlier described definition of executive coaching by Kilburg (1996). Since coaching is a one-on-one intervention (Boyce et al., 2010; Peterson, 1996), each coaching intervention focuses on specific issues that are most relevant for the coachee and is therefore unique (Ely et al., 2010; Kemp, 2008).

Feldman and Lankau (2005) explained four phases of the coaching relationship: data gathering, feedback, implementation of the intervention (coaching), and evaluation. The first phase (data gathering) is focused on setting the foundation of the coaching relationship and coachees’ developmental goals are defined. In this phase, there are two major steps to distinguish. The first step concerns the establishment of a relationship with the coachee. This involves sharing mutual expectations of the coaching relationship and of the coaching process (norms of behavior, etc.). The second step involves data gathering about the coachee and the organization by the coach. In the second phase (feedback), the results of this data collection are presented to the coachee and based on these results the coachees’ improvement areas are discussed. In the third phase (implementation of the intervention), the coach collaborates with the coachee in sessions to work towards their established development goals. In the last phase

(evaluation), the impact of the coaching relationship is assessed (Feldman & Lankau, 2005).

Rapport, collaboration, commitment, and mutual trust are important characteristics of the coaching relationship (Boyce et al., 2010; Ely et al., 2010). According to Ely et al. (2010), rapport includes “the mutual understanding, agreement, and liking between the client and the coach that allows each to appreciate, recognize, and respect each other as individuals”, collaboration is “the cooperation that occurs between the client and the coach that permits and requires both to contribute in directing the development experience”, commitment reflects “the dedication of both client and coach to perform the work associated with the developmental experience”, and mutual trust provides “the mutual security needed to manage expectations, establish boundaries, and develop open and honest dialogue between the client and coach.” (p. 10) Bluckert (2005), Gyllensten and Palmer (2006), and van Woerkom (2010) stated that mainly trust (in the coach’s competence and in the person) is important in having a high quality coaching relationship. A safe environment where managers can discuss their problems should be provided in the coaching relationship (Gyllensten & Palmer, 2006; Wales, 2003). Another critical aspect is the involvement by the coach and the coachee (Ely et al., 2010). Both actors have responsibility for the partnership and therefore cannot create a successful coaching relationship without each other.

The moderating role of the quality of the coaching relationship. As already mentioned in the introduction, the equity theory (Adams, 1965) proposes that how the quality of the coaching relationship is evaluated by the manager is likely to influence in well-being. To explain, when managers have the feeling that their investments in the relationship are unequal to their own outcomes, they will evaluate the quality of the coaching relationship as low and they are likely to experience more distress, which in the end will have a negative influence on their well-being.

Yet, more positive changes in the behavior of the coachee and an increase in well-being are likely to appear when the coach and the coachee move towards a higher quality coaching relationship (Gyllensten & Palmer, 2006). According to them, a valuable, high quality coaching relationship has a positive impact on coachees’ management of stress, especially when it is clear for managers what to expect from coaching. In their study, nine individuals in two large organizations who had taken part in coaching were interviewed. The focus of the interviews was on the participants’ experiences of coaching and concerned the topic coaching and stress. The outcomes indicated that the well-being of managers can be improved even more (indirectly by reduced stress levels) as managers experience a higher

quality coaching relationship during the coaching intervention (Gyllensten & Palmer, 2006).

Furthermore, the quality of the coaching relationship in general is likely to be important for positive behavioral changes and well-being as several studies show that it is crucial to the coaching outcome. For example, positive outcomes emerged from the retrospective study of McGovern et al. (2001), in which 84% of the coachees identified the quality of the coaching relationship as critical to the success of coaching. However, no statistical correlation could be established between the coaching relationship and the success of coaching because of the descriptive nature and the design of their study, as already concluded by Baron and Morin (2009). Also, Wales (2003), who explored the experiences of 15 managers with coaching, states that the quality of the coaching relationship is crucial to the outcome. Her study took place in a major UK organization and each manager who participated had been in the coaching program for over a year. The coaching program focused on managers' own goals and specific learning needs. To add, recently convincing results have emerged from the study of de Haan et al. (2013). They examined the quality of the coaching relationship among 156 coach-coachee pairs. Strong indications were found that the working alliance between the coach and the manager, as rated by the manager, correlates with the outcome of executive coaching. Therewith, the coaching relationship can be seen as an important common factor that predicts the effectiveness of executive coaching.

In summary, theory suggests that a higher quality coaching relationship will lead to more positive changes in the well-being of the coachee compared to a lower quality coaching relationship. An important issue to bear in mind, concerns the fact that the results of the articles described above are based on a relationship in f2f coaching instead of E-coaching. Although both types of coaching differ on key aspects (Ribbers & Waringa, 2012), it is likely to assume that the phases and characteristics of the coaching relationship are the same in both types of coaching. All in all, this leads to the second hypothesis:

H2: A more positive change in well-being scores over three time periods will occur as the quality of the coaching relationship is higher

The extent to which the expectations of the manager are met

Definition and explanation. Olson et al. (1996) explained "'expectancy' forms the basis for virtually all behavior" (p. 211). To add, "we rarely interact with others without at least some expectations about how they will act or perform" (Miller & Turnbull, 1986, p. 233). Roese and Sherman (2007) described expectancy as "an event that may or may not occur with some degree of probability ..." (p. 94). When the expectancies are violated, often

negative emotions occur (Zeelenberg et al., 2000). For example, when the outcomes are worse than initially expected or, in other words, when the outcome does not live up to initial expectations (Olson et al., 1996; Zeelenberg et al., 2000). According to the expectancy violations theory of Burgoon (1993), which is a “theoretical model that attempts to predict and explain the consequences of expectancy confirmations and violations in interpersonal communication” (p. 31), more positive outcomes and interaction patterns are produced when the enacted behavior is more positive than expected, relative to expectancy confirmation. On the other hand, when the enacted behavior is more negative than the expected behavior, the outcomes are considered to be detrimental. Overall, it is important for success that the expectations are realistic and in line with the obtained outcomes (Burgoon, 1993; Zeelenberg et al., 2000).

The above described theory is already applied to the coaching literature. For example, Kilburg (1996) stated the importance of managing the expectations of coachees for coaching success. He specifically explains that unrealistic expectations of the coach and the coaching process may be a factor contributing to a negative coaching outcome. At the beginning of the coaching relationship, the coach can explain to the coachee what he or she can expect from coaching (Gyllensten & Palmer, 2006). When the coach and the coachee discuss and align their expectations, this can support the coaching process by eliminating possible concerns the manager may have (Mineur, 2012, Niemes, 2002). To add, when expectations are aligned it offers a greater chance of coaching success and misunderstandings with all their consequences can be avoided (Gyllensten & Palmer, 2006; Witherspoon & White, 1996).

The moderating role of the extent to which the expectations are met. Imagine a manager has experiences with the coach and the coaching process that are worse than he or she expected them to be beforehand, it can be deduced from the studies of Olson et al. (1996) and Zeelenberg et al. (2000) that the manager will experience disappointment and negative emotions. Therewith, it will have a negative influence on their well-being. The contrary applies when the manager has better experiences with the coaching process and the coach than expected (Burgoon, 1993). In summary, it is expected that the extent to which the expectations of managers are met will influence the changes in well-being. This leads to the third hypothesis:

H3: A more positive change in well-being scores over three time periods will occur as managers have better experiences with the coach and the coaching process compared to their initial expectations

Synthesis: Conceptual model

The variables mentioned in the theoretical framework combined with the hypotheses form a conceptual model as shown in Figure 1.

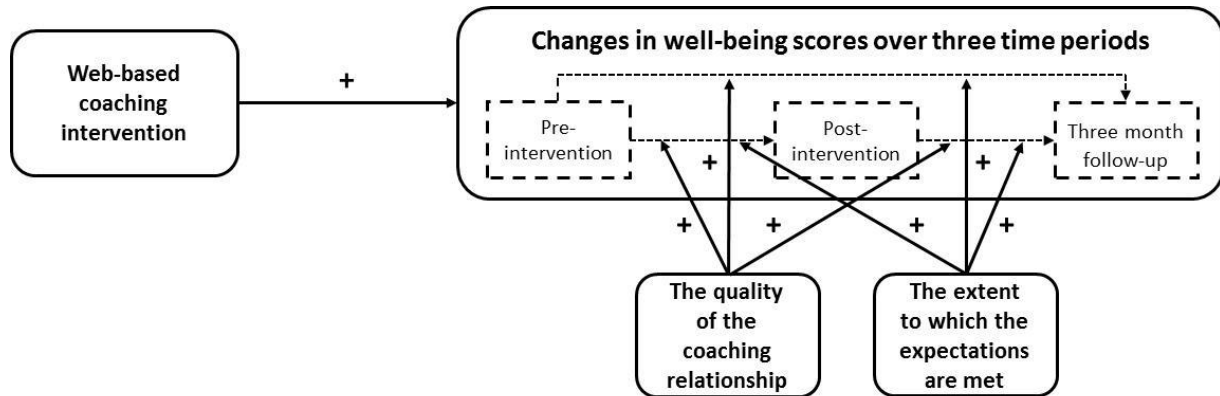


Figure 1. Conceptual model

Method

Research set-up and procedure

This study is a secondary data analysis based on the data collected in the project “increasing employees’ well-being through web-based coaching intervention for their managers”, funded by the Netherlands Organization for Health Research and Development (NWO-ZonMw). The duration of the project was 48 months, starting in January 2010. The study concerned a prospective, controlled behavioral intervention design.

Line and team managers were recruited from different business lines of several organizations: Supermarket, Bank, University 1, University 2, and University Medical Center. Managers could apply to join the research via e-mail, and therefore decided by themselves whether to join or not. Managers were selected by convenience sampling and not at random, because this sampling method was easy and inexpensive. The managers who joined the research were randomly assigned to either the experimental group or the control group to ensure approximate equivalence of the groups. Therefore, it was an experimental study with a pretest-posttest control group design (Singleton & Straits, 2005). The control group existed of one third of the applications. The experimental group started with the intervention at six different time points (six cohorts). The experimental group was compared with the control group at three measurement points, one day prior to the WBC intervention (T0), at three months (T1, at the end of the WBC intervention), and at six months (T2). The comparison was necessary to find out whether the experimental group significantly benefited from the

WBC intervention, in terms of well-being, compared to the control group. For information, the managers from the control group also received WBC, only after T2.

The WBC intervention was carried out on the job. The focus of the WBC intervention was different for each manager, since it depended on the need of the manager. Several internal coaches (HR professionals) and external (professional) coaches, all trained in WBC and therefore referred to as e-coaches, coached the experimental group. CoachCampus, designed by eCoachPro, provided the digital environment for communication between the manager and their e-coach. This website had several options for communication: sending messages using the dialogue function, sending short text messages using the text message (SMS) function, sharing documents in the digital library, and the use of a workbook to develop exercises. Participants required a safe, accessible, and easy to use way of digital communication, which was found in the CoachCampus environment. Other requirements met were the possibility to make use of e-mail and support for time and place independency. During the WBC intervention period, managers had the possibility to contact their e-coach every day (all the time) and on every computer with internet access the digital program was available

In advance, a pilot study was conducted to examine whether the questionnaire was clear to managers. Then standardized and validated questionnaires were filled in by all managers (both experimental and control groups) at multiple moments (T0, T1, and T2). The questionnaires were sent online.

Description of respondents

Sample size. The response rate is unknown in the present study, because the recruitment took place via different channels, like sending e-mails, and it is unknown how many managers saw the invitation to participate. Therewith, unfortunately, it is also unknown whether a selection bias took place.

In the experimental group (all cohorts included), 162 managers filled in the questionnaire prior to the WBC intervention (T0). At the end of the intervention (T1) 120 managers, and at six months (T2) 82 managers still participated in the research program (respectively 74.1% and 50.6% of the total sample in the experimental group). At T0 the control group consisted of 56 managers, at T1 of 49 managers, and at T2 of 31 managers (respectively 87.5% and 55.4% of the total sample in the control group). A summary of the sample sizes at the different time points in both groups can be found in Table 1.

Table 1

Sample sizes of the experimental and control groups (N)

	T0	T1	T2
Experimental group	162 (100%)	120 (74.1%)	82 (50.6%)
Control group	56 (100%)	49 (87.5%)	31 (55.4%)

Note. T0 = one day prior to the intervention, T1 = at three months (at the end of the intervention), T2 = at six months

The high attrition is due to various reasons. It is mainly due to considerable reorganizations within the participating organizations and the additional increased job demands, job insecurity, and job loss. Several managers from the experimental group had difficulty prioritizing coaching in their daily work, simply because they were too busy. In some cases, personal circumstances (like illness or a long vacation) were reasons for managers to step out of the research. In addition, a few managers could not get access to the digital coaching environment (CoachCampus). Finally, in the experimental group, only four of the six cohorts ($N = 68$) filled in the items to measure the quality of the coaching relationship, since this variable was added to the questionnaire later.

In order to find out whether the drop out was selective, the compositions of both the experimental and control groups were compared at the different time points in terms of demographic variables (age, years of experience as a manager, gender, and educational level). The demographic analyses showed that the gender ratio was somewhat different between both groups, with more males than females in the control group across the three time points, compared to a more equal number of males and females in the experimental group across the three time points. In addition, at T2, the experimental group consisted of somewhat more females than males. Both groups were quite comparable on age, years of experience as a manager and educational level across the three time points. Then, within the experimental group, attrition analyses were conducted on whether managers already participated in leadership development training in the last 12 months preceding the WBC intervention and on whether they already once received coaching before. The survivors included in the present study seem to be the managers who did not already receive leadership development training or coaching before, compared to the general sample of managers.

Also, the mean scores on each core variable within both the experimental and control groups between the total sample at T0, and the survivors and dropouts at T1 and T2 were compared. The scores on the components of well-being (negative affect, positive affect, and

life satisfaction) were quite the same for the survivors as well as the dropouts. Although it seemed that the scores on positive affect were slightly higher among the dropouts and the scores on life satisfaction slightly lower among the dropouts. Furthermore, within the experimental group it seemed that the experiences managers had with the coach and the coaching process were slightly worse among the dropouts in comparison with the survivors. Overall, the potential selective dropout should be kept in mind when interpreting the results.

Experimental group. This subsection presents the description of the respondents from the experimental group who filled in at least (part of) the questionnaires at T0 and T1 and/or T2 ($N = 125$). The other respondents (who filled in the questionnaire only at T0, T1, or T2; and those who did not fill in the questionnaire at T0) were deleted from the data set, and their corresponding information was not used when executing further analyses. A summary of the demographic information of the experimental group can be found in Tables 2 through 5.

The age of the respondents ranged from 28 until 62, with an average of 45 years old (with a standard deviation of 8.12). The minimum year of experience as a manager was 0 and the maximum year was 35. In three cases, the years of experience were rounded up in order to perform the analysis; 1.5 years became 2 years, 3.5 became 4 years, and 1.75 years became 2 years of experience. The average year of experience as a manager was 8.45 with a standard deviation of 7.23. 48.8% of the respondents ($N = 61$) were male and 51.2% ($N = 64$) were female. 111 respondents (88.8%) were highly educated, with 53 (42.4%) who completed higher academic education and an additional 58 (46.4%) who completed higher vocational education. The remaining 14 (11.2%) fell into the category of secondary education. The respondents were recruited from different organizations; 7 managers from a Supermarket (5.6%), 75 managers from a Bank (60.0%), 17 managers from University 1 (13.6%), 9 managers from University 2 (7.2%), and 17 managers from the University Medical Center (13.6%). The financial organization was co-requestor for the research project funded by NWO-ZonMw, therewith explaining why the number of participating managers in this organization was higher. The managers from the Supermarket and Universities participated out of interest in the topic. It is important to mention that the managers recruited from the Supermarket did not represent the control group and only represented the first cohort in the experimental group, since this organization was taken over by another Supermarket and ceased to exist. The distribution of the respondents in the experimental group across the cohorts was as follows: cohort 1, $N = 25$ (20.0%); cohort 2, $N = 16$ (12.8%); cohort 3, $N = 13$ (10.4%); cohort 4, $N = 19$ (15.2%); cohort 5, $N = 21$ (16.8%); and cohort 6, $N = 31$ (24.8%).

Table 2

Demographic information about age and years of experience as a manager

	M	SD	Min.	Max.
Age	44.98	8.115	28	62
Years of experience ¹	8.45	7.231	0	35

Note. M = mean, SD = standard deviation, Min. = minimum, Max. = maximum, 1 = years of experience as a manager

Table 3

Demographic information about gender and educational level

	Gender		Total
	Male	Female	
Higher academic education	23 (18.4%)	30 (24.0%)	53 (42.4%)
Higher vocational education	29 (23.2%)	29 (23.2%)	58 (46.4%)
Higher secondary education	4 (3.2%)	2 (1.6%)	6 (4.8%)
Lower secondary education	5 (4.0%)	3 (2.4%)	8 (6.4%)
Total	61 (48.8%)	64 (51.2%)	125 (100%)

Table 4

Demographic information about type of organization per cohort

	Type of organization					Total
	Supermarket	Bank	University 1	University 2	UMC	
Cohort 1	7 (5.6%)	4 (3.2%)	10 (8.0%)	4 (3.2%)	0 (0.0%)	25 (20.0%)
Cohort 2	0 (0.0%)	11 (8.8%)	1 (0.8%)	3 (2.4%)	1 (0.8%)	16 (12.8%)
Cohort 3	0 (0.0%)	12 (9.6%)	1 (0.8%)	0 (0.0%)	0 (0.0%)	13 (10.4%)
Cohort 4	0 (0.0%)	16 (12.8%)	0 (0.0%)	0 (0.0%)	3 (2.4%)	19 (15.2%)
Cohort 5	0 (0.0%)	10 (8.0%)	2 (1.6%)	1 (0.8%)	8 (4.0%)	21 (16.8%)
Cohort 6	0 (0.0%)	22 (17.6%)	3 (2.4%)	1 (0.8%)	5 (4.0%)	31 (24.8%)
Total	7 (5.6%)	75 (60.0%)	17 (13.6%)	9 (7.2%)	17 (13.6%)	125 (100%)

Note. UMC = University Medical Center

Furthermore, 28.8% of the respondents ($N = 36$) were assigned to an external coach. The rest of the respondents ($N = 89$, 71.2%) were assigned to an internal coach from the Supermarket ($N = 5$, 4.0%), Bank ($N = 36$, 28.8%), University 1 ($N = 22$, 17.6%), University

2 ($N = 13$, 10.4%), and University Medical Center ($N = 13$, 10.4%). The coaches were matched with the coachees in a cross-organizational manner, meaning that coaches were assigned to coachees regardless of the organization. 55 respondents (44.0%) had received training in leadership development (LD) during the last 12 months. Furthermore, 23 respondents (18.4%) had already once received coaching.

Table 5

Demographic information about type of coach, training received in leadership development and coaching received

		Type of coach ¹						Total
		External	Supermarket	Bank	University 1	University 2	UMC	
Training received in LD ²	No	22 (17.6%)	2 (1.6%)	18 (14.4%)	12 (9.6%)	6 (4.8%)	10 (8.0%)	70 (56.0%)
	Yes	14 (11.2%)	3 (2.4%)	18 (14.4%)	10 (8.0%)	7 (5.6%)	3 (2.4%)	55 (44.0%)
	Total	36 (28.8%)	5 (4.0%)	36 (28.8%)	22 (17.6%)	13 (10.4%)	13 (10.4%)	125 (100%)
Coaching received	No	27 (21.6%)	3 (2.4%)	30 (24.0%)	20 (16.0%)	10 (8.0%)	12 (9.6%)	102 (81.6%)
	Yes ³	9 (7.2%)	2 (1.6%)	6 (4.8%)	2 (1.6%)	3 (2.4%)	1 (0.8%)	23 (18.4%)
	Total	36 (28.8%)	5 (4.0%)	36 (28.8%)	22 (17.6%)	13 (10.4%)	13 (10.4%)	125 (100%)

Note. 1 = type of coach assigned to during the WBC intervention, 2 = training received in leadership development (LD) during the last 12 months, 3 = yes, received coaching before, and UMC = University Medical Center

Just like gender and age may influence coaching outcomes (as explained in the theoretical framework), it is also possible that participation in leadership development training in the last 12 months preceding the WBC intervention, whether the manager already once received coaching, educational level, and the number of years' experience as a manager influence coaching outcomes. Finally, since the research took place in different organizations, made use of both internal and external coaches, and consisted of multiple cohorts; the type of organization, type of coach, and number of cohort were also included as control variables.

Control group. This subsection presents the description of the respondents from the control group who filled in at least (part of) the questionnaires at T0 and T1 and/or T2 ($N = 49$), since these respondents participated in further analyses. A summary of the demographic information of the control group can be found in Tables 6 through 8.

The age averaged 45 years (with a standard deviation of 7.51); the youngest respondent was 31 years old and the oldest respondent was 59 years old. The average year of experience as a manager was 8.88 with a standard deviation of 6.78. The minimum year of experience as a manager was 1 and the maximum year was 24. In two cases, the years of experience were rounded up in order to perform the analysis; 3.5 became 4 years and 5.5

became 6 years of experience. The control group consisted of 32 males (65.3%) and 17 females (34.7%). In total, 83.7% ($N = 41$) were highly educated, with 20.4% ($N = 10$) who completed higher academic education and an additional 63.3% ($N = 31$) who completed higher vocational education, and only the remaining 8 (16.3%) fell into the category of secondary education. By far, most of the respondents in the control group were recruited from the Bank ($N = 39$, 79.6%), the rest was recruited from University 1 ($N = 1$, 2.0%), University 2 ($N = 1$, 2.0%), and the University Medical Center ($N = 8$, 16.3%). No managers within the control group were recruited from the Supermarket. Finally, compared to the experimental group, the control group represented only cohort 2 ($N = 7$, 14.3%), cohort 4 ($N = 13$, 26.5%), cohort 5 ($N = 10$, 20.4%), and cohort 6 ($N = 19$, 38.8%).

Table 6

Demographic information about age and years of experience as a manager

	M	SD	Min.	Max.
Age	45.22	7.509	30	58
Years of experience ¹	8.88	6.775	1	24

Note. M = mean, SD = standard deviation, Min. = minimum, Max. = maximum, 1 = years of experience as a manager

Table 7

Demographic information about gender and educational level

	Gender		Total
	Male	Female	
Higher academic education	5 (10.2%)	5 (10.2%)	10 (20.4%)
Higher vocational education	22 (44.9%)	9 (18.4%)	31 (63.3%)
Higher secondary education	2 (4.1%)	2 (4.1%)	4 (8.2%)
Lower secondary education	3 (6.1%)	1 (2.0%)	4 (8.2%)
Total	32 (65.3%)	17 (34.7%)	49 (100%)

Table 8

Demographic information about type of organization per cohort

	Type of organization				Total
	Bank	University 1	University 2	UMC	
Cohort 2	6 (12.2%)	0 (0.0%)	1 (2.0%)	0 (0.0%)	7 (14.3%)
Cohort 4	10 (20.4%)	0 (0.0%)	0 (0.0%)	3 (6.1%)	13 (26.5%)
Cohort 5	5 (10.2%)	1 (2.0%)	0 (0.0%)	4 (8.2%)	10 (20.4%)
Cohort 6	18 (36.7%)	0 (0.0%)	0 (0.0%)	1 (2.0%)	19 (38.8%)
Total	39 (79.6%)	1 (2.0%)	1 (2.0%)	8 (16.3%)	49 (100%)

Note. UMC = University Medical Center

Instruments

The well-being of the manager. This dependent variable was measured prior to the WBC intervention (T0), at three months (T1, at the end of the intervention) and at six months (T2), by the positive and negative affect scale (PANAS) by Watson, Clark, and Tellegen (1988), and the satisfaction with life scale (SWLS) by Diener et al. (1985). Both original questionnaires (including all items) can be found in Appendix A, Tables A1 and A2. The PANAS questionnaire was translated into Dutch by Peeters, Ponds, and Vermeeren (1996). A Dutch version of the SWLS of Diener et al. (1985) was available from 1991.

PANAS. PANAS consisted of 19 words (9 positive and 10 negative) that describe different moods and emotions. Normally, the scale also exists of 10 positive items. Unfortunately, there was an entry error in SPSS eliminating the answers on one positive emotion. Example mood states of positive affect (PA) were; interested, excited, strong, enthusiastic, inspired, and active. Example mood states of negative affect (NA) were; scared, guilty, upset, ashamed, and nervous (Watson et al., 1988). For each item the manager had to indicate to what extent he or she felt in the short term (e.g., at this moment or today) and at the longer-term (e.g., past year or general). Therefore, PA and NA are sensitive to fluctuations in mood as well as exhibiting trait-like stability (Watson et al., 1988). According to Watson and Pennebaker (1989) and Diener (2000), it is desirable to measure both dimensions separately because different conclusions often emerge about the antecedents and consequences of these independent dimensions of affect. Diener (2000) added that researchers may lose valuable information about the two types of affect if, they are combined into for example a global “happiness” score. Also, the different components of well-being can move

in different directions over time (Diener et al., 2006; Lucas, Diener, & Suh, 1996). To measure PANAS, a five-point Likert scale was used with the following answer possibilities: very slightly or not at all, a little, moderately, quite a bit, and extremely.

The nineteen items of PANAS were checked for their factor structure using Principal Component Analysis (PCA) at the three measurement points (T0, T1, and T2) in the control group as well as in the experimental group. Prior to performing PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrices at the three measurement points in both groups revealed many coefficients of .3 and above. In the experimental group, the Kaiser-Meyer-Olkin (KMO) value was .793 at T0, .784 at T1, and .759 at T2. In the control group, the KMO value was respectively .707, .603, and .437. At T1 in the control group, the recommended value of .6 was just exceeded (Pallant, 2007). At T2 in the control group, the recommended value was not exceeded and therefore it did not support the factorability of the corresponding correlation matrix. Since significant outcomes of Bartlett's test of sphericity were found, PANAS did support the factorability of their corresponding correlation matrixes at T0, T1 and T2 in the experimental group and at T0 and T1 in the control group. Initially, PCA revealed the presence of 5 or 6 components with eigenvalues exceeding 1. Catell's (1966) scree test was used to decide to retain two components for further investigation, since an inspection of the scree plots most of the times revealed a clear break after the second component. As the sample size decreases in time, a less clear break after the second component was noticed in the scree plot. The assumed two factor structure could be supported when the nineteen items were subjected to a factor analysis using Oblimin rotation with the number of extracted factors set as two. The ten items measuring negative emotions were clustered as the first factor, and the nine items measuring positive emotions as the second factor. The results of these analyses support using the positive affect items and the negative affect items as separate scales, as suggested by Watson and Pennebaker (1989) and Diener (2000). Finally, an overall weak negative correlation was noticed between the two factors. As an example, the results of PCA at T0 in the experimental group can be found in Appendix B, Table B1. The Cronbach's Alpha coefficients for the negative affect scale ranged from $\alpha = .79$ to $\alpha = .88$, and for the positive affect scale from $\alpha = .75$ to $\alpha = .81$, which indicate acceptable to good internal consistency (Pallant, 2007). The outcomes of the reliability analyses are in line with the previously found values of $\alpha = .83$ for the negative affect scale and $\alpha = .79$ for the positive affect scale (Peeters et al., 1996).

SWLS. The SWLS consisted of 5 items that describe the global life satisfaction. Examples of questions were: *“In most ways my life is close to my ideal”*, *“The conditions of my life are excellent”*, and *“If I could live my life over, I would change almost nothing”*. A seven-point Likert scale was used to measure life satisfaction that ranged from strongly disagree (1) to strongly agree (7).

When checking the five items of SWLS for their factor structure using PCA at three measurement points (T0, T1, and T2) in both experimental and control groups, all revealed only one component with eigenvalue exceeding one. The lowest KMO value was .693 and the highest .869. Furthermore, significant outcomes of Bartlett’s test of sphericity were found. To be sure, the scree plots were checked and they clearly revealed one component. Reliability analyses showed Cronbach’s Alpha coefficients between $\alpha = .74$ and $\alpha = .87$, which indicates at least acceptable internal consistency of the scale. Therewith, most of the Cronbach’s Alpha coefficients in the current study were somewhat lower compared to the Cronbach’s Alpha coefficient found by Pavot, Diener, Colvin, and Sandvik (1991), who reported a good internal consistency of $\alpha = .85$.

The quality of the coaching relationship. Horvath and Greenberg (1989) designed the Working Alliance Inventory (WAI), a scale that originally measures the quality of the working alliance in psychotherapy. Nowadays, the WAI, which was originally defined by Greenson (1965), is a widely used, well-validated tool to measure the “working alliance” or coaching relationship in executive coaching (de Haan et al., 2013). Next to the complete 36-item WAI, a 12-item short form of WAI (WAI-S) was developed by Tracey and Kokotovic (1989) and since this development the WAI-S has been widely used in psychotherapy research (Hatcher & Gillaspay, 2006; Martin, Gaske, & Davis, 2000). In this current research, the 12-item short form or WAI-S was used to rate the quality of the coaching relationship from a client (manager) perspective. The WAI consisted of three subscales; “tasks”, “bonds”, and “goals”, based on the model of Bordin (1979). The questionnaire can be found in Appendix A, Table A3. This moderating variable was rated by coachees three or four weeks after they started with the WBC intervention using a seven-point Likert scale that ranged from never (1) to always (7). Examples of questions were: *“My coach and I trust one another”*, and *“I believe the way we are working to support my development is correct”*. Two items were reversed: *“I have doubts about what we are trying to accomplish”* and *“My coach and I have different ideas on what my development needs are”*, since they were negatively formulated.

With a KMO value of .861 and a significant outcome of Bartlett's test of sphericity, the questionnaire was suitable for being subjected to PCA (Pallant, 2007). PCA revealed the presence of two components with eigenvalues exceeding 1, explaining 57.6%, and 11.5% of the variance respectively. An inspection of the scree plot revealed a clear break after the first component. When one component was extracted, this component explained 57.5% of the variance (see Appendix B, Table B2, for information about the factor loading on component 1 and the scree plot). Scale analysis revealed a Cronbach's Alpha value of $\alpha = .93$, which indicates an excellent internal consistency. The reliability of the scale in the current study is consistent with earlier findings of Horvath and Greenberg (1989), who also found a Cronbach's alpha of $\alpha = .93$ in client scores.

The extent to which the expectations of the manager are met. This moderating variable concerns the expectations of managers about the coach and the coaching process compared to their real experiences. The expectations of managers were measured one day prior to the intervention (T0) and the experiences of managers at the end of the intervention (T1). This was necessary to find out whether managers' experiences were better or worse than initially expected. Examples of questions at T0 were: *"I expect that my coach will understand me well"*, *"I expect that my coach can create a setting in which I feel at ease"*, and *"I expect that the coaching process will be concentrated on my development goals."* This scale consisted of 9 items. At T1, the questions involved the same theme; only now manager's experiences or opinions were asked, for example *"In my opinion, my coach understood me well"*. Furthermore, at T1 one item was added: *"In my opinion, I had enough time for the dialogue on CoachCampus.nl during the coaching process"*, and therefore consisted of 10 items. A seven-point Likert scale that ranged from strongly disagree (1) to strongly agree (7) was used for both scales. Both questionnaires including all items can be found in Appendix A, Table A4 (expectations at T0) and Table A5 (experiences at T1). Both scales were self-designed by the project team for the WBC intervention study.

After preliminary factor analysis and reliability analysis, it was decided to eliminate one item from both questionnaires (*"I expect that the coaching process will take me a lot of energy"* at T0, and *"In my opinion, the coaching process took me a lot of energy"* at T1, in both scales item four), since the Cronbach's Alpha coefficient increased in both questionnaire (at T0 from $\alpha = .71$ to $\alpha = .81$, and at T1 from $\alpha = .83$ to $\alpha = .89$) when this item was deleted, and this item loaded negatively on the first component (at T0 $-.076$, and at T1 $-.066$) when interpreting the output of PCA. The KMO value was .790 at T0 and .821 at T1, including item

four. The KMO value was .795 at T0, and .833 at T1, when item four was deleted. The outcomes of Bartlett's test of sphericity were significant. After the elimination of this item in both questionnaires, the results of PCA still did not reveal a one factor solution with an eigenvalue above 1 since PCA showed two components at both moments of measuring with an eigenvalue above 1. However, an inspection of the scree plot revealed a clear break after the first component. When one component was extracted, this component explained 44.5% of the variance at T0 and 55.6% at T1. In Appendix B, Table B3, the factor loadings on component 1 and the scree plot at T0 (with item four deleted) can be found.

Statistical analyses

All statistical analyses were performed using SPSS 21.0 for Windows. First, the data was checked for outliers and missing data using SPSS. In total, eleven outliers were identified by checking the residual scatterplots (seven in the experimental group and four in the control group), because their standardized residual values fell outside the range from 3.3 to -3.3 (Tabachnick & Fidell, 2007) and no explanations could be found. Those eleven respondents were indicated as missing values. To minimize the negative effect of missing data, "exclude cases pair wise" was used.

Assumptions. Before testing the hypotheses, the assumptions of regression analysis were checked. Sample size should fulfill the criterion of Green (1991) which says that a regression analysis should at least have $N \geq 50 + 8 \times k$ cases, with k as the number of independent variables. With a maximum number of two predictors in each separate hierarchical regression analysis, an N of $50 + 8 \times 2 = 66$ should be obtained. With a sample size varying between $N = 68$ and $N = 125$ in the experimental group, this criterion was met.

Initially, no violations of the assumption of multicollinearity were found because no correlations between the independent variables were higher than .7 and inspection of the Variance Inflation Factor (VIF) and Tolerance values showed VIF values much lower than the critical threshold of 10 and Tolerance exceeded the critical threshold of .10 (Pallant, 2007). However, multicollinearity was noticed in the correlation matrixes when computing the interaction term between the dependent and moderating variable in SPSS. To decrease multicollinearity, mean centering was applied for the independent and moderating variables.

To check the distribution of scores, the histograms and normal probability plots were observed. The negative affect scales were positively skewed and the life satisfaction scales were somewhat negatively skewed. The results from those regressions need to be interpreted

with caution as the assumption of normal distribution of the dependent variable was violated here. Finally, inspections of residual scatterplots and normal probability plots revealed no major violations of the assumptions of linearity, independence of residuals, and homoscedasticity.

Hypotheses testing. To test H1, a mixed between-within subjects analysis of variance (ANOVA) was used, since this analysis provided information about the impact of a WBC intervention on well-being (within-subject factor or time) and whether there was a significant difference in scores on well-being between the experimental and control groups due to the WBC intervention (between-subject factor or group). As a reminder, the well-being of the manager in the present study could be distinguished in three components; negative affect, positive affect, and life satisfaction. Therefore, separate analyses were used for each component of well-being. Using this analysis the equivalence of both groups could be observed by comparing the scores at T0, in which equivalent groups is achieved when the scores on well-being in both groups are not significantly different at T0. In addition, the scores on the components of well-being within both groups at T1 and T2 could be compared, to observe whether there occurred a significant difference in scores on well-being within and between the two groups.

To compare the differences in scores on well-being over time between the experimental and control groups in an extended way, new variables were created by subtracting the scores at T0 from the scores at T1, at T1 from the scores at T2, and at T0 from the scores at T2 within both groups. Based on these new variables, which comprised the mean difference between two measure points, the experimental group could be compared with the control group using independent sample t-tests in an additional analysis.

Following this, H2 and H3 were examined using hierarchical regression analyses. Since well-being in the present study consisted of three components, in total, eighteen separate hierarchical regression analyses were performed (see Appendix B, Figure B1). This study looked for a manageable approach for dealing with continuous variable interactions. Regression analysis is an appropriate means by which to deal with continuous variable interactions (Pallant, 2007). Regression analyses comprised three blocks of variables (three models). To test both moderating hypotheses, first the moderating variable and the independent variable (with separate analyses for the three components and across the different time points), were entered into the regression (Model 1). To test H3, the moderating variable was created by subtracting the scores at T0 (the expectations) from the scores at T1 (the

experiences). In this way, a positive score means that the experiences with the coaching process and the coach were better than the expectations and a negative score means the opposite (the experiences were worse than expected). In the second model, the interaction term between the two variables was entered. The effects of the control variables on the multiple regression models in both H2 and H3 were tested in the third model.

Results

Descriptive statistics

After the variables had been tested for their factor structure, a correlation analysis using Pearson product-moment correlation was carried out. This analysis comprised the correlations of the variables within and between the different time points and revealed the basic relations between them. The means, standard deviations, and correlations concerning the core variables from the conceptual model (in the experimental group) can be found in Table 9.

With respect to the components of well-being, negative affect correlated negatively to positive affect at T0 ($r = -.248, p < .01$), T1 ($r = -.307, p < .05$), and T2 ($r = -.251, p < .05$). Negative affect also correlated negatively to life satisfaction at T0 ($r = -.191, p < .05$), T1 ($r = -.327, p < .01$), and T2 ($r = -.462, p < .01$). Positive affect and life satisfaction showed a significant positive correlation only at T1 ($r = .196, p < .05$). In addition, the expectations of managers prior to the WBC intervention significantly correlated with all components of well-being at T0. The expectations correlated negatively with negative affect ($r = -.223, p < .05$), and positively with positive affect ($r = .298, p < .01$) and life satisfaction ($r = .336, p < .01$). The experiences of managers only correlated positively with life satisfaction as a component of well-being at T0 ($r = .244, p < .01$) and at T1 ($r = .226, p < .05$). In addition, the quality of the working alliance between the coach and the manager (from manager perspective) correlated positively with the experiences of managers ($r = .454, p < .01$), and with the extent to which the expectations of managers were met ($r = .322, p < .01$).

The means, standard deviations, and correlations between the three components of well-being and the different time points of all respondents (taken both experimental and control groups together) can be found in Appendix C, Table C1. Furthermore, correlations with respect to the components of well-being at the different time points, the moderating variables and control variables (logically these correlation analyses were obtained from the experimental group) can be found in Appendix C, Tables C2 through C4.

Table 9

Means, standard deviations and correlations of the variables in the experimental group between the different time points.

Variables	M	SD	N	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) T0 Negative Affect	1.56	.47	124												
(2) T0 Positive Affect	3.90	.44	125	-.248**											
(3) T0 Life Satisfaction	5.67	.84	124	-.191*	.160										
(4) T0 Expectations	5.81	.55	125	-.223*	.298**	.336**									
(5) T1 Negative Affect	1.53	.46	120	.714**	-.114	-.231*	-.068								
(6) T1 Positive Affect	3.95	.43	120	-.332**	.708**	.230*	.272**	-.307**							
(7) T1 Life Satisfaction	5.79	.78	119	-.237**	.039	.725**	.207*	-.372**	.196*						
(8) T1 Experiences	5.40	.89	119	-.127	-.018	.244**	.165	-.048	.086	.226*					
(9) Quality relationship	5.00	.93	68	.040	.279*	.314**	.183	.150	.118	.237	.454**				
(10) T2 Negative Affect	1.44	.40	81	.633**	.000	-.383**	-.266*	.669**	-.241*	-.494**	.010	.201			
(11) T2 Positive Affect	3.90	.45	82	-.289**	.512**	.189	.116	-.329**	.602**	.229*	.108	.160	-.251*		
(12) T2 Life satisfaction	5.80	.72	82	-.331**	.110	.659**	.226*	-.273*	.148	.733**	.217	.209	-.462**	.192	
(13) ExpcomtoExp	-.41	.97	119	.003	-.188**	.043	-.422**	-.007	-.075	.103	.825**	.322**	.153	.004	.084

Note. M = means, SD = standard deviations, N = number of respondents

1 2 5 6 10 11 answering scale from very slightly or not at all (1) to extremely (5). 3 4 7 8 12 answering scale from strongly disagree (1) to strongly agree (7). 9 answering scale from never (1) to always (7).

13 expectations compared to the experiences, answering score of 0 means that the experiences with the coach and the coaching process were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected

T0 = measured one day prior to the coaching intervention. T1 = measured at three months (at the end of the coaching intervention). T2 = measured at six months (3-months follow-up)

* $p < .05$ ** $p < .01$ (two-tailed)

Changes in well-being

A mixed between-within subjects ANOVA was conducted to assess the impact of a WBC intervention in the experimental group (compared to a control group who did not follow the WBC intervention) on the respondents' scores on well-being, across three time periods (pre-intervention, post-intervention and three-month follow-up). To begin with, no significant differences were found in scores on well-being one day before the coaching intervention between the experimental and control groups, suggesting equivalent groups. Tables 10, 11, and 12, show the scores at the different time points on the different components of well-being for both experimental and control groups. Besides, Plot 1, 2, and 3 show the changes over time in respectively negative affect, positive affect, and life satisfaction.

In all three analyses the assumption of sphericity, assessed by SPSS using Mauchly's Test of Sphericity, was not violated. To add, the assumption of homogeneity of variances, checked by Levene's test of Equality of Error Variances, also was not violated in all three analyses. Before the main effects were observed, first the interaction effects were assessed to find out whether there occurred a similar change in scores over time for both the experimental and control groups. With respect to negative affect as a component of well-being, there was no significant interaction between type of group and time, Wilks Lambda = .98, $F(2,104) = .95$, $p = .39$, partial eta squared = .02. Also, in positive affect as a component of well-being, no significant interaction between type of group and time was found, Wilks Lambda = .98, $F(2, 105) = 1.04$, $p = .36$, partial eta squared = .02. However, in life satisfaction as a component of well-being, a significant interaction between type of group and time was found, Wilks Lambda = .93, $F(2,105) = 4.13$, $p = .02$, partial eta squared = .07 (see Plot 3). This significant interaction means that the impact of one variable is influenced by the impact of the second variable and therefore the main effects have to be interpreted very carefully, as general conclusions are usually not appropriate (Pallant, 2007).

No substantial main effect for time was found in negative affect, Wilks Lambda = .96, $F(2,104) = 2.08$, $p = .13$, partial eta squared = .04. There was a substantial main effect for time in positive affect, Wilks Lambda = .90, $F(2,105) = 5.98$, $p = .003$, partial eta squared = .10, with both experimental and control groups showing an increase in positive affect across T0 and T1 and a reduction across T1 and T2 (see Plot 2). Furthermore, also a substantial main effect for time was found in life satisfaction, Wilks Lambda = .89, $F(2,105) = 6.28$, $p = .003$, partial eta squared = .11, with both experimental and control groups showing an increase in life satisfaction across T0 and T1. Across T1 and T2, no clear reduction in life satisfaction was observed in the experimental group which was the case in the control group (see Plot

C3). According to the commonly used guidelines proposed by Cohen (1988, p. 284-7), both significant results suggest in between a moderate and large effect size.

Table 10

Negative affect for the experimental and control groups across three time periods

Time period	Experimental group			Control group		
	N	M	SD	N	M	SD
Pre-intervention	76	1.55	.46	31	1.52	.52
Post-intervention	76	1.51	.48	31	1.43	.43
3-mth follow-up	76	1.44	.39	31	1.47	.47

Note. N = number of respondents, M = means, SD = standard deviations

Answering scale from very slightly or not at all (1) to extremely (5)

Table 11

Positive affect for the experimental and control groups across three time periods

Time period	Experimental group			Control group		
	N	M	SD	N	M	SD
Pre-intervention	77	3.87	.41	31	3.96	.48
Post-intervention	77	3.94	.43	31	4.10	.45
3-mth follow-up	77	3.88	.44	31	3.95	.52

Note. N = number of respondents, M = means, SD = standard deviations

Answering scale from very slightly or not at all (1) to extremely (5)

Table 12

Life satisfaction for the experimental and control groups across three time periods

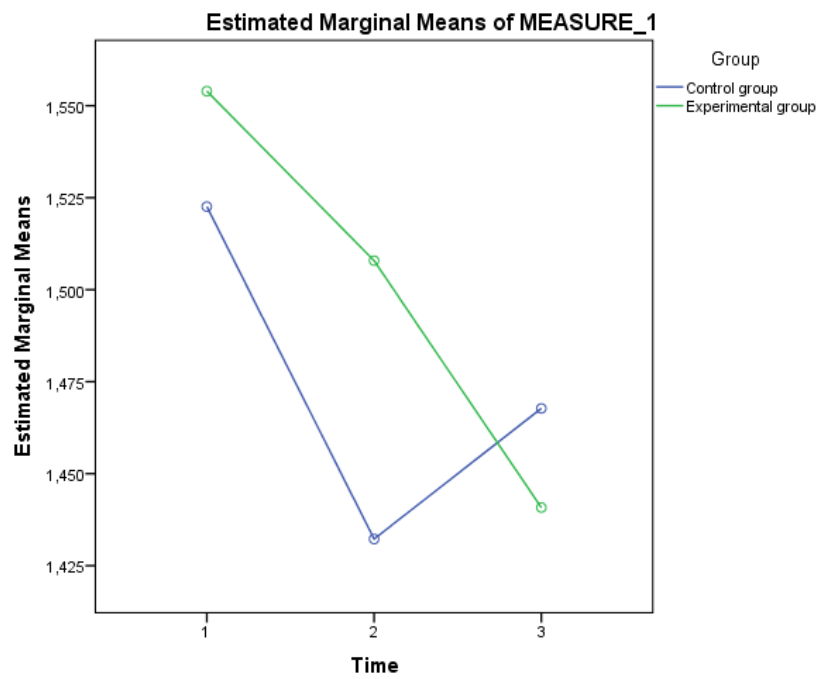
Time period	Experimental group			Control group		
	N	M	SD	N	M	SD
Pre-intervention	77	5.74	.76	31	5.70	.97
Post-intervention	77	5.83	.81	31	6.01	.59
3-mth follow-up	77	5.81	.70	31	5.63	.84

Note. N = number of respondents, M = means, SD = standard deviations

Answering scale from strongly disagree (1) to strongly agree (7)

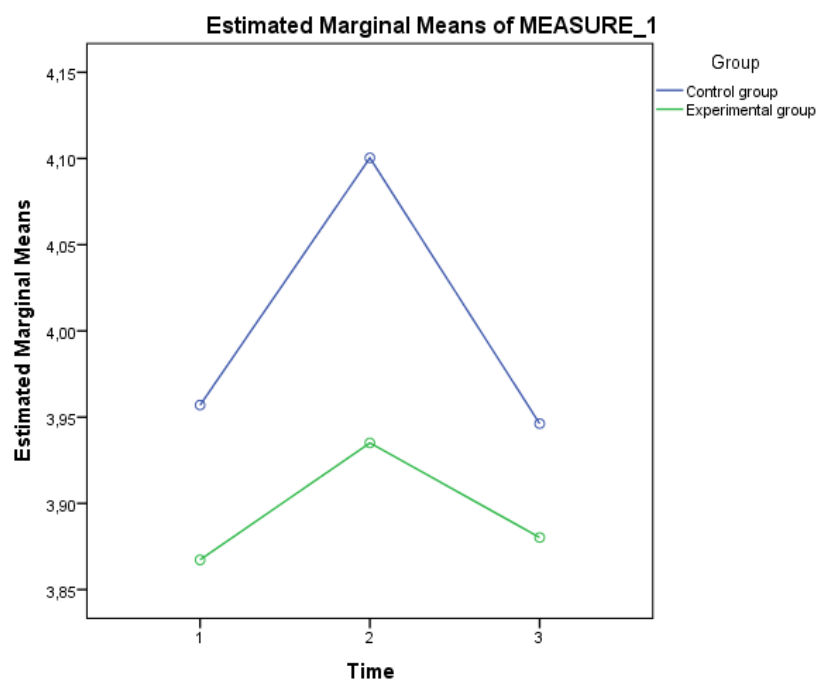
Plot 1

Changes in negative affect over time



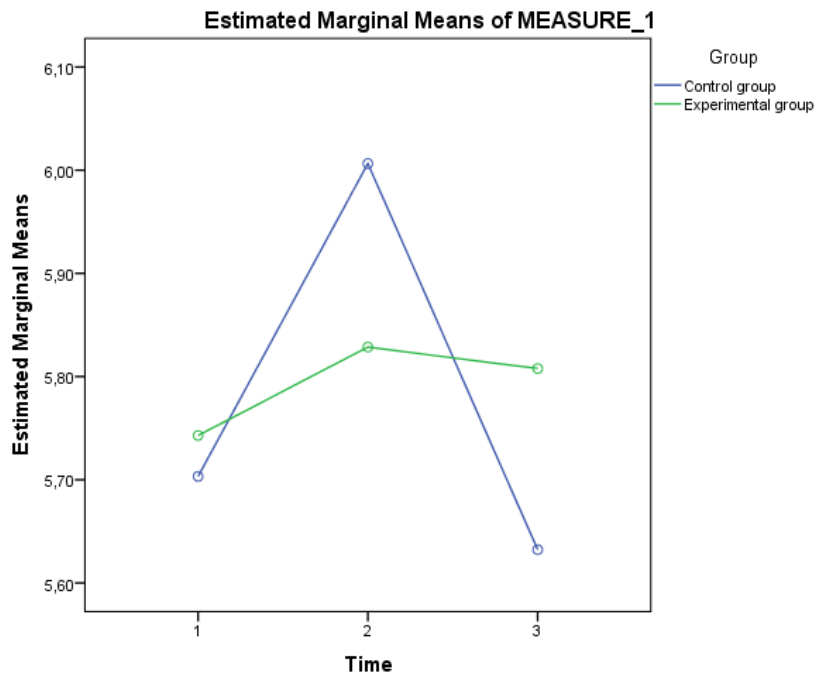
Plot 2

Changes in positive affect over time



Plot 3

Changes in life satisfaction over time



Furthermore, the main effect comparing the experimental group with the control group was not significant in each separate analysis for the components of well-being, suggesting no difference in scores on well-being between both groups due to the WBC intervention. When performing the additional analysis, in which an independent sample t-test was performed to compare the mean differences of both groups between two time points for each component of well-being, in life satisfaction a significant difference in scores for the experimental group ($M = -.02$, $SD = .56$) and the control group $M = -.38$, $SD = .63$; $t(106) = 2.87$, $p = .005$ (two-tailed) was found between time points T1 and T2. The magnitude of the difference in the means (mean difference = .35, 95% CI: .11 to .60) was moderate (eta squared = 0.07; Cohen, 1988). The other eight additional analyses did not reveal significant effects.

Altogether, it can be stated that, compared to controls, the WBC intervention did not lead to positive changes in negative affect and positive affect as components of well-being over three time periods. Compared to controls, during the three-month follow-up, a slightly positive change in life satisfaction as a component of well-being occurred, as there is a significant difference in the reduction of life satisfaction between the experimental and the control groups across T1 and T2. Therewith, H1: “the WBC intervention will lead to positive changes in well-being scores (in terms of negative affect, positive affect, and life satisfaction) over three time periods” is partially supported.

The quality of the coaching relationship as a moderator on the changes in well-being

Hierarchical multiple regression analyses were used to assess the moderating effect of the quality of the coaching relationship on the changes in well-being. No significant results surfaced for all three the components of well-being. Therefore, H2: “*a more positive change in well-being scores over three time periods will occur as the quality of the coaching relationship is higher*”, is not supported. Finally, when the effects of the control variables on the multiple regression models were tested, no significant results surfaced. In Appendix C, Tables C5 through C13, the results can be found.

The extent to which the expectations are met as a moderator on the changes in well-being

Also, hierarchical multiple regression analyses were used to assess the moderating effect of the extent to which the expectations of the manager are met on the changes in well-being. A significant interaction was found between the scores on life satisfaction at T0 and the extent to which the expectations of the manager are on the scores on life satisfaction at T2. The addition of the interaction term in the second model significantly affected the life satisfaction at T2 ($\Delta R^2 = .059$, $p < .01$), this result can be found in Table 13. This significant interaction means that a more positive change in life satisfaction occurred, when the experiences of managers with the coach and the coaching process were better than they initially expected. The other eight analyses showed no significant interaction effects (these results can be found in Appendix C, Tables C14 through C21). To conclude, H3: “*a more positive change in well-being scores over three time periods will occur as managers have better experiences with the coach and the coaching process compared to their initial expectations*”, is partially supported. At last, the third model, which included the control variables, showed no significant results in all nine hierarchical multiple regression analyses.

Table 13

Hierarchical multiple regression analysis predicting the scores on life satisfaction at T2 from the scores on life satisfaction at T0 and the extent to which the expectations are met

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	5.79	.06		5.79	.06		5.83	.50	
Expcomtoexp ^a	.04	.07	.06	.09	.06	.12	.11	.07	.15
Life satisfaction at T0	.56	.08	.66***	.58	.07	.68***	.57	.07	.67***
Interaction effect ^b				.20	.07	.25**	.19	.07	.24**
Age ^c							.00	.01	.02
Experience as manager ^c							.00	.01	-.00
Gender ^d							.38	.14	.26**
Educational level ^e							-.03	.08	-.04
Type of organization ^f							-.11	.07	-.17
Number of cohort							.01	.03	.04
Type of coach ^g							-.04	.04	-.08
Received training in LD ^h							.12	.12	.08
Received coaching ⁱ							-.10	.16	-.05
R ²			.44			.50			.58
ΔR^2						.06			.08
F			28.81***			24.00***			7.24***
ΔF						8.52**			1.33

Note. N = 82; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a expectations compared to the experiences, answering score from 0 means that the experiences were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected. ^b interaction effect between the scores on life satisfaction at T0 and the extent to which the expectations are met. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

** p < .01, *** p < .001

Discussion and conclusion

The research question was to find out whether a web-based coaching (WBC) intervention for leadership development can lead to positive changes in the well-being of managers and whether the changes in well-being were moderated by the quality of the coaching relationship and the extent to which the expectations of managers (about the coach and the coaching process) are met. 174 managers from five different organizations filled in questionnaires that were used to answer the research question. The managers were randomly assigned to an experimental group (125 managers) and a control group (49 managers), and consisted of six cohorts. The questionnaires were administered one day prior to the WBC intervention, at three months (straight after the WBC intervention), and at a three-month follow-up.

Contrary to expectations, compared to controls no robust evidence was found for the WBC intervention leading to positive changes in well-being scores, in terms of low levels of negative affect (experiencing few unpleasant emotions and moods), positive affect (experiencing many pleasant emotions and moods), and global life satisfaction, across three periods of time. This result is contradictory to the study of Grant et al. (2009), who showed that a short-term coaching intervention for leadership development can enhance well-being, and to the study of Lyubomirsky et al. (2011), who argued that interventions can increase well-being at least in the short-term.

To cut straight to the point, it also turned out that the quality of the coaching relationship and the extent to which the expectations of the manager are met, did not moderate on the changes in well-being to a large extent. Contradictory to the expectations as derived from the equity theory (Adams, 1965), and to the outcomes of Gyllensten and Palmer (2006), no more positive changes in well-being occurred as the quality of the coaching relationship was higher. To add, on average, managers' experiences were slightly worse than expected. According to theory, negative emotions will occur when the expectancies are violated (Burgoon, 1993; Olson et al., 1996; Zeelenberg et al., 2000), which explains why the extent to which the expectations were met did not positively affect the changes in well-being to a large extent. Overall, it is not surprising that these two aspects were mainly non-significant, since both variables could lead to a better understanding of the changes in well-being when indeed robust changes in well-being occurred due to the WBC intervention, which was not the case.

In general, many fluctuations in well-being scores over time were noticed in both experimental and control groups. Given that the fluctuations in well-being occurred in both groups and were even more extreme in the control group, no clear conclusions can be drawn to the small significant effect found regarding the difference in the reduction of life satisfaction during the three-month follow-up between the experimental and control groups, and to the small significant effect found in a more positive change in life satisfaction, when the experiences of managers were better than expected.

External factors had more impact on well-being than the WBC intervention. To explain, it is remarkable that all managers (from both experimental and control groups) experienced more pleasant emotions and revealed a higher level of life satisfaction just after the WBC intervention had ended. An explanation can be that all managers were pleased and excited with the fact that they could participate in the research program, since the managers from the control group also knew that they were about to receive WBC (only after the three-month follow-up). It would at least be in line with theory, as the well-being of managers often

increases when managers recognize the investment their company makes in them (Thach & Heinselman, 1999). However, reasons for this can be very diverse. For example, a holiday or other happy event may have occurred during the WBC intervention period. Second, managers from both groups again experienced less pleasant emotions at the three-month follow-up. It is likely that the effects of the reorganizations and the corresponding uncertainty about the continuation of their job (job loss) and work stressors became tangible to all managers, which negatively influenced their experienced level of positive affect. This explanation is strengthened by the high attrition, which was respectively almost the same in both groups.

Then, the research design of the present study is likely to have contributed to the non-significant results. First, managers were coached only for three months. Cummings and Worley (2008) expressed their doubts in the effectiveness of this length of coaching intervention, as they state that a coaching intervention lasting for only a couple of months is relatively weak.

Second, a short-term follow-up was used to measure well-being due to several practical reasons. As described in theory, the increase in well-being often occurs indirectly, for example through goal attainment (Burke & Linley, 2007; Sheldon & Houser-Marko, 2001), decreased stress levels (Kampa-Kokesch & Anderson, 2001; Passmore, 2010; Thach & Heinselman, 1999), and self-acceptance and confidence (Grant et al., 2009; Gyllensten & Palmer, 2006). Therewith, the impact of WBC on well-being is likely to become more visible in the longer term, when for example managers were coached for a longer period of time and eventually gained more self-acceptance and confidence.

In addition, the coaches had no experience with WBC. Even the external coaches (professionals) needed some time to acquire the needed skills, because WBC is likely to require different skills than f2f coaching when taking the differences in key aspects (social anonymity, writing, and synchronism of time) into account (Ribbers & Waringa, 2012). This phenomenon is clearly seen in managers' valuation of the quality of the coaching relationship, which is higher valued in the later cohorts. To add, Cummings and Worley (2008) explained that:

Coaching involves helping managers understand how their behaviors are contributing to the current situation. Such understanding is often difficult to achieve and often deeply personal. Therefore, the limits of a coach's skills and abilities must be acknowledged. Many coaching failures have been attributed to working too far from the practical application of behavioral principles, or too close to the boundaries of therapy, and the failure of the coach to understand the difference. (p. 452)

Logical explanations for the non-significant results concerning the quality of the coaching relationship can be derived from the feedback managers gave on the items in the questionnaire that measured the quality of the coaching relationship. First, many managers stated that not all questions were relevant yet, because they had just started working with their e-coach. In the current research the quality of the coaching relationship was measured after just a few weeks. Second, some managers explained that they needed more social-emotional contact to evaluate the quality of the coaching relationship. Both reasons suggest that in WBC it might be hard for managers to build a relationship and it probably takes more time, compared to f2f coaching. It seems that the coaching relationship in WBC is different from f2f coaching, and maybe not as important for success as in f2f coaching, like many articles have argued (de Haan et al., 2013; McGovern et al., 2001; Wales, 2003). Mainly the practical results seem to be more important for coachees, as also explained in theory by Gyllensten and Palmer (2006), since the managers who were positive about the quality of their coaching relationship explained that they could apply the gained information immediately in the workplace. This information is in line with theory, which already has shown the advantage of the transfer of knowledge in E-coaching (Belling et al., 2004; Olivero et al., 1997; Stewart & Palmer, 2009). To summarize, it can be assumed that WBC, compared to f2f coaching, has different qualities and should therefore be used for different purposes. WBC seems to be more effective when used for an action-oriented purpose based on specific demands rather than for personal development that is based on helping relationships.

Limitations

This study is subject to several limitations. As already explained, weaknesses include the short time frame, a follow-up after three months, and unexperienced e-coaches. Fourth, the high attrition put the sample size at a major disadvantage. It is likely to have influenced the outcomes of this research and therewith it negatively influenced the (internal) validity. To add, the sample size may have negatively affected the power of statistical testing, particularly when the moderating role of the quality of the coaching relationship was studied, since this variable was added later to the questionnaire. Fifth, E-coaching is a recently new way for leadership development (Ahrend et al., 2010). Therefore, during research, little knowledge or experience with completely online coaching intervention studies existed to rely on. Moreover, managers require self-knowledge as they have to be aware of their own leadership style and possess the capacity to change their leadership style in order to let coaching help them to leadership development and increase their well-being (Sadler-Smith, 2006). Another

limitation concerns the fact that self-report questionnaires were used. Common methods bias, which refers to “the degree to which correlations are altered (inflated) due to a methods effect” (Meade, Watson, & Kroustalis, 2007, p. 1), may thus have influenced part of the results. Therewith, also a social desirability bias, which refers to a “systematic error in self-report measures resulting from the desire of respondents to avoid embarrassment and project a favorable image to others” (Fisher, 1993, p. 303), may have influenced the results. Finally, it is noticed that testing effects can occur when measuring respondents at multiple moments with only three months between two measure points, and that it could be a threat to internal validity (Singleton & Straits, 2005).

Future research

First, it is recommended for future research to increase the length of the WBC intervention. According to Cummings and Worley (2008, p. 453), “more rigorous studies are necessary to judge the effectiveness of coaching interventions.” When focusing on the impact on well-being, also a long-term follow-up should be used. This seems more important than just enlarging the sample size and using the same research design, because the same non-significant effects are likely to occur. Of course, if possible, a larger sample also allows for a stronger indication of the effectiveness of WBC. Then, future research may examine whether WBC is indeed more effective when used for an action-oriented purpose, in which managers have specific demands.

Furthermore, the deployment of experienced e-coaches seems to be important. Also, the present study examined the quality of the coaching relationship only from a manager perspective. To obtain a more comprehensive view of the quality of the coaching relationship and how it correlates with the WBC outcome in general, it is also recommended to take the perspective of the coach into account. To add, the quality of the coaching relationship in WBC is likely to take more time to establish than in f2f coaching and should therefore be measured after a longer period of time, for example after a few months.

Finally, the practical results and whether managers evaluated the WBC program as useful have not been examined. Therewith, the extent of leadership development among managers (for example an increase in the skills and abilities of the manager), was not investigated. Future research can find out whether WBC is able to increase well-being indirectly (for example through goal attainment). Evidence is already found that a higher individual well-being leads to higher individual- and organizational-levels of performance (Taris & Schreurs, 2009). If an increase in performance-levels (leadership development)

thanks to WBC indeed contributes to increases in well-being, a higher level of virulence is established. In this way, stronger arguments can be given that executive coaching has a high return on investment in terms of both positive behavior changes, as already found in the studies of Thach and Heinselman (1999) and McGovern et al. (2001), and positive changes in well-being in the longer term.

Concluding remarks

In conclusion, the short-term WBC intervention was not able to show robust positive changes in the well-being of managers. Fluctuations in well-being scores over time were noticed in both experimental and control groups and external factors clearly had more impact on well-being than the WBC intervention. To add, there are considerable improvements possible for the research design. It is plausible to think that WBC has more to offer than it shows until now. Compared to f2f coaching, WBC is likely to have different qualities and should therefore be used for different purposes. To conclude, WBC seems to be more effective when used for an action-oriented purpose based on specific demands rather than for personal development that is based on helping relationships.

References

- Adams, J.S. (1965). Inequity in social exchange. In L. Berkowitc (Ed.), *Advances in Experimental Social Psychology*. (vol. 2, pp. 267-299). New York: Academic Press.
- Ahrend, G., Diamond, F., & Webber, P.G. (2010). Virtual coaching: Using technology to boost performance. *Chief Learning Officer*, 9(7), 44-47.
- Bakker, A.B., Schaufeli, W.B., Sixma, H.J., Bosveld, W., & Van Dierendonck, D. (2000). Patient demands, lack of reciprocity, and burnout: A five-year longitudinal study among general practitioners. *Journal of Organizational Behavior*, 21(4), 425-441.
- Baron, L., & Morin, L. (2009). The coach-coachee relationship in executive coaching: A field study. *Human Resource Development Quarterly*, 20(1), 85-106.
- Baron, L., & Morin, L. (2012). The working alliance in executive coaching: Its impact on outcomes and how coaches can influence it. In E. De Haan & C. Sills (Eds.), *Coaching Relationships*. (pp. 213-226). Farringdon, UK.
- Belling, R., James, K., & Ladkin, D. (2004). Back to the workplace: How organizations can improve their support for management learning and development. *Journal of Management Development*, 23(3), 234-255.

- Bordin, H. (1979). The generalizability of the psychoanalytic concept of the working alliance. *Psychotherapy, Theory, Research & Practice*, 16(3), 252-260.
- Bowles, S., Cunningham, C.J.K., De La Rosa, G.M., & Picano, J. (2007). Coaching leaders in middle and executive management: Goals, performance, buy-in. *Leadership and Organization Development Journal*, 28(5), 388-408.
- Boyce, L., Jackson, J., & Neal, L.J. (2010). Building successful leadership coaching relationships: Examining impact of matching criteria in a leadership coaching program. *Journal of Management Development*, 29(10), 914-931.
- Bluckert, P. (2005). Critical factors in executive coaching – the coaching relationship. *Industrial and Commercial Training*, 37(7), 336-340.
- Burgoon, J.K. (1993). Interpersonal expectations, expectancy violations, and emotional communication. *Journal of Language and Social Psychology*, 12(1-2), 30-48.
- Burke, D., & Linley, P.A. (2007). Enhancing goal self-concordance through coaching. *Psychology Review*, 2(1), 62-69.
- Buunk, B.P., & Schaufeli, W.B. (1999). Reciprocity in interpersonal relationships: An evolutionary perspective on its importance for health and well-being. *European Review of Social Psychology*, 10(1), 259-291.
- Cattell, R.B. (1966). The scree test for the number of factors. *Multivariate Behavioural Research*, 1(2), 245-276.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd edition). Hillsdale, New Jersey: Lawrence Erlbaum Associated.
- Cohen, S., & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310-357.
- Cummings, T.G., & Worley, C.G. (2008). *Organization Development and Change*. Cengage Learning.
- Danna, K., & Griffin, R.W. (1999). Health and well-being in the workplace: A review and synthesis of the literature. *Journal of Management*, 25(3), 357-384.
- Day, D.V. (2001). Leadership development: A review in context. *Leadership Quarterly*, 11(4), 581-613.
- de Haan, E., Duckworth, A., Birch, D., & Jones, C. (2013). Executive coaching outcome research: The contribution of common factors such as relationship, personality match, and self-efficacy. *Consulting Psychology Journal: Practice and Research*, 65(1), 40-57.

- Dekker, S.W.A., & Schaufeli, W.B. (1995). The effects of job insecurity on psychological health and withdrawal: A longitudinal study. *Australian Psychologist*, 30(1), 57-63.
- Diener, E. (2000). Subjective well-being: The science of happiness and proposal for a national index. *American Psychologist*, 55(1), 34-43.
- Diener, E., & Diener, C. (1996). Most people are happy. *Psychological Science*, 7(3), 181-185.
- Diener, E., Emmons, R.A., Larsen, R.J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of personality assessment*, 49(1), 71-75.
- Diener, E., Lucas, R.E., & Scollon, C.N. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist*, 61(4), 305-314.
- Edwards, J.R. (1992). A cybernetic theory of stress, coping, and well-being in organizations. *The Academy of Management Review*, 17(2), 238-274.
- Eid, M., & Diener, E. (2004). Global judgements of subjective well-being: Situational variability and long-term stability. *Social Indicators Research*, 65(3), 245-277.
- Ellinger, A.D. (2003). Antecedents and consequences of coaching behaviour. *Performance Improvement Quarterly*, 16(1), 5-28.
- Ely, K., Boyce, L.A., Nelson, J.K., Zaccaro, S.J., Hernez-Broome, G., & Whyman, W. (2010). Evaluating leadership coaching: A review and integrated framework. *Leadership Quarterly*, 21(4), 585-599.
- Evers, W.J.G., Brouwers, A., & Tomic, W. (2006). A quasi-experimental study on management coaching effectiveness. *Consulting Psychology Journal: Practice and Research*, 58(3), 174-182.
- Feldman, D.C., & Lankau, M.J. (2005). Executive coaching: A review and agenda for future research. *Journal of Management*, 31(6), 829-848.
- Fillery-Travis, A., & Lane, D. (2006). Does coaching work or are we asking the wrong question? *International Coaching Psychology Review*, 1(1), 23-36.
- Fisher, R.J. (1993). Social Desirability bias and the validity of indirect questioning. *Journal of Consumer Research*, 20(2), 303-315.
- Frese, M. (1999). Social support as a moderator of the relationship between work stressors and psychological dysfunctioning: A longitudinal study with objective measures. *Journal of Occupational Health Psychology*, 4(3), 179-192.
- Grant, A.M., Curtayne, L., & Burton, G. (2009). Executive coaching enhances goal attainment, resilience and workplace well-being: A randomized controlled study. *The Journal of Positive Psychology*, 4(5), 396-407.

- Grawitch, M.J., Gottschalk, M., & Munz, D.C. (2006). The path to a healthy workplace: A critical review linking healthy workplace practices, employee well-being, and organizational improvements. *Consulting Psychology Journal: Research and Practice*, 58(3), 129-147.
- Gray, D.E. (2006). Executive coaching: Towards a dynamic alliance of psychotherapy and transformative learning processes. *Management Learning*, 37(4), 475-497.
- Green, S.B. (1991). How many subjects does it take to do a regression analysis? *Multivariate Behavioral Research*, 26(3), 499-510.
- Greenson, R.R. (1965). The working alliance and the transference neurosis. *The Psychoanalysis Quarterly*, 34(2), 155-179.
- Gyllensten, K., & Palmer, S. (2006). Experiences of coaching and stress in the workplace: An interpretative phenomenological analysis. *International Coaching Psychology Review*, 1(1), 86-96.
- Harris, J.I., Winkowski, A.M., & Engdahl, B.E. (2007). Types of workplace social support in the prediction of job satisfaction. *The Career Development Quarterly*, 56(2), 150-156.
- Hart, V., Blattner, J., & Leipsic, S. (2001). Coaching versus therapy: A perspective. *Consulting Psychology Journal: Practice and Research*, 53(4), 229-237.
- Hatcher, R.L., & Gillaspie, J.A. (2006). Development and validation of a revised short version of the working alliance inventory. *Psychotherapy Research*, 16(1), 12-25.
- Hellgren, J., Sverke, M., & Isaksson, K. (1999). A two-dimensional approach to job insecurity: Consequences for employee attitudes and well-being. *European Journal of Work and Organizational Psychology*, 8(2), 179-195.
- Hofmann, W., Luhmann, M., Fisher, R.R., Vohs, K.D., & Baumeister, R.F. (2013). Yes, but are they happy? Effects of trait self-control on affective well-being and life satisfaction. *Journal of Personality*, doi: 10.1111/jopy.12050.
- Horvath, A. O., & Greenberg, L.S. (1989). Development and validation of the working alliance inventory. *Journal of Counseling Psychology*, 36(2), 223-233.
- Joo, B. (2005). Executive coaching: A conceptual framework from an integrative review of practice and research. *Human Research Development Review*, 4(4), 462-488.
- Kampa-Kokesch, S., & Anderson, M.Z. (2001). Executive coaching: A comprehensive review of the literature. *Consulting Psychology Journal: Practice and Research*, 53(4), 205-228.

- Kemp, T. (2008). Self-management and the coaching relationship: Exploring coaching impact beyond models and methods. *International Coaching Psychology Review*, 3(1), 32-42.
- Kilburg, R.R. (1996). Toward a conceptual understanding and definition of executive coaching. *Consulting Psychology Journal: Practice and Research*, 48(2), 134-144.
- Kim-Prieto, C., Diener, E., Tamir, M., Scollon, C., & Diener, M. (2013). Integrating the diverse definitions of happiness: A time-sequential framework of subjective well-being. In A. Delle Fave (Ed.), *The Exploration of Happiness*. (pp. 47-75). Springer Netherlands.
- Kombarakaran, F.A., Yang, J.A., Baker, M.N., & Fernandes, P.B. (2008). Executive coaching: It works! *Consulting Psychology Journal: Practice and Research*, 60(1), 78-90.
- Latham, G.P., & Heslin, P.A. (2003). Training the trainee as well as the trainer: Lessons to be learned from clinical psychology. *Canadian Psychology*, 44(3), 218-231.
- Lucas, R.E., Diener, E., & Suh, E. (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psychology*, 71(3), 616-628.
- Lyubomirsky, S., Dickerhoof, R., Boehm, J.K., & Sheldon, K.M. (2011). Becoming happier takes both a will and a proper way: An experimental longitudinal intervention to boost well-being. *American Psychological Association*, 11(2), 391-402.
- Martin, D.J., Gaske, J.P., & Davis, M.K. (2000). Relation of the therapeutic alliance with outcome and other variables: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, 68(3), 438-450.
- McGovern, J., Lindemann, M., Vergara, M.M.A., Murphy, S., Barker, L.M.A., & Warrenfeltz, R. (2001). Maximizing the impact of executive coaching: Behavioural change, organizational outcomes, and return on investment. *The Manchester Review*, 6(1), 1-9.
- McKenna, D.D., & Davis, S.L. (2009). Hidden in plain sight: The active ingredients of executive coaching. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 2(3), 244-260.
- Meade, A.W., Watson, A.M., & Kroustalis, C.M. (2007). Assessing common methods bias in organizational research. In 22nd Annual Meeting of the Society for Industrial and Organizational Psychology. (pp. 1-10). New York.
- Miller, D.T., & Turnbull, W. (1986). Expectancies and interpersonal processes. *Annual Review of Psychology*, 37(1), 233-256.

- Mineur, M. (2012). Research on the effectiveness of coaching. Determining relevant factors of coaching: The development of a questionnaire. Master thesis, Tilburg: Tilburg University.
- Mohr, D.C. (1995). Negative outcome in psychotherapy: A critical review. *Clinical Psychology: Science and Practice*, 2(1), 1-27.
- Mumford, M.D., Zaccaro, S.J., Harding, F.D., Jacobs, T.O., & Fleishman, E.A. (2000). Leadership skills for a changing world: Solving complex social problems. *Leadership Quarterly*, 11(1), 11-35.
- Natale, S.M., & Diamante, T. (2005). The five stages of executive coaching: Better process makes better practice. *Journal of Business Ethics*, 59(4), 261-374.
- Niemes, J. (2002). Discovering the value of executive coaching as a business transformation tool. *Journal of Organizational Excellence*, 21(4), 61-70.
- Olivero, G., Bane, K.D., & Kopelman, R.E. (1997). Executive coaching as a transfer of training tool: Effects on productivity in a public agency. *Public Personnel Management*, 26(4), 461-469.
- Olson, J.M., Roese, N.J., & Zanna, M.P. (1996). Expectancies. In E.T. Higgins & A.W. Kruglanski (Eds.), *Social Psychology: Handbook of Basic Principles*. (pp. 211-238). New York: Guilford Press.
- Oshagbemi, T. (2004). Age influences on the leadership styles and behaviour of managers. *Employee Relations*, 26(1), 14-29.
- Padavic, I., & Reskin, B. (2002). *Women and men at work*. London, England: Thousand Oaks, Pine Forge Press.
- Pallant, J. (2007). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows*. Maidenhead: Open University Press.
- Palmer, S., Tubbs, I., Whybrow, A. (2003). Health coaching to facilitate the promotion of healthy behaviour and achievement of health-related goals. *International Journal of Health Promotion and Education*, 41(3), 91-93.
- Passmore, J. (2010). A grounded theory study of the coachee experience: The implications for training and practice in coaching psychology. *International Coaching Psychology Review*, 5(1), 48-62.
- Pavot, W., Diener, E., Colvin, C.R., & Sandvik, E. (1991). Further validation of the satisfaction with life scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment*, 57(1), 149-161.

- Peeters, F.P.M.L., Ponds, R.W.H.M., & Vermeeren, M.T.G. (1996). Affectiviteit en zelfbeoordeling van depressie en angst [Affectivity and self-rating of depression and anxiety]. *Tijdschrift voor Psychiatrie*, 38(3), 240-250.
- Peterson, D.B. (1996). Executive coaching at work: The art of one-on-one change. *Consulting Psychology Journal: Practice and Research*, 48(2), 78-86.
- Purcell, J., & Hutchinson, S. (2007). Front-line managers as agents in the HRM performance causal chain: Theory, analysis and evidence. *Human Resource Management Journal*, 17(1), 3-20.
- Ribbers, A., & Waringa, A. (2012). *E-coaching: Direct aan de slag met het nieuwe coachen. [E-coaching: Get started with the new coaching]*. Boom Nelissen, the Netherlands.
- Roese, N.J., & Sherman, J.W. (2007). Expectancy. In E.T. Higgins & A.W. Kruglanski (2nd Eds.), *Social Psychology: Handbook of Basic Principles*. (pp. 91-115). New York: Guilford Press.
- Sadler-Smith, E. (2006). *Learning and development for managers: Perspectives from research and practice*. London: Blackwell Publishing.
- Sheldon, K.M., & Houser-Marko, L. (2001). Self-concordance, goal attainment, and the pursuit of happiness: Can there be an upward spiral? *Journal of Personality and Social Psychology*, 80(1), 152-165.
- Sherman, S., & Freas, A. (2004). The wild west of executive coaching. *Harvard Business Review*, 82(11), 82-93.
- Singleton, R.A., & Straits, B.C. (2005). *Approaches to social research* (4th edition). Oxford University Press.
- Skakon, J., Nielsen, K., Borg, V., & Guzman, J. (2010). Are leaders' well-being, behaviours and style associated with the affective well-being of their employees? A systematic review of three decades of research. *Work and Stress*, 24(2), 107-139.
- Sparks, K., Faragher, B., & Cooper, C.L. (2001). Well-being and occupational health in the 21st century workplace. *Journal of Occupational and Organizational Psychology*, 74(4), 489-509.
- Stewart, L.J., & Palmer, S. (2009). Capitalizing on coaching investment: Enhancing coaching transfer. *Development and Learning in Organizations*, 23(3), 14-17.
- Tabachnick, B.G., & Fidell, L.S. (2007). *Using multivariate statistics* (5th edition). Boston: Pearson Education.

- Taris, T.W., & Schreurs, J.G. (2009). Well-being and organizational performance: An organizational-level test of the happy-productive worker hypothesis. *Work and Stress*, 23(2), 120-136.
- Thach, L., & Heinselman, T. (1999). Executive coaching defined. *Training and Development Journal*, 43(3), 34-39.
- Thompson, T., Purdy, J., & Summers, D.B. (2008). A five factor framework for coaching middle managers. *Organization Development Journal*, 26(3), 62-71.
- Tracey, T.J., & Kokotovic, A.M. (1989). Factor structure of the working alliance inventory. *A Journal of Consulting and Clinical Psychology*, 1(3), 207-210.
- van Dierendonck, D., Haynes, C., Borrill, C., & Stride, C. (2004). Leadership behavior and subordinate well-being. *Journal of Occupational Health Psychology*, 9(2), 165-175.
- van Dierendonck, D., Schaufeli, W.B., & Sixma, H.J. (1994). Burnout among general practitioners: A perspective from equity theory. *Journal of Social and Clinical Psychology*, 13(1), 86-100.
- van Woerkom, M. (2010). The relationship between coach and coachee: A crucial factor for coaching effectiveness. In S. Billett (Eds.), *Learning Through Practice*. (pp. 256-267). Dordrecht: Springer Netherlands.
- Wales, S. (2003). Why coaching? *Journal of Change Management*, 3(3), 275-282.
- Wampold, B.E. (2001). *The great psychotherapy debate: Models, methods and findings*. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070.
- Watson, D., & Pennebaker, J.W. (1989). Health complaints, stress and distress: Exploring the central role of negative affectivity. *Psychological Review*, 96(2), 234-254.
- Witherspoon, R., & White, R.P. (1996). Executive coaching: A continuum of roles. *Consulting Psychology Journal: Practice and Research*, 48(2), 124-133.
- Wright, J. (2007). Stress in the workplace: A coaching approach. *Work*, 28(3), 279-284.
- Xanthopoulou, D., Bakker, A.B., Demerouti, E., & Schaufeli, W.B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14(2), 121-141.
- Zeelenberg, M., Van Dijk, W.W., Manstead, A.S.R., & Van der Pligt, J. (2000). On bad decisions and disconfirmed expectancies: The psychology of regret and disappointment. *Cognition and Emotion*, 14(4), 521-541.

Appendix A

Table A1

The Positive and Negative Affect Scale (PANAS)

This scale consists of a number of words that describe different feelings and emotions.

Attentive*	Inspired
Hostile	Jittery
Interested	Proud
Irritable	Upset
Alert	Determined
Guilty	Distressed
Excited	Strong
Ashamed	Afraid
Enthusiastic	Active
Nervous	Scared

Note. * The answers on this item were eliminated because of an entry error in SPSS; Answers on a five point likert scale from one (very slightly or not at all) to five (extremely)

Table A2

The Satisfaction with Life Scale (SWLS)

This scale consists of 5 items that describe global life satisfaction.

Item Nr.

- | | |
|---|--|
| 1 | In most ways my life is close to my ideal. |
| 2 | The conditions of my life are excellent. |
| 3 | I am satisfied with life. |
| 4 | So far I have gotten the important things I want in life. |
| 5 | If I could live my life over, I would change almost nothing. |

Note. Answers on a seven-point likert scale from one (strongly disagree) to seven (strongly agree)

Table A3

The Working Alliance Inventory (WAI)

This scale consists of 12 items that measure the quality of the coaching relationship.

Item Nr.

- | | |
|----|--|
| 1 | I believe my coach likes me. |
| 2 | I am confident in my coach's ability to help me. |
| 3 | I feel that my coach appreciates me. |
| 4 | My coach and I trust one another. |
| 5 | My coach and I agree about the steps to be taken to improve my situation. |
| 6 | My coach and I both feel confident about the usefulness of our current activity. |
| 7 | We agree on what is important for me to work on. |
| 8 | I believe the way we are working to support my development is correct. |
| 9 | I have doubts about what we are trying to accomplish.* |
| 10 | My coach and I are working towards mutually agreed upon goals. |
| 11 | My coach and I have different ideas on what my development needs are.* |
| 12 | We have established a good understanding of the kind of changes that would be good for me. |
-

Note. * These items were reversed; Answers on a seven-point likert scale from one (never) to seven (always)

Table A4

Questionnaire Expectations

This scale consists of nine items that describe the expectations of the manager about the coach and the coaching process

Item	Ik verwacht ...
Nr.	
1	dat het coachingstraject toegespitst blijft op mijn ontwikkelpunten.
2	mijn gedachten goed te kunnen formuleren tijdens het coachingstraject.
3	dat ik mijn emoties goed onder woorden weet te brengen tijdens het coachingstraject.
4	dat het coachingstraject mij veel energie kost.*
5	dat de coach een setting kan creëren waarin ik mij op mijn gemak voel.
6	dat de coach mij goed zal begrijpen.
7	dat de coach mij anders over mijn ontwikkelpunten kan laten nadenken.
8	dat het coachingstraject mij een aanzet tot verandering oplevert.
9	tijdens het coachingstraject praktische inzichten te verkrijgen.

Note. * This item was eliminated from the questionnaire; Answers on a seven-point likert scale from one (strongly disagree) to seven (strongly agree)

Table A5

Questionnaire Experiences

This scale consists of ten items that describe the experiences of the manager about the coach and the coaching process

Item	Ik ben van mening dat ...
Nr.	
1	het coachingstraject toegespitst was op mijn ontwikkelpunten.
2	ik mijn gedachten goed kon formuleren tijdens het coachingstraject.
3	ik mijn emoties goed onder woorden kon brengen tijdens het coachingstraject.
4	het coachingstraject mij veel energie heeft gekost.*
5	mijn coach een setting wist te creëren waarin ik mij op mijn gemak voelde.
6	mijn coach mij goed begreep.
7	mijn coach mij anders over mijn ontwikkelpunten heeft laten nadenken.
8	het coachingstraject mij een aanzet tot verandering heeft opgeleverd.
9	ik tijdens het coachingstraject praktische inzichten heb gekregen.
10	ik tijdens het coachingstraject voldoende tijd wist vrij te maken voor de dialoog op CoachCampus.nl

Note. * This item was eliminated from the questionnaire; Answers on a seven-point likert scale from one (strongly disagree) to seven (strongly agree)

Appendix B

Table B1

Pattern matrix PANAS at T0 for the experimental group

Item	Factor loading	
	Component 1	Component 2
Upset	0.785	
Guilty	0.737	
Distressed	0.734	
Scared	0.691	
Afraid	0.681	
Nervous	0.671	
Jittery	0.580	
Ashamed	0.567	
Irritable	0.525	
Hostile	0.477	
Active		0.728
Enthusiastic		0.714
Strong		0.645
Alert		0.639
Determined		0.586
Inspired		0.576
Interested		0.516
Proud		0.447
Excited		0.431

Note. Extraction method: PCA, two components extracted with Oblimin rotation.

N = 125. Component 1 = negative affect, component 2 = positive affect

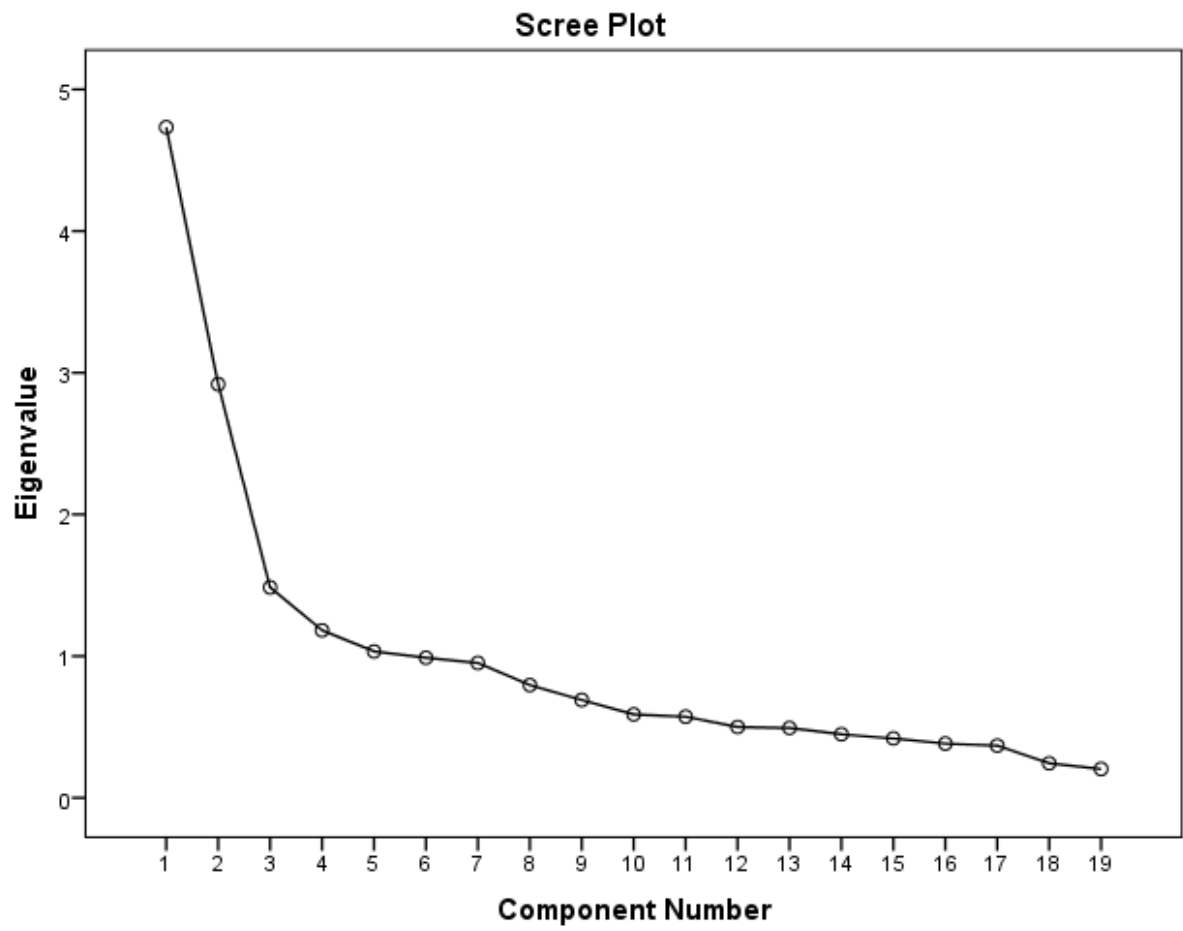


Table B2

Component matrix WAI

Nr.	Item	Factor loading Component 1
5	My coach and I agree about the steps to be taken to improve my situation.	0.894
6	My coach and I both feel confident about the usefulness of our current activity.	0.877
7	We agree on what is important for me to work on.	0.875
2	I am confident in my coach's ability to help me.	0.804
9	I have doubts about what we are trying to accomplish.*	0.794
3	I feel that my coach appreciates me.	0.751
10	My coach and I are working towards mutually agreed upon goals.	0.740
12	We have established a good understanding of the kind of changes that would be good for me.	0.727
1	I believe my coach likes me.	0.697
8	I believe the way we are working to support my development is correct.	0.681
4	My coach and I trust one another.	0.609
11	My coach and I have different ideas on what my development needs are.*	0.575

Note. * These items were reversed; $N = 68$

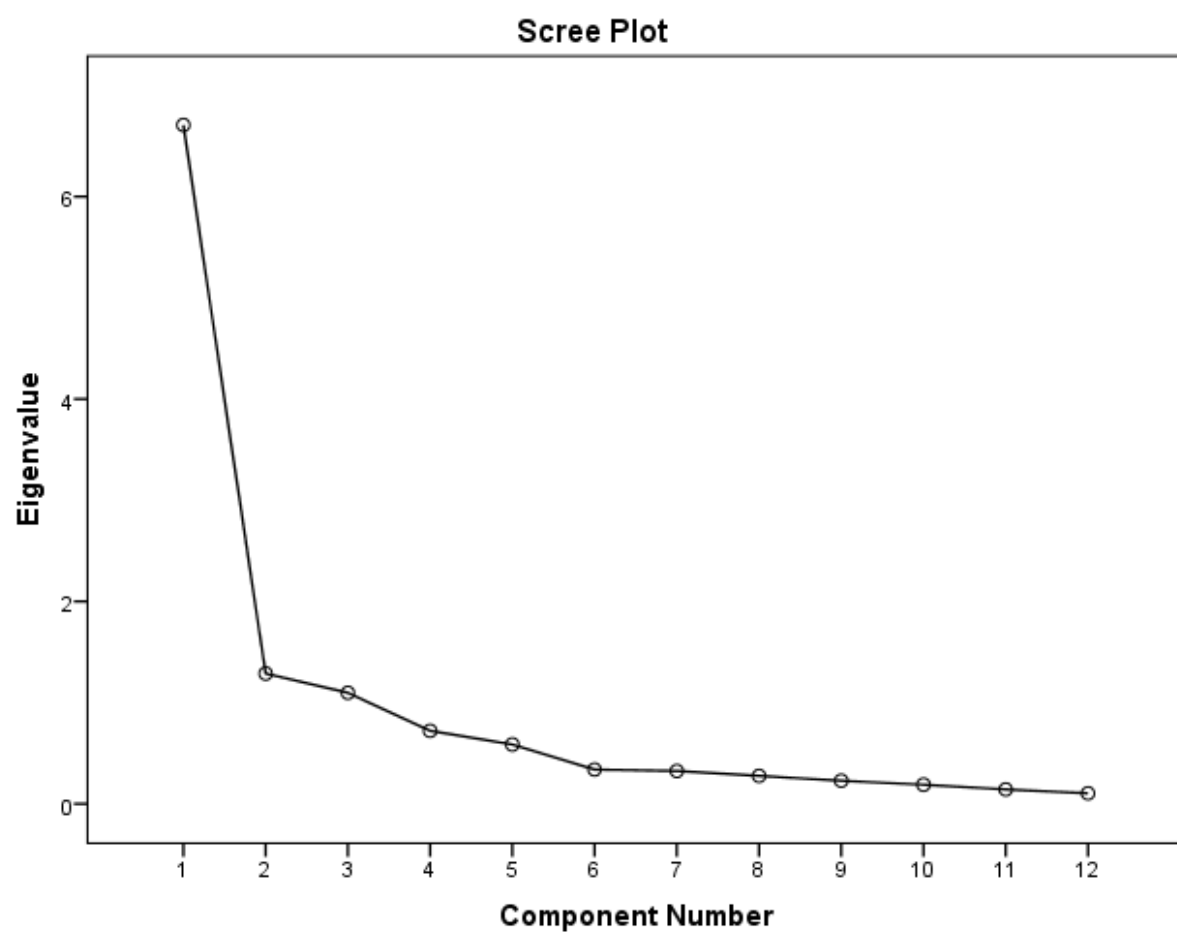
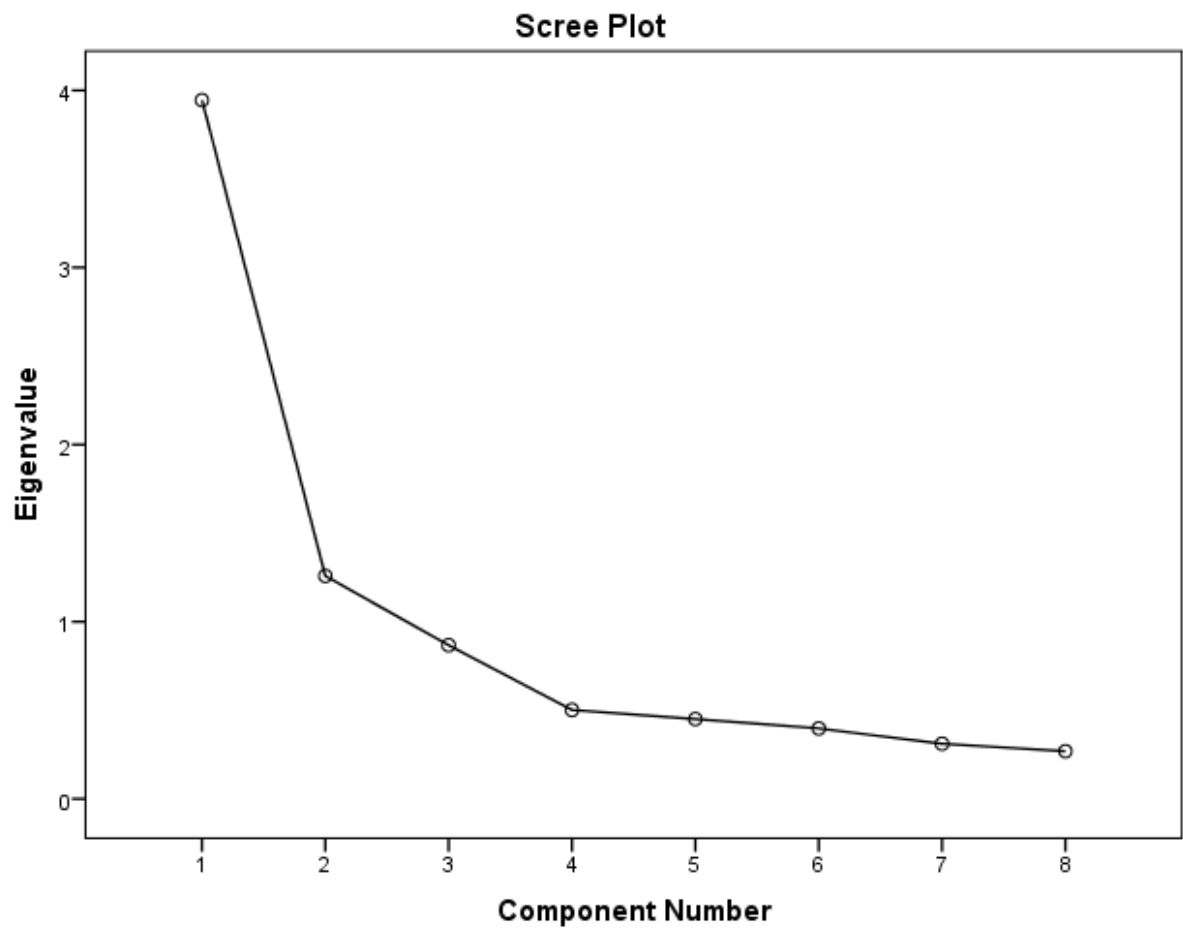


Table B3

Component matrix Expectations at T0, with item four deleted

Nr.	Item: ik verwacht ...	Factor loading Component 1
6	dat de coach mij goed zal begrijpen.	0.800
2	mijn gedachten goed te kunnen formuleren tijdens het coachingstraject.	0.746
3	dat ik mijn emoties goed onder woorden weet te brengen tijdens het coachingstraject.	0.724
5	dat de coach een setting kan creëren waarin ik mij op mijn gemak voel.	0.711
7	dat de coach mij anders over mijn ontwikkelpunten kan laten nadenken.	0.645
8	dat het coachingstraject mij een aanzet tot verandering oplevert.	0.619
9	tijdens het coachingstraject praktische inzichten te verkrijgen.	0.541
1	dat het coachingstraject toegespitst blijft op mijn ontwikkelpunten	0.493

Note. *N* = 125



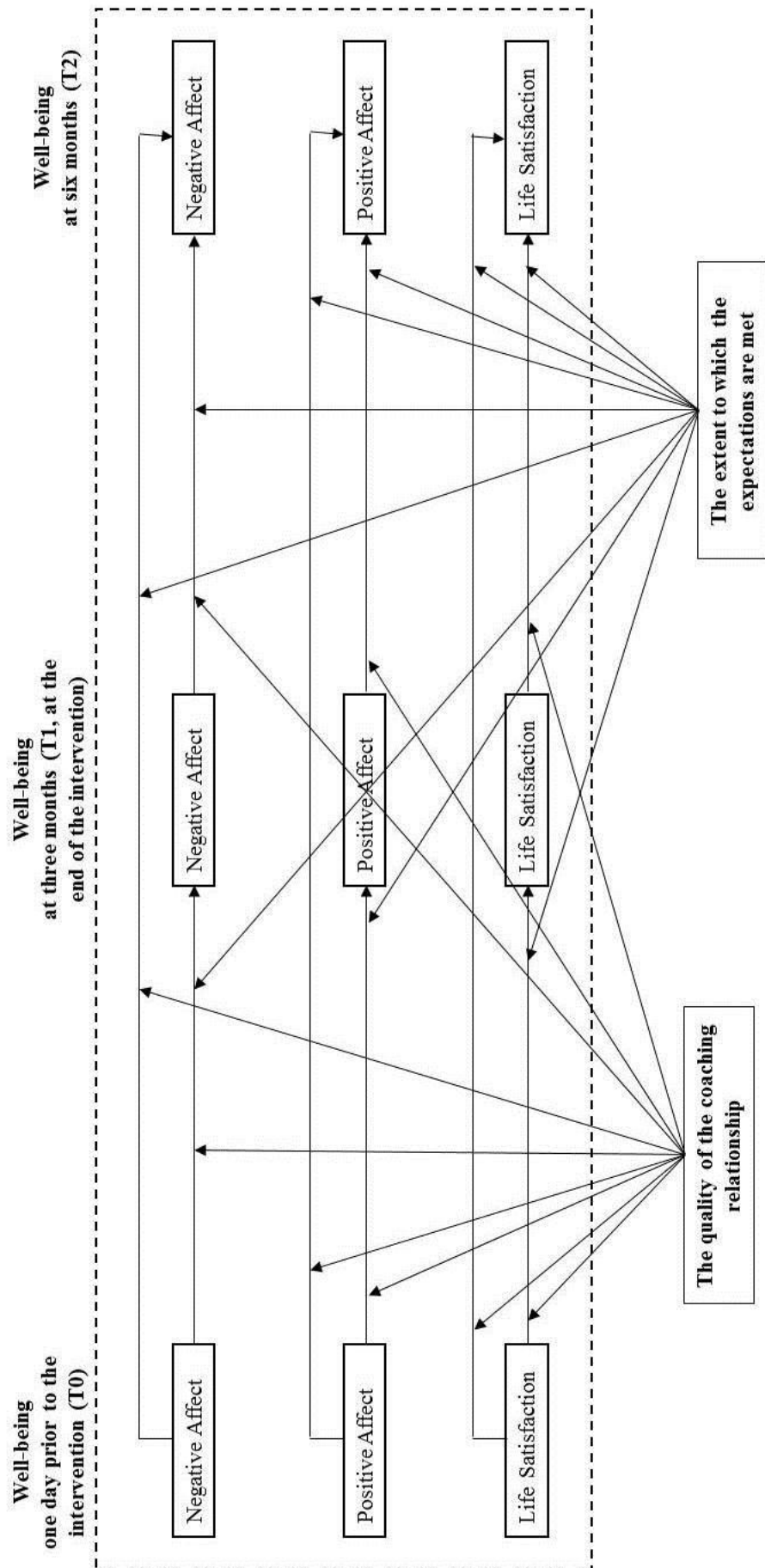


Figure B1. Extended conceptual model

Appendix C

Table C1
Means, standard deviations and correlations of all respondents (both control and experimental groups) between the different time points

Variables	M	SD	N	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) T0 Negative Affect	1.55	.49	173								
(2) T0 Positive Affect	3.94	.45	174	-.174*							
(3) T0 Life Satisfaction	5.66	.90	173	-.207**	.155*						
(4) T1 Negative Affect	1.49	.45	169	.708**	-.131	-.158*					
(5) T1 Positive Affect	3.40	.44	169	-.304**	.718**	.236**	-.309**				
(6) T1 Life Satisfaction	5.83	.76	166	-.170*	.109	.678**	-.301**	.249**			
(7) T2 Negative Affect	1.45	.40	112	.628**	.018	-.294**	.684**	-.185	-.367**		
(8) T2 Positive Affect	3.91	.47	113	-.326**	.590**	.199*	-.348**	.671**	.245*	-.232*	
(9) T2 Life Satisfaction	5.76	.76	113	-.389**	.111	.656**	-.308**	.191*	.678**	-.358**	.281**

Note. M = means, SD = standard deviations, N = number of respondents

124578 answering scale from very slightly or not at all (1) to extremely (5). 369 answering scale from strongly disagree (1) to strongly agree (7)

T0 = measured one day prior to the coaching intervention. T1 = measured at three months (at the end of the coaching intervention). T2 = measured at six months (3-months follow-up)

* $p < .05$ ** $p < .01$ (two-tailed)

Table C2

Means, standard deviations and correlations of the variables concerning well-being at T0, the moderating variables, and the control variables in the experimental group

Variables	M	SD	N	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Negative affect	1.56	.47	124													
(2) Positive affect	3.90	.44	125	-.248**												
(3) Life satisfaction	5.67	.84	124	-.191*	.160											
(4) Quality relationship	5.00	.93	68	.040	.279*	.314**										
(5) Exproctoexp	-.41	.97	119	.003	-.188*	.043	.322**									
(6) Gender	.51	.50	125	-.075	.040	.039	-.093	.030								
(7) Age	45	8.12	125	-.200*	.052	.015	-.017	.130	.008							
(8) Received training in LD	1.44	.50	125	.112	.052	-.014	-.042	.065	-.005	-.122						
(9) Received coaching	1.18	.39	125	-.011	.213*	.122	.141	-.118	-.115	-.226*	.161					
(10) Experience as manager	8.45	7.23	125	-.025	.032	.073	.093	.035	-.262**	.527**	-.039	-.124				
(11) Type of organization	2.63	1.15	125	-.101	-.125	-.096	-.171	.312**	.372**	.245**	-.109	-.154	-.059			
(12) Cohort	3.70	1.88	125	.037	-.163	.064	.140	.120	.008	-.060	.158	.053	-.086	.140		
(13) Type of coach	2.08	1.65	125	-.017	.050	.026	-.138	.031	.281**	.067	-.023	-.136	-.105	.360**	.083	
(14) Educational level	1.75	.82	125	-.040	.027	.143	.240*	.089	-.120	.093	-.027	.144	.158	-.081	.083	-.057

Note: M = means, SD = standard deviations, N = number of respondents

12 answering scale from very slightly or not at all (1) to extremely (5). 3 answering scale from strongly disagree (1) to strongly agree (7). 4 answering scale from never (1) to always (7)

5 expectations compared to the experiences, answering score of 0 means that the experiences with the coach and the coaching process were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected

6 0 = male, 1 = female, 7 in years. 8 1 = no, 2 = yes, 9 1 = no, 2 = yes (with meaning). 10 in years. 11 1 = C1000, 2 = ING, 3 = UvA, 4 = TiU, 5 = UMCg. 12 in numbers, 13 0 = extern, 1 = intern C1000, 2 = intern ING, 3 = intern UvA,

4 = intern TiU, 5 = intern UMCg. 14 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education

* p < .05 ** p < .01 (two-tailed)

Table C3

Means, standard deviations and correlations of the variables concerning well-being at T1, the moderating variables, and the control variables in the experimental group

Variables	M	SD	N	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Negative affect	1.53	.46	120													
(2) Positive affect	3.95	.43	120	-.307**												
(3) Life satisfaction	5.79	.78	119	-.372**	.196*											
(4) Quality relationship	4.97	.93	68	.150	.118	.237										
(5) Exptomtoexp	-.41	.97	119	-.007	-.075	.103	.322**									
(6) Gender	.51	.50	125	.024	.032	.109	-.093	.030								
(7) Age	45	8.12	125	-.114	-.013	.047	-.017	.130	.008							
(8) Received training in LD	1.44	.50	125	.216*	.052	-.018	-.042	.065	-.005	-.122						
(9) Received coaching	1.18	.39	125	.041	.188*	.043	.141	-.118	-.115	-.226*	.161					
(10) Experience as manager	8.45	7.23	125	-.021	-.012	-.054	.093	.035	-.262**	.527**	-.039	-.124				
(11) Type of organization	2.63	1.15	125	-.037	-.076	-.022	-.171	.312**	.372**	.245**	-.109	-.154	-.059			
(12) Cohort	3.70	1.88	125	.066	-.128	.176	.140	.120	.008	-.060	.158	.053	-.086	.140		
(13) type of coach	2.08	1.65	125	-.040	.036	.045	-.138	.031	.281**	.067	-.023	-.136	-.105	.360**	.083	
(14) Educational level	1.75	.82	125	-.099	.104	.141	.240*	.089	-.120	.093	-.027	.144	.158	-.081	.083	-.057

Note. M = means, SD = standard deviations, N = number of respondents

12 answering scale from very slightly or not at all (1) to extremely (5). 3 answering scale from strongly disagree (1) to strongly agree (7). 4 answering scale from never (1) to always (7)

5 expectations compared to the experiences, answering score of 0 means that the experiences with the coach and the coaching process were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected

6 0 = male, 1 = female, 7 in years. 8 1 = no, 2 = yes. 9 1 = no, 2 = yes (with meaning). 10 in years. 11 1 = C1000, 2 = ING, 3 = UvA, 4 = TiU, 5 = UMCG. 12 in numbers, 13 0 = extern, 1 = intern C1000, 2 = intern ING, 3 = intern UvA,

4 = intern TiU, 5 = intern UMCG. 14 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education

* p < .05 ** p < .01 (two-tailed)

Table C4

Means, standard deviations and correlations of the variables concerning well-being at T2, the moderating variables, and the control variables in the experimental group

Variables	M	SD	N	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Negative affect	1.44	.40	81													
(2) Positive affect	3.90	.45	82	-.251*												
(3) Life satisfaction	5.80	.72	82	-.462**	.192											
(4) Quality relationship	5.00	.93	68	.201	.160	.209										
(5) Exptomtoexp	-.41	.97	119	.153	.004	.084	.322**									
(6) Gender	.51	.50	125	-.098	.086	.213	-.093	.030								
(7) Age	45	8.12	125	-.114	.080	-.022	-.017	.130	.008							
(8) Received training in LD	1.44	.50	125	.273*	-.048	.107	-.042	.065	-.005	-.122						
(9) Received coaching	1.18	.39	125	.034	.182	.049	.141	-.118	-.115	-.226*	.161					
(10) Experience as manager	8.45	7.23	125	.068	-.109	-.034	.093	.035	-.262**	.527**	-.039	-.124				
(11) Type of organization	2.63	1.15	125	-.004	.076	-.139	-.171	.312**	.372**	.245**	-.109	-.154	-.059			
(12) Cohort	3.70	1.88	125	.040	-.112	.088	.140	.120	.008	-.060	.158	.053	-.086	.140		
(13) Type of coach	2.08	1.65	125	.001	.071	-.040	-.138	.031	.281**	.067	-.023	-.136	-.105	.360**	.083	
(14) Educational level	1.75	.82	125	-.187	-.054	.067	.240*	.089	-.120	.093	-.027	.144	.158	-.081	.083	-.057

Note. M = means, SD = standard deviations, N = number of respondents

12 answering scale from very slightly or not at all (1) to extremely (5). 3 answering scale from strongly disagree (1) to strongly agree (7). 4 answering scale from never (1) to always (7)

5 expectations compared to the experiences, answering score of 0 means that the experiences with the coach and the coaching process were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected

6 0 = male, 1 = female, 7 in years, 8 1 = no, 2 = yes, 9 1 = no, 2 = yes (with meaning), 10 in years, 11 1 = C1000, 2 = ING, 3 = UvA, 4 = TIU, 5 = UMCG, 12 in numbers, 13 0 = extern, 1 = intern C1000, 2 = intern ING, 3 = intern UvA,

4 = intern TIU, 5 = intern UMCG, 14 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education

* p < .05 ** p < .01 (two-tailed)

Table C5

Hierarchical multiple regression analysis predicting the scores on negative affect at T1 from the scores on negative affect at T0 and the quality of the coaching relationship

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	1.54	.04		1.53	.04		1.16	.34	
Quality relationship ^a	.06	.04	.12	.07	.04	.13	.08	.05	.16
Negative affect at T0	.68	.08	.72***	.67	.08	.72***	.68	.09	.72***
Interaction effect ^b				.10	.10	.08	.07	.11	.06
Age ^c							.00	.01	.06
Experience as manager ^c							.00	.01	.01
Gender ^d							.05	.09	.06
Educational level ^e							-.05	.05	-.08
Type of organization ^f							.02	.04	.06
Number of cohort							-.01	.02	-.02
Type of coach ^g							-.01	.03	-.02
Received training in LD ^h							.11	.09	.12
Received coaching ⁱ							.07	.11	.06
R ²			.55			.55			.58
ΔR^2						.01			.03
F			39.05***			26.34***			6.44***
ΔF						.96			.47

Note. N = 120; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a answering score from never (1) to always (7). ^b interaction effect between the scores on negative affect at T0 and the quality of the coaching relationship. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

*** p < .001

Table C6

Hierarchical multiple regression analysis predicting the scores on negative affect at T2 from the scores on negative affect at T0 and the quality of the coaching relationship

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	1.45	.05		1.44	.05		1.31	.42	
Quality relationship ^a	.08	.05	.18	.08	.05	.20	.11	.06	.26
Negative affect at T0	.50	.10	.63***	.50	.10	.62***	.48	.10	.60***
Interaction effect ^b				.19	.13	.18	.13	.14	.13
Age ^c							-.00	.01	-.05
Experience as manager ^c							.00	.01	.14
Gender ^d							-.07	.11	-.09
Educational level ^e							-.10	.06	-.20
Type of organization ^f							.06	.05	.16
Number of cohort							-.01	.03	-.07
Type of coach ^g							.01	.03	.05
Received training in LD ^h							.16	.11	.20
Received coaching ⁱ							.04	.14	.04
R ²			.43			.46			.57
ΔR^2						.03			.10
F			14.42***			10.63***			3.04**
ΔF						2.17			.74

Note. N = 81; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a answering score from never (1) to always (7). ^b interaction effect between the scores on negative affect at T0 and the quality of the coaching relationship. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

** p < .01, *** p < .001

Table C7

Hierarchical multiple regression analysis predicting the scores on negative affect at T2 from the scores on negative affect at T1 and the quality of the coaching relationship

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	1.44	.05		1.43	.05		1.59	.42	
Quality relationship ^a	.04	.05	.10	.04	.05	.10	.07	.06	.17
Negative affect at T1	.56	.10	.65***	.53	.11	.62***	.48	.12	.56***
Interaction effect ^b				.17	.14	.14	.17	.16	.14
Age ^c							-.01	.01	-.12
Experience as manager ^c							.01	.01	.14
Gender ^d							-.11	.11	-.14
Educational level ^e							-.08	.07	-.17
Type of organization ^f							.04	.05	.13
Number of cohort							-.01	.03	-.04
Type of coach ^g							.01	.03	.06
Received training in LD ^h							.12	.11	.15
Received coaching ⁱ							-.03	.14	-.03
R ²			.46			.48			.56
ΔR^2						.02			.08
F			16.06***			11.27***			2.97**
ΔF						1.38			.58

Note. N = 81; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a answering score from never (1) to always (7). ^b interaction effect between the scores on negative affect at T1 and the quality of the coaching relationship. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

** p < .01, *** p < .001

Table C8

Hierarchical multiple regression analysis predicting the scores on positive affect at T1 from the scores on positive affect at T0 and the quality of the coaching relationship

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	3.99	.04		3.98	.04		3.531	.34	
Quality relationship ^a	-.04	.04	-.09	-.04	.04	-.09	-.06	.05	-.13
Positive affect at T0	.72	.09	.73***	.73	.09	.75***	.76	.11	.78***
Interaction effect ^b				.07	.11	.05	.09	.14	.08
Age ^c							.01	.01	.15
Experience as manager ^c							-.01	.01	-.11
Gender ^d							-.03	.10	-.04
Educational level ^e							.06	.05	.10
Type of organization ^f							-.00	.04	-.00
Number of cohort							.00	.02	.02
Type of coach ^g							-.01	.03	-.02
Received training in LD ^h							.02	.09	.03
Received coaching ⁱ							.02	.12	.02
R ²			.51			.51			.54
ΔR^2						.00			.03
F			33.52***			22.23***			.56***
ΔF						.34			.36

Note. N = 120; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a answering score from never (1) to always (7). ^b interaction effect between the scores on positive affect at T0 and the quality of the coaching relationship. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

*** p < .001

Table C9

Hierarchical multiple regression analysis predicting the scores on positive affect at T2 from the scores on positive affect at T0 and the quality of the coaching relationship

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	3.92	.06		3.94	.07		3.38	.56	
Quality relationship ^a	.01	.07	.02	.02	.07	.03	.04	.08	.09
Positive affect at T0	.52	.15	.51**	.49	.15	.48**	.46	.18	.45*
Interaction effect ^b				-.12	.19	-.10	-.21	.24	-.17
Age ^c							.01	.01	.26
Experience as manager ^c							-.02	.01	-.27
Gender ^d							.03	.16	.03
Educational level ^e							-.04	.09	-.07
Type of organization ^f							.02	.07	.06
Number of cohort							-.02	.04	-.08
Type of coach ^g							.00	.04	.00
Received training in LD ^h							-.07	.14	-.08
Received coaching ⁱ							.20	.19	.17
R ²			.26			.27			.39
ΔR^2						.01			.11
F			6.95**			4.72**			1.51
ΔF						.45			.59

Note. N = 82; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a answering score from never (1) to always (7). ^b interaction effect between the scores on positive affect at T0 and the quality of the coaching relationship. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

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

Table C10

Hierarchical multiple regression analysis predicting the scores on positive affect at T2 from the scores on positive affect at T1 and the quality of the coaching relationship

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	3.91	.06		3.92	.06		3.64	.53	
Quality relationship ^a	.04	.06	.09	.06	.06	.12	.09	.07	.19
Positive affect at T1	.62	.13	.59***	.60	.14	.58***	.58	.15	.55**
Interaction effect ^b				-.14	.16	-.12	-.19	.18	-.16
Age ^c							.01	.01	.17
Experience as manager ^c							-.01	.01	-.19
Gender ^d							.02	.14	.02
Educational level ^e							-.09	.08	-.15
Type of organization ^f							.03	.07	.07
Number of cohort							-.02	.04	-.07
Type of coach ^g							.01	.04	.03
Received training in LD ^h							-.08	.13	-.09
Received coaching ⁱ							.16	.17	.13
R ²			.37			.38			.48
ΔR^2						.01			.09
F			11.47***			7.88***			2.20*
ΔF						.82			.57

Note. N = 82; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a answering score from never (1) to always (7). ^b interaction effect between the scores on positive affect at T1 and the quality of the coaching relationship. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

* p < .05, ** p < .01, *** p < .001

Table C11

Hierarchical multiple regression analysis predicting the scores on life satisfaction at T1 from the scores on life satisfaction at T0 and the quality of the coaching relationship

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	5.78	.07		5.77	.07		5.33	.57	
Quality relationship ^a	.01	.08	.01	.01	.08	.01	-.01	.08	-.01
Life satisfaction at T0	.67	.08	.72***	.67	.09	.73***	.71	.10	.78***
Interaction effect ^b				.03	.10	.03	.15	.13	.14
Age ^c							.01	.01	.14
Experience as manager ^c							-.02	.01	-.018
Gender ^d							.05	.16	.03
Educational level ^e							.02	.09	.02
Type of organization ^f							-.01	.07	-.02
Number of cohort							.07	.04	.17
Type of coach ^g							-.03	.05	-.06
Received training in LD ^h							-.03	.14	-.02
Received coaching ⁱ							-.18	.20	-.09
R ²			.53			.53			.58
ΔR^2						.00			.06
F			36.04***			23.73***			6.36***
ΔF						.11			.80

Note. N = 119; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a answering score from never (1) to always (7). ^b interaction effect between the scores on life satisfaction at T0 and the quality of the coaching relationship. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

*** p < .001

Table C12

Hierarchical multiple regression analysis predicting the scores on life satisfaction at T2 from the scores on life satisfaction at T0 and the quality of the coaching relationship

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	5.79	.09		5.80	.09		5.651	.79	
Quality relationship ^a	.00	.10	.00	.00	.10	.00	-.00	.11	-.00
Life satisfaction at T0	.56	.11	.66***	.56	.12	.65***	.56	.13	.65***
Interaction effect ^b				-.01	.13	-.01	.01	.17	.01
Age ^c							.00	.02	.05
Experience as manager ^c							-.01	.02	-.06
Gender ^d							.36	.22	.25
Educational level ^e							-.00	.12	-.00
Type of organization ^f							-.10	.10	-.16
Number of cohort							.02	.06	.06
Type of coach ^g							-.04	.07	-.09
Received training in LD ^h							.14	.20	.10
Received coaching ⁱ							-.10	.27	-.06
R ²			.44			.44			.52
ΔR^2						.00			.08
F			14.99***			9.74***			2.60*
ΔF						.01			.56

Note. N = 82; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a answering score from never (1) to always (7). ^b interaction effect between the scores on life satisfaction at T0 and the quality of the coaching relationship. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

* p < .05, *** p < .001

Table C13

Hierarchical multiple regression analysis predicting the scores on life satisfaction at T2 from the scores on life satisfaction at T1 and the quality of the coaching relationship

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	5.81	.08		5.81	.08		5.90	.71	
Quality relationship ^a	.03	.09	.04	.03	.09	.03	.02	.10	.03
Life satisfaction at T1	.67	.10	.72***	.67	.11	.72***	.66	.12	.71***
Interaction effect ^b				-.03	.10	-.03	-.03	.12	-.03
Age ^c							-.00	.01	-.04
Experience as manager ^c							.01	.02	.08
Gender ^d							.33	.19	.23
Educational level ^e							-.02	.11	-.02
Type of organization ^f							-.10	.09	-.16
Number of cohort							-.01	.05	-.03
Type of coach ^g							-.02	.06	-.05
Received training in LD ^h							.15	.18	.11
Received coaching ⁱ							.01	.24	.01
R ²			.54			.54			.61
ΔR^2						.00			.07
F			22.74***			14.82***			3.79**
ΔF						.07			.59

Note. N = 82; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a answering score from never (1) to always (7). ^b interaction effect between the scores on life satisfaction at T1 and the quality of the coaching relationship. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

** p < .01, *** p < .001

Table C14

Hierarchical multiple regression analysis predicting the scores on negative affect at T1 from the scores on negative affect at T0 and the extent to which the expectations are met

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	1.54	.03		1.54	.03		1.11	.26	
Expcomtoexp ^a	.00	.03	.00	.00	.03	.00	-.01	.03	-.02
Negative affect at T0	.68	.06	.73***	.68	.06	.73***	.68	.06	.73***
Interaction effect ^b				.00	.07	.00	.01	.07	.01
Age ^c							.00	.01	.06
Experience as manager ^c							.00	.01	.02
Gender ^d							.05	.07	.06
Educational level ^e							-.03	.04	-.06
Type of organization ^f							.02	.03	.05
Number of cohort							.00	.02	.00
Type of coach ^g							-.01	.02	-.04
Received training in LD ^h							.11	.06	.12
Received coaching ⁱ							.09	.08	.07
R ²			.53			.53			.56
ΔR^2						.00			.03
F			65.69***			43.42***			11.26***
ΔF						.00			.78

Note. N = 120; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a expectations compared to the experiences, answering score from 0 means that the experiences were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected. ^b interaction effect between the scores on negative affect at T0 and the extent to which the expectations are met. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

*** p < .001

Table C15

Hierarchical multiple regression analysis predicting the scores on negative affect at T2 from the scores on negative affect at T0 and the extent to which the expectations are met

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	1.45	.04		1.45	.04		1.32	.30	
Expcomtoexp ^a	.07	.04	.16	.07	.04	.16	.07	.04	.16
Negative affect at T0	.51	.07	.64***	.50	.07	.63***	.48	.07	.61***
Interaction effect ^b				.03	.08	.03	.01	.09	.01
Age ^c							-.00	.01	-.05
Experience as manager ^c							.01	.01	.15
Gender ^d							-.07	.08	-.09
Educational level ^e							-.09	.04	-2.02*
Type of organization ^f							.03	.04	.68
Number of cohort							-.01	.02	-.46
Type of coach ^g							.01	.02	.45
Received training in LD ^h							.14	.07	1.90
Received coaching ⁱ							.09	.10	.88
R ²			.43			.43			.52
ΔR^2						.00			.09
F			27.14***			17.92***			5.60***
ΔF						.13			1.28

Note. N = 81; *b* = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a expectations compared to the experiences, answering score from 0 means that the experiences were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected. ^b interaction effect between the scores on negative affect at T0 and the extent to which the expectations are met. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

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

Table C16

Hierarchical multiple regression analysis predicting the scores on negative affect at T2 from the scores on negative affect at T1 and the extent to which the expectations are met

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	1.44	.03		1.44	.03		1.63	.29	
Expcomtoexp ^a	.07	.04	.16	.06	.04	.15	.07	.04	.17
Negative affect at T1	.57	.07	.67***	.57	.07	.67***	.54	.08	.63***
Interaction effect ^b				.08	.08	.09	.06	.08	.07
Age ^c							-.01	.01	-.13
Experience as manager ^c							.01	.01	.14
Gender ^d							-.09	.08	-.12
Educational level ^e							-.08	.04	-.16
Type of organization ^f							.01	.04	.04
Number of cohort							-.01	.02	-.03
Type of coach ^g							.02	.02	.07
Received training in LD ^h							.09	.07	.11
Received coaching ⁱ							.03	.09	.03
R ²			.47			.48			.55
ΔR^2						.01			.07
F			32.72***			22.20***			6.34***
ΔF						1.08			1.03

Note. N = 81; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a expectations compared to the experiences, answering score from 0 means that the experiences were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected. ^b interaction effect between the scores on negative affect at T1 and the extent to which the expectations are met. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

*** p < .001

Table C17

Hierarchical multiple regression analysis predicting the scores on positive affect at T1 from the scores on positive affect at T0 and the extent to which the expectations are met

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	3.98	.03		3.99	.03		3.60	.24	
Expcomtoexp ^a	.03	.03	.06	.04	.03	.08	.04	.03	.08
Positive affect at T0	.70	.07	.72***	.69	.07	.70***	.69	.07	.70***
Interaction effect ^b				.13	.07	.13	.14	.07	.14*
Age ^c							.01	.00	.16
Experience as manager ^c							-.01	.01	-.13
Gender ^d							-.02	.07	-.02
Educational level ^e							.04	.04	.07
Type of organization ^f							-.01	.03	-.03
Number of cohort							-.01	.02	-.03
Type of coach ^g							.00	.02	.00
Received training in LD ^h							.02	.06	.03
Received coaching ⁱ							.04	.08	.04
R ²			.50			.52			.54
ΔR^2						.02			.02
F			59.01***			41.59***			10.55***
ΔF						3.86			.62

Note. N = 120; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a expectations compared to the experiences, answering score from 0 means that the experiences were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected. ^b interaction effect between the scores on positive affect at T0 and the extent to which the expectations are met. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

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

Table C18

Hierarchical multiple regression analysis predicting the scores on positive affect at T2 from the scores on positive affect at T0 and the extent to which the expectations are met

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	3.93	.05		3.93	.05		3.31	.38	
Expcomtoexp ^a	.05	.05	.10	.05	.05	.11	.05	.05	.11
Positive affect at T0	.55	.10	.53***	.54	.11	.53***	.56	.11	.54***
Interaction effect ^b				.05	.11	.05	.07	.11	.07
Age ^c							.02	.01	.30*
Experience as manager ^c							-.02	.01	-.26*
Gender ^d							-.02	.10	-.03
Educational level ^e							-.05	.06	-.09
Type of organization ^f							.02	.05	.05
Number of cohort							-.01	.03	-.04
Type of coach ^g							.00	.03	-.00
Received training in LD ^h							-.06	.09	-.07
Received coaching ⁱ							.16	.13	.14
R ²			.27			.28			.38
ΔR^2						.00			.10
F			13.89***			9.242***			3.22**
ΔF						.23			.10

Note. N = 82; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a expectations compared to the experiences, answering score from 0 means that the experiences were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected. ^b interaction effect between the scores on positive affect at T0 and the extent to which the expectations are met. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

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

Table C19

Hierarchical multiple regression analysis predicting the scores on positive affect at T2 from the scores on positive affect at T1 and the extent to which the expectations are met

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	3.91	.04		3.91	.04		3.54	.36	
Expcomtoexp ^a	.02	.04	.05	.02	.05	.05	.03	.05	.06
Positive affect at T1	.63	.10	.61***	.63	.10	.61***	.62	.11	.59***
Interaction effect ^b				.00	.10	.00	.04	.10	.04
Age ^c							.01	.01	.19
Experience as manager ^c							-.01	.01	-.17
Gender ^d							-.00	.10	-.00
Educational level ^e							-.07	.05	-.13
Type of organization ^f							.02	.05	.05
Number of cohort							-.01	.02	-.05
Type of coach ^g							.00	.03	.02
Received training in LD ^h							-.07	.09	-.08
Received coaching ⁱ							.17	.12	.14
R ²			.37			.37			.44
ΔR^2						.00			.07
F			21.24***			13.97***			4.17***
ΔF						.00			.94

Note. N = 82; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a expectations compared to the experiences, answering score from 0 means that the experiences were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected. ^b interaction effect between the scores on positive affect at T1 and the extent to which the expectations are met. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

*** p < .001

Table C20

Hierarchical multiple regression analysis predicting the scores on life satisfaction at T1 from the scores on life satisfaction at T0 and the extent to which the expectations are met

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	5.78	.05		5.78	.05		5.38	.42	
Expcomtoexp ^a	.06	.05	.07	.07	.05	.09	.05	.06	.06
Life satisfaction at T0	.67	.06	.72***	.67	.06	.73***	.67	.06	.72***
Interaction effect ^b				.06	.06	.07	.04	.06	.04
Age ^c							.01	.01	.11
Experience as manager ^c							-.02	.01	-.15
Gender ^d							.09	.11	.06
Educational level ^e							.04	.06	.04
Type of organization ^f							-.03	.06	-.04
Number of cohort							.05	.03	.12
Type of coach ^g							-.01	.03	-.01
Received training in LD ^h							-.03	.10	-.02
Received coaching ⁱ							-.09	.14	-.05
R ²			.53			.54			.57
ΔR^2						.01			.04
F			65.05***			43.84***			11.80***
ΔF						1.19			1.06

Note. N = 119; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a expectations compared to the experiences, answering score from 0 means that the experiences were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected. ^b interaction effect between the scores on life satisfaction at T0 and the extent to which the expectations are met. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

*** p < .001

Table C21

Hierarchical multiple regression analysis predicting the scores on life satisfaction at T2 from the scores on life satisfaction at T1 and the extent to which the expectations are met

Variable	Model 1			Model 2			Model 3		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
(Constant)	5.81	.06		5.80	.06		6.10	.48	
Expcomtoexp ^a	.01	.06	.01	.03	.06	.03	.07	.06	.09
Life satisfaction at T1	.68	.07	.73***	.69	.07	.74***	.69	.08	.74***
Interaction effect ^b				.12	.08	.12	.13	.08	.14
Age ^c							-.01	.01	-.06
Experience as manager ^c							.01	.01	.10
Gender ^d							.33	.13	.23*
Educational level ^e							-.05	.07	-.05
Type of organization ^f							-.10	.06	-.16
Number of cohort							-.02	.03	-.05
Type of coach ^g							-.04	.04	-.09
Received training in LD ^h							.13	.12	-.09
Received coaching ⁱ							-.02	.15	-.01
R ²			.54			.55			.63
ΔR^2						.01			.08
F			42.94***			29.87***			9.00***
ΔF						2.26			1.47

Note. N = 82; b = unstandardized regression coefficients; SE = standard error, Beta = standardized regression coefficient.

^a expectations compared to the experiences, answering score from 0 means that the experiences were exactly as expected, answering score above 0 means that the experiences were better than expected, answering score below 0 means that the experiences were worse than expected. ^b interaction effect between the scores on life satisfaction at T1 and the extent to which the expectations are met. ^c in years. ^d 0 = male, 1 = female. ^e 1 = higher academic education, 2 = higher vocational education, 3 = higher secondary education, 4 = lower secondary education. ^f 1 = Supermarket, 2 = Bank, 3 = University 1, 4 = University 2, 5 = University Medical Center. ^g 0 = extern, 1 = intern Supermarket, 2 = intern Bank, 3 = intern University 1, 4 = intern University 2, 5 = intern University Medical Center. ^h received training in leadership development in the last 12 months preceding the WBC intervention, 1 = no, 2 = yes. ⁱ received coaching before, 1 = no, 2 = yes.

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